## 1AC---Whole Res

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### 1AC – Advantage

#### Fossil fuel subsidies drive down prices and fuel unmitigated warming.

Wagner 6- 13 Gernot Wagner, 6-13-2019, Gernot Wagner, Ph.D., works closely with EDF’s Office of the Chief Economist, participating in projects relating to climate damages and tipping points, the social cost of carbon, empirical modeling of climate change and human activity, and others. He served as economist at EDF (2008 – 2016), most recently as lead senior economist (2014 – 2016).This is part 2 of a 5-part series exploring policy solutions outlined in broad terms in “Policy Design for the Anthropocene.” Part 3 will focus on “Coasian” rights-based instruments, taking a closer look at tools that limit overall pollution to create markets where there were none before., "Not all fossil fuel subsidies are created equal, all are bad for the planet", Market Forces, http://blogs.edf.org/markets/2019/06/13/not-all-fossil-fuel-subsidies-are-created-equal-all-are-bad-for-the-planet/, Accessed on 10-26-2019 // JPark

A recent International Monetary Fund (IMF) working paper made headlines by revealing that the world is subsidizing fossil fuels to the tune of $5 trillion a year. Every one of these dollars is a step backward for the climate. That much is clear. Instead of subsidizing fossil emissions, each ton of carbon dioxide (CO2) emitted should be appropriately priced. That’s also where it’s important to dig into the numbers. It’s tempting to go with the $5 trillion figure, as it suggests a simple remedy: remove the subsidies. At one level, that is precisely the right message. But the details matter, and they go well beyond the semantics of what it means to subsidize something. Direct subsidies are large The actual, direct subsidies—money flowing directly from governments to fossil fuel companies and users—are “only” around $300 billion per year. That is still a huge number, and it may well be an underestimate at that. The International Energy Agency’s World Energy Outlook 2014, which took a closer look at fossil subsidies than reports since, put the number closer to around $500 billion; a 2015 World Bank paper provided more detailed methodologies and a range of between $500 billion and $2 trillion. What all these estimates have in common is that they stick to a tight definition of a subsidy: Subsidy (noun, \ ˈsəb-sə-dē \) “a grant by a government to a private person or company to assist an enterprise deemed advantageous to the public,” per Merriam-Webster. These taxpayer-funded giveaways are not only not “advantageous to the public,” they also ignore the enormous now-socialized costs each ton of CO2 emitted causes over its lifetime in the atmosphere. (Each ton emitted today stays in the atmosphere for dozens to hundreds of years.) The direct subsidies also come in various shapes and forms—from some countries keeping the cost of gasoline artificially low, to a $1 billion tax credit for “refined coal” in the United States. Indirect subsidies are significantly larger The vast majority of the IMF’s total $5 trillion figure is the unpriced socialized cost of each ton of CO2 emitted into the atmosphere. Each ton, the IMF estimates conservatively, causes about $40 in damages over its lifetime in today’s dollars. Depending on one’s definition of a subsidy, this may well qualify. It’s a grant from the public to fossil fuel producers and users—something the public pays for in lives, livelihoods and other unpriced consequences of unmitigated climate change. The remedy here is very different than removing direct government subsidies. It’s to price each ton of CO2 emitted for less to be emitted. The principle couldn’t be simpler: “When something costs more, people buy less of it,” as Bill Nye imbued memorably on John Oliver’s Last Week Tonight recently. The $5 trillion figure also hides something else. By using a $40-per-ton figure, the IMF focuses on a point estimate for each ton of CO2 emitted, and a conservative one at that. The number comes from an estimate produced by President Obama’s Interagency Working Group on the Social Cost of Carbon. That’s a good starting point, certainly a better one than the current Administration’s estimate. But even the $40 figure is conservative. It captures what was quantifiable and quantified at the time. It does not account for many known yet still-to-be-quantified damages. It does not account for risks and uncertainties, the vast majority of which would push the number significantly higher still. In short, the $5 trillion figure may well convey a false sense of certainty. In some sense, little of that matters. The point is: there is a vast thumb on the scale pushing the world economy toward fossil fuels, the exact opposite of what should be done to ensure a stable climate. In another very real sense, the different matters a lot: Politics may trump all else, but policy design matters, too.

#### Subsidies stop clean energy transitions and lead to air pollution.

Carrington 8-1 Damian Carrington, 8-1-2019, Damian Carrington is Environment Editor at the Guardian, which he joined in 2008. He has been a journalist for 20 years and previously worked on staff at the Financial Times, New Scientist and BBC News Online. He has a PhD in geology from the University of Edinburgh, where he also did post-doctoral research. "Just 10% of fossil fuel subsidy cash 'could pay for green transition'", Guardian, https://www.theguardian.com/environment/2019/aug/01/fossil-fuel-subsidy-cash-pay-green-energy-transition, Accessed on 10-29-2019 // JPark Brackets in original text

Switching just some of the huge subsidies supporting fossil fuels to renewables would unleash a runaway clean energy revolution, according to a new report, significantly cutting the carbon emissions that are driving the climate crisis. Coal, oil and gas get more than $370bn (£305bn) a year in support, compared with $100bn for renewables, the International Institute for Sustainable Development (IISD) report found. Just 10-30% of the fossil fuel subsidies would pay for a global transition to clean energy, the IISD said. Ending fossil fuel subsidies has long been seen as vital to tackling the climate emergency, with the G20 nations pledging in 2009 to phase them out, but progress has been limited. In May, the UN secretary general, António Guterres, attacked subsidies, saying: “What we are doing is using taxpayers’ money – which means our money – to boost hurricanes, to spread droughts, to melt glaciers, to bleach corals. In one word: to destroy the world.” The new analysis shows how redirecting some of the fossil fuel subsidies could decisively tip the balance in favour of green energy, making it the cheapest electricity available and instigating a rapid global rollout. Fossil fuels subsidised by $10m a minute, says IMF Read more “Almost everywhere, renewables are so close to being competitive that [a 10-30% subsidy swap] tips the balance, and turns them from a technology that is slowly growing to one that is instantly the most viable and can replace really large amounts of generation,” said Richard Bridle of the IISD. “It goes from being marginal to an absolute no-brainer.” The transition from polluting fossil fuels to clean energy is already under way. Annual investment in renewables has been greater than that in fossil fuel electricity generation since 2008 and new renewable capacity has exceeded fossil fuel power each year since 2014. But progress is slow compared with the urgency required, said Bridle. “There is no question that renewables can power the energy system,” he said. “The question now is can we transition quickly enough away from fuels like coal, and **subsidy reform** is a very obvious step towards that.” Very few ways of cutting emissions actually save governments money, he said. “Taking away subsidies from fossil fuels and channelling them towards clean energy would boost their development at a much faster pace, and help secure our climate goals,” said Ipek Gençsü of the Overseas Development Institute. An added bonus is the social and economic benefits, such as reduced air pollution and health spending, she said. “A key breakthrough [in the energy transition] could occur if countries cut their fossil fuel subsidies, which are propping up dirty energy,” said Rana Adib, the executive secretary of the global sustainable energy network REN21. A recent REN21 report found 112 nations subsidised fossil fuel prices. Reform of fossil fuel subsidies could have a significant impact on global heating. An earlier IISD study of 20 countries with large fossil fuel subsidies found that a 30% swap to renewables would lead to emissions reductions of between 11% and 18%. UK has biggest fossil fuel subsidies in the EU, finds commission Read more Most experts define fossil fuel subsidies as financial or tax support for those buying fuel or the companies producing it. The IMF also includes the cost of the damage fossil fuel burning causes to climate and health, leading to an estimate of $5.2tn of fossil fuel subsidies in 2017, or $10m a minute. Ending the subsidies would cut global emissions by about a quarter, the IMF estimates, and halve the number of early deaths from fossil fuel air pollution. Bridle said funding fossil fuel subsidies was “madness”, but said ending them could cause short-term price rises and political difficulties, as the benefits of lower costs in the future and reduced air pollution are less obvious. “There are political problems but it is worth persevering because the prize is so big,” he said. “You have to bring people along with you.” Gençsü said governments must ensure that the most vulnerable people were not adversely affected by changes.

#### Status quo warming rates cause biodiversity loss and decks food production.

Plumer 5-6 Brad Plumer, 5-6-2019, Brad Plumer is a reporter covering climate change, energy policy and other environmental issues for The Times’s climate team. @bradplumer, "Humans Are Speeding Extinction and Altering the Natural World at an ‘Unprecedented’ Pace", No Publication, https://www.nytimes.com/2019/05/06/climate/biodiversity-extinction-united-nations.html, Accessed on 10-21-2019 // JPark

WASHINGTON — Humans are transforming Earth’s natural landscapes so dramatically that as many as one million plant and animal species are now at risk of extinction, posing a dire threat to ecosystems that people all over the world depend on for their survival, a sweeping new United Nations assessment has concluded. The 1,500-page report, compiled by hundreds of international experts and based on thousands of scientific studies, is the most exhaustive look yet at the decline in biodiversity across the globe and the dangers that creates for human civilization. A summary of its findings, which was approved by representatives from the United States and 131 other countries, was released Monday in Paris. The full report is set to be published this year. Its conclusions are stark. In most major land habitats, from the savannas of Africa to the rain forests of South America, the average abundance of native plant and animal life has fallen by 20 percent or more, mainly over the past century. With the human population passing 7 billion, activities like farming, logging, poaching, fishing and mining are altering the natural world at a rate “unprecedented in human history.” At the same time, a new threat has emerged: Global warming has become a major driver of wildlife decline, the assessment found, by shifting or shrinking the local climates that many mammals, birds, insects, fish and plants evolved to survive in. When combined with the other ways humans are damaging the environment, climate change is now pushing a growing number of species, such as the Bengal tiger, closer to extinction. As a result, biodiversity loss is projected to accelerate through 2050, particularly in the tropics, unless countries drastically step up their conservation efforts. Cattle grazing on a tract of illegally cleared Amazon forest in Pará State, Brazil. In most major land habitats, the average abundance of native plant and animal life has fallen by 20 percent or more, mainly over the past century. Cattle grazing on a tract of illegally cleared Amazon forest in Pará State, Brazil. In most major land habitats, the average abundance of native plant and animal life has fallen by 20 percent or more, mainly over the past century.CreditLalo de Almeida for The New York Times The report is not the first to paint a grim portrait of Earth’s ecosystems. But it goes further by detailing how closely human well-being is intertwined with the fate of other species. “For a long time, people just thought of biodiversity as saving nature for its own sake,” said Robert Watson, chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, which conducted the assessment at the request of national governments. “But this report makes clear the links between biodiversity and nature and things like food security and clean water in both rich and poor countries.” A previous report by the group had estimated that, in the Americas, nature provides some $24 trillion of non-monetized benefits to humans each year. The Amazon rain forest absorbs immense quantities of carbon dioxide and helps slow the pace of global warming. Wetlands purify drinking water. Coral reefs sustain tourism and fisheries in the Caribbean. Exotic tropical plants form the basis of a variety of medicines. But as these natural landscapes wither and become less biologically rich, the services they can provide to humans have been dwindling. Humans are producing more food than ever, but land degradation is already harming agricultural productivity on 23 percent of the planet’s land area, the new report said. The decline of wild bees and other insects that help pollinate fruits and vegetables is putting up to $577 billion in annual crop production at risk. The loss of mangrove forests and coral reefs along coasts could expose up to 300 million people to increased risk of flooding. The authors note that the devastation of nature has become so severe that piecemeal efforts to protect individual species or to set up wildlife refuges will no longer be sufficient. Instead, they call for “transformative changes” that include curbing wasteful consumption, slimming down agriculture’s environmental footprint and cracking down on illegal logging and fishing. “It’s no longer enough to focus just on environmental policy,” said Sandra M. Díaz, a lead author of the study and an ecologist at the National University of Córdoba in Argentina. “We need to build biodiversity considerations into trade and infrastructure decisions, the way that health or human rights are built into every aspect of social and economic decision-making.” Scientists have cataloged only a fraction of living creatures, some 1.3 million; the report estimates there may be as many as 8 million plant and animal species on the planet, most of them insects. Since 1500, at least 680 species have blinked out of existence, including the Pinta giant tortoise of the Galápagos Islands and the Guam flying fox. Though outside experts cautioned it could be difficult to make precise forecasts, the report warns of a looming extinction crisis, with extinction rates currently tens to hundreds of times higher than they have been in the past 10 million years. “Human actions threaten more species with global extinction now than ever before,” the report concludes, estimating that “around 1 million species already face extinction, many within decades, unless action is taken.” Unless nations step up their efforts to protect what natural habitats are left, they could witness the disappearance of 40 percent of amphibian species, one-third of marine mammals and one-third of reef-forming corals. More than 500,000 land species, the report said, do not have enough natural habitat left to ensure their long-term survival. Over the past 50 years, global biodiversity loss has primarily been driven by activities like the clearing of forests for farmland, the expansion of roads and cities, logging, hunting, overfishing, water pollution and the transport of invasive species around the globe. In Indonesia, the replacement of rain forest with palm oil plantations has ravaged the habitat of critically endangered orangutans and Sumatran tigers. In Mozambique, ivory poachers helped kill off nearly 7,000 elephants between 2009 and 2011 alone. In Argentina and Chile, the introduction of the North American beaver in the 1940s has devastated native trees (though it has also helped other species thrive, including the Magellanic woodpecker). All told, three-quarters of the world’s land area has been significantly altered by people, the report found, and 85 percent of the world’s wetlands have vanished since the 18th century. And with humans continuing to burn fossil fuels for energy, global warming is expected to compound the damage. Roughly 5 percent of species worldwide are threatened with climate-related extinction if global average temperatures rise 2 degrees Celsius above preindustrial levels, the report concluded. (The world has already warmed 1 degree.) “If climate change were the only problem we were facing, a lot of species could probably move and adapt,” Richard Pearson, an ecologist at the University College of London, said. “But when populations are already small and losing genetic diversity, when natural landscapes are already fragmented, when plants and animals can’t move to find newly suitable habitats, then we have a real threat on our hands.” The dwindling number of species will not just make the world a less colorful or wondrous place, the report noted. It also poses risks to people. Today, humans are relying on significantly fewer varieties of plants and animals to produce food. Of the 6,190 domesticated mammal breeds used in agriculture, more than 559 have gone extinct and 1,000 more are threatened. That means the food system is becoming less resilient against pests and diseases. And it could become harder in the future to breed new, hardier crops and livestock to cope with the extreme heat and drought that climate change will bring. “Most of nature’s contributions are not fully replaceable,” the report said. Biodiversity loss “can permanently reduce future options, such as wild species that might be domesticated as new crops and be used for genetic improvement.” The report does contain glimmers of hope. When governments have acted forcefully to protect threatened species, such as the Arabian oryx or the Seychelles magpie robin, they have managed to fend off extinction in many cases. And nations have protected more than 15 percent of the world’s land and 7 percent of its oceans by setting up nature reserves and wilderness areas. Still, only a fraction of the most important areas for biodiversity have been protected, and many nature reserves poorly enforce prohibitions against poaching, logging or illegal fishing. Climate change could also undermine existing wildlife refuges by shifting the geographic ranges of species that currently live within them. So, in addition to advocating the expansion of protected areas, the authors outline a vast array of changes aimed at limiting the drivers of biodiversity loss.

#### Independently, persistent climate change leads to cycles of resource wars – it’s an impact magnifier and causes cycles of suffering.

The Economist 5-23 The Economist, The Economist is an English-language weekly magazine-format newspaper owned by the Economist Group and edited at offices in London. 5-23-2019, "How climate change can fuel wars", Economist, https://www.economist.com/international/2019/05/23/how-climate-change-can-fuel-wars, Accessed on 10-21-2019 // JPark

Mr Ibrahim is not the only one to see a link between climate and war. Globally, the proportion of people who die violently has been falling for decades, as poverty has tumbled and wars between states have become rarer. But many fret that climate change will be so disruptive that it will make future conflicts more likely. Some fear that as the Arctic sea-ice melts, Russia, China and America will scramble for the sea lanes that will open up and the minerals that may lie beneath. Others worry that, as temperatures rise, thirsty countries such as India and Pakistan or Egypt and Ethiopia will fight over rivers they share with their neighbours. However, the most immediate threat is of civil wars, not inter-state ones, and one of the most vulnerable regions is the Sahel, an arid strip below the Sahara desert. Here, the roots of many conflicts lie in competition over dwindling fertile land. In Mali, for example, struggles over resources between farmers and herders as the population rises have escalated into ethnic cleansing. Mahamadou Souleymane, a Fulani herder, fled his village last year when militiamen from the Dogon ethnic group attacked. “They were our friends from our great, great grandfathers,” says Mr Souleymane. But one day last year, they came with automatic rifles and machetes. “They cut off hands, arms and penises, and took them away.” They told the villagers that if they did not leave, “no one will survive. We will kill everyone.” So “we ran into the bush,” recalls Mr Souleymane. Green campaigners and eager headline-writers sometimes oversimplify the link between global warming and war. It is never the sole cause. But several studies suggest that, by increasing the frequency and intensity of extreme weather events, including floods and droughts, it makes conflict likelier than it would otherwise be. In a meta-analysis carried out in the early 2010s, Solomon Hsiang, then at Princeton University, and Marshall Burke, then at the University of California, Berkeley, found “strong support” for a causal link between climate change and conflict (encompassing everything from interpersonal to large-scale violence). They even tried to quantify the relationship, claiming that each rise in temperature or extreme rainfall by one standard variation increased the frequency of interpersonal violence by 4% and intergroup conflict by 14%. History offers several examples of climate change appearing to foment mayhem. An examination of Chinese records spanning a millennium found that the vast majority of violent eras were preceded by bouts of cooler weather. The team behind the study argues that lower temperatures reduced agricultural production, provoking fights over land and food. Some see the recent civil war in Sudan’s Darfur region as the first modern climate-change conflict. In 2007 theun Environment Programme argued that desertification and dwindling rainfall had made supplies of food and water less secure, which may have helped spark the rebellion that Sudan’s government put down with a campaign of genocide and mass rape. However, just as one can never be sure that any individual hurricane would not have happened without global warming, one can never prove that a given war would not have occurred without it. Environmental forces interact in unpredictable ways with human greed, opportunism and cruelty—and sometimes with mankind’s better angels, too. And the environmental forces themselves are complex. Consider Syria. Between 2012 and 2015 three academic papers argued that climate change had been a catalyst or even a primary driver of the civil war. Headlines blamed it for the waves of refugees reaching Europe. The argument was that human emissions had caused or exacerbated a severe drought in Syria in the late 2000s that triggered mass migration from farmland into cities, contributing to tensions which ultimately led to war. The headlines were too simplistic, as headlines often are. Climate modelling led by Colin Kelley, then at the University of California in Santa Barbara, estimated that greenhouse-gas emissions made the drought twice as likely. That is significant, but need not mean that in the absence of climate change, there would have been no drought and no war. Syrians had many reasons to revolt against their ruler, Bashar al-Assad, a despot from a religious minority who enforced his rule with mass torture. The conflict around Lake Chad is also a tangled tale. Its roots can be traced back to a deadly drought in the 1970s and 1980s. Many have blamed that drought on industrial emissions of greenhouse gases. But climate models suggest they did not in fact play a big role in the drought. The recurrent failure of monsoon rains was caused by cooler temperatures in the north Atlantic, which pushed the rains too far south. The cooling was itself caused by a mixture of natural and human factors, notably air pollution above the ocean—a striking reminder that greenhouse-gas emissions are not the only way in which human activity may alter the climate. A report published this month by Adelphi, a Berlin-based think-tank, shows that Lake Chad is no longer shrinking. Its authors examined 20 years of satellite data and found that the southern pool was stable for the duration. The northern pool is still shrinking slightly, but total water storage in the area is increasing, as 80% of the water is held in a subterranean aquifer, which is being replenished, as is moisture in the soil, as the rains have returned. This has big implications for plans to alleviate tension in the region, says Janani Vivekananda, who led the research. Earlier this year government ministers dusted off a decades-old proposal to divert billions of cubic metres of water from tributaries of the Congo River, down a 2,400km canal and into the Lake Chad basin. The latest findings suggest this would do little good, at enormous cost. Things fall apart Despite all these caveats, climate change clearly can play a part in fostering conflict. The Sahel is warming 1.5 times faster than the global average, owing to greenhouse-gas emissions. In future, most models suggest, it will experience more extreme and less predictable rains over shorter seasons. In a region where most people still grow or rear their own food, that could make millions desperate and restless. Traditional systems for sharing resources can break down if farmers suddenly have to adapt to different growing seasons or herders need to move their cattle at different times. Around Lake Chad, people are concentrated in a much smaller area than before, says Fode Baba Condé, who leads the unhcr’s mission on the Chadian side of the lake, including the camp at Dar es Salaam. Many confrontations between farmers and herders result, he says. Cattle that used to wallow in the lake can now die for lack of water; those that survive may trample farmland. Yusfa Issa, a 60-year-old, came to Dar es Salaam camp from Brasserie, a Chadian village of farmers and fisherfolk. He laments the old days, when people would share food. “Now people won’t give you a potato, onion or cassava…There is nothing left.” His village is just 10-15km away, but too dangerous to go back to, he says. Climate models predict that, as global average temperatures rise, dry regions will get drier and wet regions will get wetter, with more extremes and greater variability. Poverty makes it harder for farmers to adapt. Trying something new is always risky—and potentially catastrophic for those with no savings to fall back on. In conflict zones, farmers who once had the means to plant several different crops may only be able to plant one. They end up with all their seeds in one basket. On the shores of Lake Chad, violent clashes between government forces and armed opposition groups have created zones that are off-limits to civilians, says Chitra Nagarajan, a researcher for the Adelphi report, who spent two years conducting surveys in all four littoral countries. Conflict and environmental change disproportionately bring suffering to women. “We are seeing high levels of divorce, high levels of domestic abuse,” says Ms Nagarajan. “Men are migrating, leaving the women to fend for themselves.” The x factor Conflict itself makes the poor even poorer, and more vulnerable to the vagaries of a changing climate. Fearing murder, pastoralists cannot take their herds to places with water and vegetation. The unhcr’s Mr Condé says that fishermen can no longer go into the deep lake to fish. Government troops block them, and Boko Haram is still on the prowl. Fighters steal farmers’ crops. All the farmers can harvest is wood, which they sell as fuel. In a bitter twist, doing so accelerates desertification, further degrading the land. Climate change makes conflict more likely but not inevitable. The Sahelian drought of the 1970s and 80s was felt across the region, but the violence began and has been most intense in a particularly ill-governed part of Nigeria. Likewise, the drought that preceded the Syrian civil war also affected Jordan, Lebanon and Cyprus, none of which imploded. Lebanon took in 1.5m refugees with barely a complaint. The Adelphi report confirms that the Lake Chad conflict had many causes besides climate variability, including bad governance, corruption, rising inequality and religious extremism. Similarly, the origins of Syria’s war are complex. It was a revolt against a blood-drenched tyrant who had recently slashed fuel and fertiliser subsidies. But, as Charles Iceland of the World Resources Institute (wri), a research organisation, points out, a horrible drought preceded the outbreak of hostilities, and “it isn’t logical to say that it contributed less tension or the tension stayed the same.” The question is in what circumstances environmental stresses can tip a precarious peace into violence, and how to respond. Governance can make the difference. Badly governed or poor countries find it harder to cope with climate change, especially when, as often, they have weak institutions. The Netherlands and Bangladesh both face similar environmental challenges: low-lying coastlines and frequent floods which will become more frequent and more extreme as sea-levels rise. The Netherlands has the political, technological and financial means to cope; much poorer, Bangladesh may not. No sensible person expects a Dutch civil war because of climate change; in Bangladesh, the risk of such a conflict is not trivial. Aaron Wolf of Oregon State University and his collaborators have catalogued 2,606 instances of international conflict and co-operation over water between 1948 and 2008. In 70% of cases, countries co-operate. The biggest risk of conflict comes when an upstream country builds infrastructure, such as a dam, without an agreement on how to soften the downstream impact. Many of these dams are built because climate change is making water scarcer, or because of a move away from fossil fuels towards hydropower—ie, a secondary link to climate change. More light than shade Mr Wolf says that conflict is most likely when the change outpaces institutional capacity to adapt: “The problem is not the dam but the dam plus the absence of an agreement for how to deal with it.” At a meeting this year of the Planetary Security Initiative, a consortium of think-tanks, delegates from Mali gave their own illustration of this, drawing on the degradation of the Inner Niger Delta whose waters support farmers, pastoralists and fisherfolk. Ancestral agreements had created a system of shared commons. “Before, there were traditional mechanisms, a calendar that everyone respected. When the farmer was done, the pastoralist could bring his animals to graze the same land,” said Diallo Tata Touré, president of a commune in the delta. But as the supply of water to the delta has been depleted by irrigation upstream, these pacts have disintegrated, fuelling outbreaks of violence. Another dam thing “Pastoralists enter the delta earlier because their animals are hungry. They cross farms and fish-nurseries. The different groups are in conflict where before there was peace,” said Karounga Keita, a Malian economist, at the meeting. “All this is because the flooding area is reduced by dams and irrigation upstream.” There is concern that the proposed $280m Fomi dam upstream of the delta in the Guinean highlands will make matters worse. Conflicts between agriculturalists have existed for centuries, says Seydou Doumbia, a Malian official, but have never resulted in a security crisis. “Not until now.” Mr Iceland and his colleagues at the wri, in collaboration with nine other organisations, are working on a predictive tool for future conflicts, with a focus on water stress. The team has fed large historical data sets of risk factors for conflict (social, economic, demographic and geographic), in addition to a number of water indicators (precipitation, groundwater availability, length and severity of droughts) to machine-learning software to generate a model that predicts the probability of conflicts. In October 2018, wri’s Manish Bapna presented preliminary results to the un Security Council. Using data from 2016, the model was able to predict instances of water conflict in 2017 with 83% accuracy. Academics may squabble about the specific causes of past conflicts, and develop complex models to forecast future ones. But there is consensus that tensions, and so the potential for bloodshed, will be heightened by climate change. And conflict, in turn, makes it harder to prepare for or respond to climate change. How to save for a rainy (or dry) day if men with guns keep stealing your savings or burning down your grain stores? Saleh Isaka, a Chadian village elder, remembers when his people used to graze thousands of animals on land where the Dar es Salaam camp now stands. Three years ago, Boko Haram attacked. They were armed with automatic weapons and they stole away all the animals, as well as women and children. “Now we are suffering. It’s hotter than before… Everything is dead,” Mr Isaka says, gesturing into the bone-dry distance.

#### Greentech is independently good – builds sustainable communities and reduces structural violence.

Callahan 2-22 Molly Callahan, 2-22-2019, Northeastern University, "Green New Deal's focus on renewable energy could fight global warming, create healthier communities, says expert", No Publication, https://phys.org/news/2019-02-green-focus-renewable-energy-global.html, Accessed on 11-16-2019 // JPark

Not only would a transition to renewable energy drastically slow the pace of global warming, it could also be the catalyst for the creation of millions of jobs, the equitable distribution of power, and the creation of healthier communities that are better suited to bounce back from disaster, says Jennie Stephens, a professor of sustainability science and policy at Northeastern University. "By changing the energy system in a deliberate, intentional way, there are opportunities for changing all these other **social injustices** that are so prevalent," says Stephens, who is director of the School of Public Policy and Urban Affairs as well as director for strategic research collaborations at the Global Resilience Institute. Stephens acknowledges that wholesale global transition from fossil fuels to renewable energy would be disruptive for a while: uprooting jobs, requiring large initial investments in infrastructure and technology, restructuring energy grids, and changing how we use energy. She says that government investment and innovative energy policies could help create a financial framework for such massive change. "It's widely accepted that the costs of investing in renewable energy are high," Stephens says, "but we also have to consider that the cost of not investing could be higher." Think about your daily routine and everything that requires energy within it: Your alarm clock (or your phone) is plugged into the wall. The lights in the bathroom require electricity. The stove where you cook your breakfast. The car or train you take to work. Heat in the winter. Air conditioning in the summer. The elevator in your building. The coffee pot. Your computer. Considering how much we rely upon energy, Stephens says, changing the energy system could change lots of other parts of our lives. Stephen's article on energy democracy was recently published in the international scientific journal Environment: Science and Policy for Sustainable Development. She'll be speaking about the ways renewable energy sources can change societies at a climate change conference at Northeastern on Friday. Several other climate scientists and artists will lead discussions and presentations, as well. "Energy is such an essential part of society that when we think about changing our energy system, we see that we can change some other fundamental dynamics in our society," she says. Stephens argues that the world's reliance on fossil fuels for energy has **concentrate**d economic and political power to a handful of countries rich in oil and a handful of companies that mine and sell it. "This concentration of wealth and power has increased inequities and vulnerabilities and weakened societal resilience," she says. Her argument is that this dynamic has created a "**predatory relationship**" between **fossil fuel providers** and the **people** who are reliant upon them to light and heat their houses, or to run transportation systems, for example. Because fossil fuels are also finite, countries have to compete for limited resources, a competition that also favors the wealthier, more powerful countries. Renewable energy—which relies on the sun, wind, water, or geothermal heat—poses neither of these challenges, Stephens says. Unlike fossil fuels, which are found only in certain parts of the world, everyone everywhere has access to some mix of renewable energy sources that, when harnessed, could **fully power** communities and **enable them to be self-sufficient**, she says. Communities on the coastlines might rely upon tidal or wave energy, whereas rural communities might rely upon wind or geothermal energy. "This would look different in every community in the world; renewable energy doesn't mean just solar panels everywhere," Stephens says.

### 1AC – Plan

#### Resolved: The United States federal government should eliminate direct production subsidies for fossil fuels.

#### I can spec or define anything in cross.

#### Plan solves –

#### 1] Collapses production and usage.

#### Fossil fuels avoid market competition – without subsidies, they collapse.

Roberts 17 Solvency Adv David Roberts, 10-6-2017, His work has been featured in The Chicago Tribune, Reuters and The Atlantic and he has made appearences on CNN and the Canadian Broadcasting Corporation. Before moving to Vox in 2015, he wrote for Grist.org on the same subjects for 10 years. "Friendly policies keep US oil and coal afloat far more than we thought", Vox, https://www.vox.com/energy-and-environment/2017/10/6/16428458/us-energy-coal-oil-subsidies, Accessed on 10-30-2019 // JPark

* This card also defines direct production subsidies.

Energy analysts have made the point again and again that fossil fuels, not renewable energy, most benefit from supportive public policy. Yet this fact, so inconvenient to the conservative worldview, never seems to sink in to the energy debate in a serious way. The supports offered to fossil fuels are so old and familiar, they fade into the background. It is support offered to challengers — typically temporary, fragmentary, and politically uncertain support — that is forever in the spotlight. So let’s change that. Let’s talk about “certain regulations and subsidies” — namely, the ones propping up US fossil fuels. Three recent analyses can help. The first does the yeoman’s work of tallying up federal and state energy subsidies. The second shows the effect those subsidies have on oil and gas production. And the third shows how thoroughly the US coal industry is propped up by regulatory policy. Together, they paint a clear picture: The profits of US fossil fuels are built on a foundation of government assistance. All right then. First: What gets subsidized, and how much? OCI is only counting direct production subsidies. As they acknowledge, that leaves out a great deal. For one thing, it leaves out the annual $14.5 billion in consumption subsidies — things like the Low Income Home Energy Assistance Program (LIHEAP), which helps lower-income residents pay their (fuel oil) heating bills. (There are better ways to help poor people, but let’s leave that aside for now.) It also leaves out subsidies for overseas fossil fuel projects ($2.1 billion a year). Most significantly, OCI’s analysis leaves out indirect subsidies — things like the money the US military spends to protect oil shipping routes, or the unpaid costs of health and climate impacts from burning fossil fuels. These indirect subsidies reach to the hundreds of billions, dwarfing direct subsidies — the IMF says that, globally speaking, they amount to $5.3 trillion a year. But they are controversial and very difficult to measure precisely. Finally, OCI acknowledges that its estimates of state-level subsidies are probably low, since many states don’t report the costs of tax expenditures (i.e., tax breaks and credits to industry), so data is difficult to come by. All of which is to say: OCI has produced about the most conservative possible estimate of the subsidies received by fossil fuels in the US. These are solely production subsidies — taxpayer money that goes directly to producing more fossil fuels. So what’s the verdict? Adding everything up: $14.7 billion in federal subsidies and $5.8 billion in state-level incentives, for a total of $20.5 billion annually in corporate welfare. Of that total, 80 percent goes to oil and gas, 20 percent to coal. On the right, subsidies are broken down by stage of production. Extraction gets the most. fossil fuel subsidies (OSI) Notice that asterisk by remediation, which refers to the cost of cleaning up environmental messes and abandoned infrastructure left behind by fossil fuels. Shady insurance, bonding, and liability-cap policies mean that taxpayers are probably on the hook for lots more than this in the end, but it’s difficult to quantify in advance. There are dozens and dozens of fossil fuel production subsidies — OCI’s report has a whole appendix devoted to listing them — but here they are broken down by the biggest offenders: fossil fuel subsidies (OCI) You probably can’t read that text, so here are the top six: Intangible drilling oil & gas deduction ($2.3 billion) Excess of percentage over cost depletion ($1.5 billion) Master Limited Partnerships tax exemption ($1.6 billion) Last-in, first-out (LIFO) accounting ($1.7 billion) Lost royalties from onshore and offshore drilling ($1.2 billion) Low-cost leasing of coal-production in the Powder River Basin ($963 million) (I listed six because that sixth one is the biggie for coal.) These kinds of obscure tax loopholes and accounting tricks are not widely known or debated, partially because you have to be a tax lawyer to understand them, and partially because they are simply old. The single biggest one, the intangible drilling deduction, has been around for over a century! As subsidies age, they start to look less like subsidies. They start looking like fixed features of the landscape, like mountains or rivers, rather than choices we are making. They just look like the status quo. How does this compare to renewable energy subsidies? In terms of permanent tax expenditures, fossil fuels beat renewables by a 7-1 margin: energy subsidies (OCI) (The primary federal tax supports for renewable energy — the investment and production tax credits, respectively — are not permanent. They are set to phase out over the next five years, and are politically vulnerable in the meantime. But if you include them, Stephen Kretzmann of OCI confirmed for me over email, permanent fossil tax breaks still win, at $7.4 billion to $5.6 billion.) If you ask people in fossil fuel industries, their support staff in conservative think tanks, or fossil-state politicians, they will tell you why these fossil fuel production subsidies are necessary. It’s always been this way. They’re more than paid back by tax revenue. Other industries get them too. (For the record: More than half the $20 billion is available to fossil fuels alone). They create jobs. They’re important for national security. Tax expenditures aren’t subsidies at all, if you think about it. Etc. If the endless debate over energy subsidies has taught me anything, it’s that nobody thinks their own subsidy is a subsidy — and no one outside think tanks and universities really gives a damn about the economic distortions of subsidies as such. Everyone thinks their favored energy sources deserve support and the other guys’ don’t. Period. They use whatever economic argument is handy — “picking winners” if you’re against the subsidy, “supporting jobs” if you’re for it — but such arguments are always instrumental. As I said recently about coal’s rent-seeking, there are no true free marketeers in struggling industries. Speaking of rent-seeking, here’s a final fun factoid from OCI: In the 2015-2016 election cycle, oil, gas, and coal companies spent $354 million in campaign contributions and lobbying and received $29.4 billion in federal subsidies in total over those same years — an 8,200% return on investment. Not bad. Fossil fuel executives, basically. (Shutterstock) So, do all these subsidies make a difference. Why, yes. Yes, they do. How much do oil subsidies matter? A lot. The effects of consumption subsidies are fairly well-understood, as it is fairly easy to aggregate consumer decisions and find patterns. But the effects of production subsidies are trickier to pin down; it is difficult to tie particular background subsidies to particular investment decisions by producers. In an analysis published in Nature in October 2017, researchers from the Stockholm Environment Institute (SEI) attempt to clear this up, quantifying, to the extent possible, just how much a difference production subsidies make. They do this by focusing in on a specific economic decision on the part of producers: whether or not to develop a new oil field they’ve discovered. After tallying up their own long list of production subsidies and attempting to calculate how those subsidies shift the economic returns of new production, they came to some pretty startling conclusions, emphasis mine: We find that, at recent US oil prices of US$50 per barrel, tax preferences and other subsidies push nearly half of new, yet-to-be-developed oil into profitability. This potentially increases US oil production by almost 17 billion barrels over the next few decades, equivalent to 6 billion tonnes (Gt) of CO2. Almost half of the new oil fields getting drilled would have been left alone if not for subsidies. That is no small effect! The researchers acknowledge that the impact of subsidies on these decisions is extremely sensitive to oil prices. If oil prices rise back up to, say, $75bbl, as some forecasters project, the impact of subsidies will appear far smaller. Photo of oil rigs sit just outside of Theodore Roosevelt National Park near Watford City, North Dakota. Almost half of these from the least few years are thanks to your taxpayer dollars. Thanks? (Ken Cedeno/Corbis via Getty Images) But at current low oil prices, subsidies are making a huge, huge difference. Coal is propped up by government policy too As the charts from OCI show, direct federal tax expenditures on behalf of coal production are dwarfed by oil and gas subsidies. The main federal tax subsidy is cheap leases to mine coal on public land. But as a report from Carbon Tracker details, coal is still very much propped up by public policy. It’s no big revelation that new coal plants are uneconomic. There hasn’t been a new coal plant built in the US in years and there will probably never be another one, for reasons of raw economics. Here are net capacity additions and subtractions from the US power fleet, from 2011 to 2016: capacity additions (Carbon Tracker) As you can see, crappy old coal plants are coming offline and nobody’s building new plants to replace them. Problem is, new coal plants have to be “clean,” which is to say, they have to have the filters and scrubbers to meet modern pollution standards. And as I’ve been saying for years, coal can either be cheap or clean, not both; making a new coal plant clean makes it uneconomic (to say nothing of what happens when you force it to bury its carbon). What’s more striking is how imperiled existing, fully paid-off coal plants are. Even many of those can’t compete against natural gas or renewables. Many existing coal plants are balanced on a fine edge. To the extent they can escape requirements to upgrade to modern pollution equipment — and believe it or not, decades after the Clean Air Act was passed, they still can — they can stay profitable for longer. “When current costs are considered, 72% of operating coal units are unprofitable compared to the operating cost of an equivalent [natural gas plant],” Carbon Tracker writes, “and 98% when the anticipated costs [of environmental upgrades] are included.” In other words, once the entire coal fleet upgrades to modern pollution standards ... basically none of it will be economically competitive. Cheap or clean; never both. The A.E.P. (American Electric Power) coal burning plant in Conesville, Ohio. Not v. competitive. (Michael Williamson/Washington Post/Getty Images) That’s a narrow path to remaining profitable, and coal plants are only on that path at all because of all the other ways they are propped up by regulatory policy: Capacity markets favor already-built coal over new natural gas or renewables: Unlike electricity markets, which pay for power, capacity markets pay for the ability to spin up, just in case. They are a way of maintaining reserve capacity in case other power plants unexpectedly go offline. For various reasons (see the report), such markets favor plants that are already amortized and have readily available fuel, i.e., generally coal plants. So yeah, even coal plants that rarely produce power still get paid to sit around and ... not be closed. In regulated energy markets, utilities get paid to keep investing in unneeded, expensive coal plants: In competitive energy markets, plants close if they can’t make enough profit from their power to cover their ongoing costs. But in fully regulated markets (which contain 67 percent of US coal capacity), a utility’s return on investment in a plant is guaranteed by regulators, whether or not closing that plant would be better for ratepayers (as it very often would). Ironically, that’s why more coal plants in regulated markets have pollution-control equipment. In competitive markets, that would render them uneconomic (better just to shut them down). But in regulated markets, hell, why not? Every bit of investment means more guaranteed profits. pollution equipment (Carbon Tracker) Utilities shuffle coal plants from their deregulated side to their regulated side, to shield them from competition: This one is so devious. Utility holding companies — which own utilities in both regulated and deregulated markets — move coal plants from the books of the latter to the books of the former, to shield them from competition and keep them alive via regulation. “This accounting practice typically shifts the economic burden from the shareholder to the consumer,” Carbon Tracker writes, “with the former often benefiting to the detriment of the latter. Utilities hedge against changing natural gas costs: Some forecasters expect natural gas prices to rise in coming years (though, honestly, everyone is guessing). To hedge against that, utilities often keep uneconomic coal plants open, just in case rising NG prices retroactively render them economic. This is just a partial accounting. The broader point is that the edifice of regulation governing the US electricity sector favors coal incumbents in myriad ways. If all coal plants had to adopt their full costs and face full market competition tomorrow, the US coal fleet would quickly shrink to negligible size. It only survives because, through taxes and regulations, the US has protected it. All three reports make it clear we’re accelerating in the wrong direction All three reports are very clear that, to achieve the global target of limiting temperature rise to 2 degrees Celsius or less this century, fossil fuels will have to be aggressively phased out. As OCI shows, staying within a 2 degrees Celsius carbon budget means that we can’t even burn all the fossil fuels in already developed reserves: carbon budget vs. reserves (OCI) Hitting our target means no new fossil fuel exploration, no new fields or mines, no new development. Carbon Tracker, meanwhile, develops a detailed scenario for phasing out the US coal fleet on schedule with a 2 degrees Celsius carbon budget. Here’s what it looks like: coal phaseout (Carbon Tracker) (B2DS and 2DS are two International Energy Agency scenarios. You don’t need to worry about the difference.) The 2C carbon budget dictates an extremely rapid phaseout — far faster than anything currently projected by utilities themselves. That is the background against which to understand fossil fuel subsidies: They are intrinsically incompatible with current climate goals. So, let’s take a step back and sum up. Right now, the US pays rhetorical fealty to a carbon goal that would require stopping all new fossil fuel development and phasing out all coal plants. Meanwhile, US taxpayers are spending tens of billions of dollars a year subsidizing new fossil fuel exploration and exploitation, and US regulatory policy keeps the zombie coal fleet shambling on. All the while, conservatives complain volubly about subsidies to renewable energy and the US energy secretary tries to use them as an excuse to dump even more public money on coal companies. It’s a train wreck. But still. The oil and gas companies making decisions to develop new fields and the utilities keeping coal plants alive are going to realize, at some point, that their vulnerability to “carbon risk” grows every year. (Arguably, big oil is way ahead of big coal in understanding this.) The Obama administration identified $8.7 billion a year in federal fossil fuel subsidies to eliminate, but couldn’t get it past Congress. Now both sides of Pennsylvania Avenue are fossil-addled. But if the US ever does get serious about mitigating climate change, those companies are going to be the ones caught with their pants down, holding a bunch of high-carbon assets that are destined to be stranded. US fossil fuel companies and utilities are basically gambling on the continued perversity of US energy policy. It’s not a terrible bet — an odds-on winner, historically speaking, and probably for the next few years — but it can’t last forever. Can it?

#### Companies are overly dependent – aff bankrupts them.

**Goldman 16** Gretchen Goldman, 12-1-2016, Gretchen Goldman is the research director for the Center for Science and Democracy at the Union of Concerned Scientists. In her role, Dr. Goldman leads research efforts on the role of science in public policy, focusing on topics ranging from scientific integrity in government decision-making, to political interference in science-based standards on hydraulic fracturing, climate change, sugar, and chemicals. She holds a Ph.D. and M.S. in environmental engineering from the Georgia Institute of Technology, and a B.S. in atmospheric science from Cornell University., "Why Haven't Fossil Fuel Companies Adjusted Their Business Models?", Union of Concerned Scientists, https://blog.ucsusa.org/elliott-negin/why-havent-fossil-fuel-companies-adjusted-business-models, Accessed on 10-28-2019 // JPark

The Union of Concerned Scientists recently released a report rating the business practices of eight top investor-owned fossil fuel companies that are either US-based or have a North American affiliate. In order of emissions magnitude, the scorecard evaluated Chevron, ExxonMobil, BP, Royal Dutch Shell, ConocoPhillips, Peabody Energy, Consol Energy and Arch Coal. In response to the scorecard, UCS supporter R. Andrews of Glendale, AZ, asked: “Your report says those large oil companies knew that ‘an alternative path forward was available’ and that ‘they could have adjusted their business models.’ It defies logic that they wouldn’t adjust their business models. Why in the world wouldn’t they?!” and is answered by scorecard co-author Gretchen Goldman. Ph.D., the Center for Science and Democracy’s research director: If the companies in our report were smart, they would have reinvented themselves. They should have seen the writing on the wall—changing economics, a need to address climate change, and the need to transition to renewable energy sources. Instead, they bet that governments would be slow to act, and they have done all they can to make sure that would be the case, much in the same way the tobacco industry staved off stronger regulations for decades. History provides examples of success—and failure. Back in the mid-1800s, whaling, which provided oil for the lamps that lighted much of the Western world, was the fifth-largest industry in the United States. By the second half of that century, whale oil was replaced by kerosene, which in turn was rendered obsolete by the electric light. The whaling industry collapsed. By contrast, the Fisher Brothers, who manufactured horse-drawn carriages at the turn of the 20th century, adapted to the changing times. Realizing that their future was tied to the fledgling auto industry, they redesigned their product to handle the stresses and strains of the new technology. They morphed into the fabulously successful Fisher Body Company, which eventually became a division of General Motors. The fossil fuel industry is at a similar crossroads today, and at least two of the companies in the UCS survey—BP and Chevron—ventured into the renewable energy business a decade ago. When they did not realize quick profits, however, they sold off their holdings. Others, notably ExxonMobil, flatly reject the idea of diversifying into renewables because, as the oil giant’s CEO Rex Tillerson told his shareholders, “We choose not to lose money on purpose.” Given that scientists project that energy companies worldwide will have to leave 60 to 80 percent of their reserves in the ground to ensure average temperatures do not rise more than 2 degrees Celsius, that’s shortsighted thinking at best, especially when governments around the world are finally getting serious about curbing global warming emissions. In any case, maximizing quarterly profits at all costs to placate Wall Street stifles innovation. When Toyota first introduced the Prius, the company lost money on every one it sold. Now it dominates the hybrid market because it was willing to invest in a long-term strategy. The oil and gas companies we surveyed had a choice and, by and large, they chose to dig in deeper, further entrenching themselves into fossil fuel dependency when they could have morphed into low-carbon and carbon-free energy companies and diversified their portfolios. They are now paying a price for their negligence. ExxonMobil , for example, is currently under investigation for fraud after evidence surfaced indicating that the company knew about the risks of climate change for decades yet continued to sell a product it knew was harmful. Meanwhile, several coal companies—including Peabody Energy and Arch Coal—have declared bankruptcy. We are not going to end the world’s dependence on fossil fuels immediately. Coal, oil and gas companies are going to continue to operate for years to come. That said, they can no longer be allowed to mislead the public and their shareholders about the threat their products pose to the planet. Likewise, governments must require them to fully disclose the risks of climate change to their operations and the full extent of their global warming emissions—and come up with credible plans to reduce them. To ensure their own future—and our children’s and grandchildren’s future—fossil fuel companies must develop new low-carbon and carbon-free products and technologies and support sensible public policies to curb global warming emissions.

#### 2] Greentech transitions.

#### Plan leads to green energy transition without wrecking the economy – aff redistributes market investment.

TRI 19 (“Decarbonizing the US Economy:Pathways Toward a Green New Deal SAMPLE POLICY: ELIMINATING FOSSIL FUEL SUBSIDIES.” The Roosevelt Institute, The Roosevelt Institute is a liberal American think tank. According to the organization, it exists "to carry forward the legacy and values of Franklin and Eleanor Roosevelt by developing progressive ideas and bold leadership in the service of restoring America’s promise of opportunity for all."The Roosevelt Institute, 2019, rooseveltinstitute.org/wp-content/uploads/2019/06/GND\_policy-brief-fossil-fuel-subsidies.pdf.)//LK [Accessed 10/22/19]

DECARBONIZING THE US ECONOMY | CREATIVE COMMONS COPYRIGHT 20192SUMMARY **Fossil fuel companies in the US heavily rely on government subsidies** to make drilling, mining, and extracting feasible, amounting to approximately $20 billion per year (Redman 2017). These corporate payouts not only sustain current fossil fuel extraction, but they also incentivize expansion into new fossil fuel projects. The US government should cease subsidizing the fossil fuel industry through a full repeal of existing subsidies to the coal, oil, and natural gas industries. BACKGROUND Historically, the US government has chosen to subsidize the fossil fuel industry to a significant degree. These subsidies amount to large transfers from the government to the fossil fuel industry.1 Handouts such as these help to prop up the existing fossil fuel sector and are largely responsible for driving up fossil fuel extraction and use in the economy. **The subsidies, initially put in place to stimulate fossil fuel extraction and further develop domestic fossil fuel assets, are partly responsible for access to cheap fossil fuels.** If the government were to stop paying these polluters through state and federal subsidies, it’s estimated that almost **half of all new US oil production would be unprofitable** and thus left undeveloped (Erickson et al. 2017). Additionally, fossil fuel subsidies represent an obstacle to renewable energy investment by artificially increasing the relative cost of renewable energy (Carbon Pricing Leadership Coalition 2017). While there is some disagreement in the literature on how much of a reduction in carbon emissions would be achieved by repealing fossil fuel subsidies, studies largely agree that fossil fuel subsidies constitute a government handout to pad the profits of fossil fuel companies (Coady 2017; Jewell 2018). According to Oil Change International, the US government spends approximately $20.5 billion subsidizing the fossil fuel industry, $14.7 billion of which comes from federal subsidies and another $5.8 billion from state subsidies (Redman 2017).2 Others contest subsidies are lower, amounting to roughly $8.7 billion as outlined in the US Self-Review of Fossil Fuel Subsidies conducted under the Obama administration in 2015 (OECD 2015). These estimates are lower primarily due to the fact that they focus on tax preferences specific for the fossil fuel industry.1 For the purposes of this report, a fossil fuel subsidy is “any government action that lowers the cost of production, lowers the cost of consumption, or raises the price received by producers. Types of fossil fuel subsidies include financial contributions or support from the government or private bodies funded by the government, including direct transfers of funds; transfer of operating or accident risks, such as by capping liability; foregone revenue including tax breaks; and provision of goods and services at below-market rates” (Redman 2017). 2 This leaves out important consumer subsidies including the Low Income Home Energy Assistance Program (LIHEAP), which helps families pay their heating bills. According to the Division of Energy Assistance and Office of Community Services, LIHEAP has released $3.65 billion for the federal fiscal year 2019 (LIHEAP 2018); total consumption subsidies amount to $14.5 billion. DECARBONIZING THE US ECONOMY | CREATIVE COMMONS COPYRIGHT 20193Table 1 displays the top 10 federal subsidies handed out to fossil fuel companies.3 The 10 major federal subsidies alone amount to an annual transfer to the fossil fuel companies of $11.3 billion, while the remaining $9.2 billion can be found in over 100 additional subsidies accessible to these polluting companies.4 To put these numbers into context: Fossil fuel firms receive seven times more subsidies in terms of permanent expenditures than the entire renewable energy sector does (Redman 2017). **Eliminating these payments would bring about important changes for fossil fuel investment returns and production decisions**. These could include reducing GHG emissions through slowing current extraction, halting development of new fossil fuel infrastructure investments, lowering profits of existing fossil fuel firms, and freeing resources currently directed at the fossil fuel industry to be deployed in building the green economy—all without having a negative effect on economic growth (Monasterolo and Raberto 2019).5 Experts also agree that this would not put US energy independence at risk, a common line for people pushing the mantra “drill, baby, drill” (Aldy 2013). Eliminating these corporate payouts will raise fossil fuel prices while freeing up additional resources for the rapid decarbonization of the US. To put these numbers into context: Fossil fuel firms receive seven times more subsidies in terms of permanent expenditures than the entire renewable energy sector does.3 A complete list can be found in Redman 2017. Note that 80 percent of subsidies flow to oil and natural gas while 20 percent flows to the coal industry.4 If we break down these subsidies by stage of production, we find that 17 percent are for remediation–cleaning up the environmental messes and abandoned resources left behind by fossil fuel companies. With the financial future of fossil fuel firms in jeopardy, there’s a legitimate concern that the government could be responsible for far more environmental cleanup from these destructive practices. 5 It is also worth noting that these authors find that fossil fuel subsidies have a higher negative distributional effect than green subsidies. DECARBONIZING THE US ECONOMY | CREATIVE COMMONS COPYRIGHT 20194SAMPLE POLICY The US should repeal all existing fossil fuel subsidies. There are 16 provisions in the US federal tax code that currently subsidize fossil fuel producers and could be eliminated to roll back fossil fuel subsidies by an estimated $8.7 billion per year (Aldy 2013; OECD 2015). With a total of $20.5 billion per year in subsidies, this rule change would represent an approximately 40 percent cut to existing subsidies—though policymakers should work to eliminate all fossil fuel subsidies. Excluding the $8.7 billion documented above, the remaining subsidies amount to an additional $6 billion at the federal level and $5.8 billion across US states. Congress, in partnership with the US Treasury and state governments, should end polluter welfare by fully eliminating these subsidies.

#### 3] Modelling.

#### Causes global emission cutbacks – Montreal Protocol proves.

Bukharin '17 (Irina Bukharin; 8-24-2017; Analyst at C4ADS, Through a peer-reviewed editing process, SIRJ seeks to become a major vehicle for undergraduate research on international relations, and encourage critical and intellectual dialogues among scholars. Cite Robert Falkner, political scientist at the London School of Economics "Environmental Multilateralism: Climate Change and American Decline"; https://works.swarthmore.edu/swarthmoreirjournal/vol1/iss2/7/, Works, accessed 11-19-2019; JPark)

The United States’ poor record of leadership in international environmental policy grows more concerning as the impending effects of unrestrained climate change become increasingly apparent. Though it is the country most able to **provide effective leadership**, the U.S. is **routinely condemned** for acting unilaterally, often in ways that undermine international agreements that it sees as counter to American interests (Ivanova 2008, 58). Robert Falkner, political scientist at the London School of Economics, explains: “America’s hegemony has formed the basis for both **international** **leadership** and **veto power** in environmental regime formation” (2005, 585). This lack of international systemic restraint, coupled with the absence of a clear “global strategic imperative” to act on climate change, means that the decentralized U.S. foreign policy apparatus and competition among domestic interest groups can produce variation in U.S. and foreign environmental policy (Falkner 2005; 586, 589). Falkner concludes that “renewed US [sic] environmental leadership is only possible as a result of strong public demand, supported by institutionalized pressure from environmental groups and business interests acting in favor of international regulation” (2005, 597). Falkner’s basic outline of the conditions necessary for the U.S. to assume environmental leadership is helpful in creating a model for promoting positive change in U.S. environmental policy. Leadership by the U.S. is necessary to create a strong plan for reducing the effects of climate change. As Falkner argues, since the U.S. is the global hegemon, it has the ability to work unilaterally or multilaterally, an option that impedes stable global cooperation on climate change. American hegemony is not a constant, however; it is in decline. It is in the United States’ **best interest** to lead the world in climate negotiations, not only to protect the environment and current related American interests, but also to secure an advantage in the international climate agreement that will serve future American interests. Many American leaders might reject this argument, so it is important to look at a case study in order to understand the conditions under which the U.S. would assume the necessary leadership role. U.S. environmental and business interests aligned because of the mutual reinforcement of scientific evidence and widespread public support. The alignment between these two core interests allowed the U.S. to lead efforts that resulted in the creation of the Montreal Protocol. The U.S. used its power as hegemon to help create the Montreal Protocol, which in turn helped maintain future U.S. advantages in certain areas. Even without the threat of future decline, it is in the United States’ interests to work multilaterally to mitigate the effects of climate change, as environmental consequences will directly harm U.S. national interests and cannot be stopped unilaterally. Climate change has Page 33 Swarthmore International Relations Journal Spring 2017 already had a substantial net negative impact on food production, foreshadowing the food insecurity that will result from climate change (IPCC 2005; 5, 13). More indirectly related security threats may arise as well; natural disasters, which have and will continue to increase in frequency and severity “may, when coupled with other triggers, do more to destabilize the government than an armed attack on the nation or its capital” (Busby 2008, 476). The U.S. has an interest in preventing states from failing, which can lead to regional conflict; so it has an interest in stopping events related to climate change. Furthermore, the U.S. will be expected to give aid to the most afflicted countries, and some of this money and support may come from the military (Busby 2008; 475, 476). Even if the United States were to remain a hegemon indefinitely, its interests lie in preventing climate change, not just for moral reasons, but for more pragmatic national interest reasons as well. International cooperation is necessary for successful climate change action, and it will not occur without American leadership. The negative environmental actions of one country frequently affect other countries in unforeseen and unavoidable ways, so “individual states are **ill-equipped to respond alone** to the myriad of challenges posed by transboundary environmental, social, and health problems” (Schreurs 1997, 1). Additionally, due to the costs of being the first state to act and the problems that can arise with free riders, the international community **needs a regulatory system** to ensure the long-term viability of any international efforts to combat climate change (Figueres 2012). For several reasons, this will not happen without **American leadership**. Not only has the U.S. historically been a force for developing international organizations and treaties, but treaties that are **not supported** by the U.S. are often seen as **less legitimate** (Ivanova 2008, 58). Furthermore, because the U.S. is the **largest contributor** to man-made climate change, it is essential the U.S. visibly work to find a solution, otherwise other countries will argue that it is **unfair** for them to pay to fix the problem that **the U.S. had a large part in creating** (Falkner 2005, 591). In short, without American participation, no international environmental action can have true **legitimacy, stability, and success** (Falkner 2005, 591). Falkner is correct that while America remains a hegemon and does not see environmental issues as a matter of national security, it will continue to have the choice to act unilaterally or multilaterally, and this choice will be decided by domestic politics. One thing that he does not consider is that while America does have flexibility in international environmental politics now, it will eventually lose the power that comes with being a hegemon. Because of this, it is in the United States’ long-term interests to establish an international climate change agreement now, using its power to create a system that will benefit it when American power diminishes in the future. To do this would not be to act under structural pressure, but to foresee a situation where structural forces may have more power. This means that the U.S. will not automatically work to create a climate change agreement, so it is necessary to use Falkner’s arguments to determine what domestic conditions must exist for the U.S. to act in its long-term interests. Domestic politics are primarily influenced by environmental interests, business interests, and public opinion, which are informed by scientific evidence and consensus, determining factors that Falkner does not adequately address. All of these arguments can be seen in the case of American leadership preventing destruction of the ozone through the Montreal Protocol. Page 34 Swarthmore International Relations Journal Spring 2017 American power has peaked; it should work while it still has a significant advantage over other countries to maximize its power and capabilities for the future, when it exists in a multipolar world. Although its military advantage will likely remain strong for the foreseeable future, trade war is currently much more likely than traditional inter-state conflict. The American military is useful in engaging in regional conflicts, but it is less relevant in the negotiation of environmental treaties (Young 1994, 136). On the other hand, economic power can increase a hegemon’s bargaining power, as a hegemon can better cajole and coerce using the promise of trade or assistance, soft power, or the threat of sanctions (Falkner 2005, 588). However, the American share of the world economy has been decreasing since 1950, while the Chinese share of the world economy has been increasing since then and is now larger than the American share (Thompson 2012, Thompson 2015). As “the old order dominated by the US [sic] and Europe is giving way to one increasingly shared with non-Western rising states,” American dominance is coming to a close, even if not in the immediate future (Ikenberry 2011, 56). In an increasingly multipolar world, the U.S. will not be able to act unilaterally or multilaterally depending solely on its domestic politics. Instead, the international system, and the great powers in the international system, will have a larger influence on how America acts. In order to preserve American interests, the U.S. would benefit from establishing international environmental treaties that favor U.S. interests and give the U.S. a **position of power for future negotiations**, thus “locking in” American power that might otherwise dissipate. In the past, across a variety of issues, the U.S. has created structures that favor it, and thereby has “spun a web of institutions that connected other states to an emerging American-dominated economic and security order” (Ikenberry 2001, 21). This can be seen in the United Nations, where the U.S. has veto power due to its permanent seat on the Security Council. Even though these institutions have been built primarily by Western nations, rising nations do not want to **change** the structure or guiding rules of the international order; they want to gain more **power** within it (Ikenberry 2011, 57). This indicates that there might be little pushback against an international treaty concerning climate change, so long as it includes developing nations. Although this may partially restrain the U.S., “now may be the best time for the United States and its democratic partners to update the liberal order for the new era, ensuring that it continues to provide the benefits of security and prosperity that it has provided since the middle of the twentieth century” (Ikenberry 2011, 58). This means creating a comprehensive international treaty to mitigate the effects of climate change while preserving American interests before they must be ceded to a multipolar world order. **The Montreal Protocol** is often cited as **the best example** of both international cooperation and American leadership on an environmental issue. In 1973, scientific evidencebegan to indicate that certain chemicals used in refrigerants and aerosols, among other things, could be destroying the ozone layer, which would increase levels of skin cancer and damage crops. The agreement to phase out these ozone-depleting substances (ODSs) was ratified in 1985, a mere twelve years after the first scientific discovery. At this point in time, all nations in the United Nations have ratified the original Montreal Protocol (UNEP 2014). In this case the U.S. was a key player, and it led the successful phase-out of ODSs that were damaging the ozone layer (Ivanova 2008, 57). The role of American hegemony in creating this treaty provides a coherent, though perhaps overly simplified, model for what needs to happen for American leadership to occur on a climate treaty, as prescribed by Falkner. In the case of the Montreal Protocol, industrial interests shifted to favoring increased regulation after a vocal public demanded it. This shift was founded on the increasingly clear scientific evidence of the reality of ozone depletion. Additionally, the treaty gave an advantage to and protected the American chemical industry in the long term. Support from the chemical industry was crucial in allowing the U.S. to have a prointernational regulation position, as business interests often impede environmental legislation. According to Falkner, “environmental groups and business interests frequently pull in opposite directions when it comes to managing environmental problems,” which causes “rifts within the domestic constituency of US foreign environmental policy” (2005, 595). Businesses often feel it is unfair for their economic interests to be sacrificed for the sake of environmental protection, and they lobby heavily in the name of protecting the U.S. economy (Sussman 2004, 352). In this they are often successful, as they have political access and money to donate to politicians’ campaigns (Harris 2001, 22). However, businesses will strongly support international legislation if they are already subject to similar domestic regulations, and “much international environmental regulation appears on the international agenda through the process of internationalizing domestic regulation” (Falkner 2005, 595). The chemical industry eventually supported ODS regulation due to falling sales and the realization that this regulation would give them an advantage in creating substitutes. As soon as the ozone depletion theory became widespread, the sale of products using ODSs in the U.S. fell by nearly two thirds (Benedick 1991, 28). Although initially the industry was opposed to any regulation, “soon after the first signs of consumer disquiet showed, industry opposition to the CFC-ozone theory began to crumble” (Harris 2001, 164). In response to this pressure, firms began developing alternatives to ODSs (Benedick 1991, 31). Because of this shift, American chemical companies began to support international regulation that would then “level the playing field” and stop foreign companies from using the cheaper ODSs for their competing products (Benedick 1991, 31). They realized that this regulation would create a market for substitutes that only large, wealthy corporations could develop, and since the major American corporations had already started developing these alternatives, they recognized that international regulation would give them a long-term advantage (Schreurs 1997, 75). This support gave legitimacy to proregulation advocates and made it easier for American legislators and diplomats to champion this regulation at home and abroad.

#### China models Greentech development – allows negative emissions.

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China’s energy landscape China is the world’s largest energy consumer, second largest economy and most populous country with 1.3 billion people. China’s economy has experienced unprecedented growth during recent decades to become a global economic superpower. At the same time, it holds the title of world’s biggest polluter. Its era of energy independence and self-sufficient ideology has ended, replaced by its voracious appetite for energy, which is both the cause and consequence of its fast-growing economy. Today, the success of China’s economic growth is inseparable from its dependence on global markets of the capitalist world. Chinese economic growth over the past three decades has been based on energy consumption, which has exceeded its GDP growth since 2002 (Xing and Clark 2010). China soon became dependent on energy imports, and in 2010 surpassed the United States to become the largest energy consumer in the world. Increasingly, China’s high energy use is both a cause and an effect of its unprecedented economic growth, particularly in the heavy industry sector. China’s demand for all forms of energy is largely due to the production and exportation of goods, and manufacturing materials for construction projects in the domestic market (IEA 2007b: 261). China’s energy matrix has the following characteristics: Coal: Coal represents close to 70 percent of the country’s total primary energy consumption, although China’s coal sources are low quality, dangerous to mine, highly sulfuric and extremely polluting (Cornelius and Story 2007). China’s coal reserves are equivalent to about 12.5 percent of the world’s total reserves, and at current production levels, should last until mid-century. Because coal is an abundant, low-cost native resource, China depends on it as its primary energy source. However, this dependence is the primary cause of China’s energy-related environmental degradation and is cited as the principal factor in high CO2 emissions. The country is investing in technologies in order to use coal in a cleaner manner (Cornelius and Story 2007). Oil: Crude oil accounts for less than one-quarter of the country’s total energy consumption despite its growing dependence on imported oil, placing it among the main issues on its political agenda. A key factor behind this is the rapid expansion of China’s auto fleet. Meanwhile, the country’s reserves are estimated at less than 15 years. China is the world’s fifth largest oil producer, but in 2011 was dependent on imports to meet about 54 percent of its oil demand. Of its oil imports, more than half comes from the Middle East. There are four large state-owned Chinese oil companies; the government regulates the prices for petroleum products (IEA 2012: 6). Gas: China is a net importer of natural gas; that is to say that although it is a gas producer and exporter, its total imports exceed the volume of gas exported. This power source accounted for only 4 percent of China’s total energy consumption in 2011 (U.S. EIA). The country is also exploring shale gas extraction possibilities to reach known sources of gas that it has not yet been able to extract. Alternative Sources: Hydro, wind, solar and nuclear energy sources form a small percentage of China’s energy matrix and are being further developed, but not enough to reduce China’s dependence on fossil fuels (IEA 2007b). However, with its natural endowments of renewable resources, China could meet all its domestic energy demand (Gallagher 2013). ‘Nowhere is China’s global influence greater than in energy markets’ (Cornelius and Story 2007: 7). This applies especially to China’s unquenchable thirst for crude oil, which has more than doubled since the mid-1990s. Today, the Chinese economy is the world’s second largest oil consumer, and with the stagnation in domestic production, its growing import demand is widely seen as a key factor behind the rise in global oil prices. China’s role in global energy development affects its policy formation and interstate relations, environmental protection standards, and the energy efficiency of other global players through the goods it produces and exports. Despite the rapid growth of the country’s demand from all sectors of energy, China’s global emergence has made the world economy become more dependent on oil, via prices, competition for supplies, and safety concerns. To improve the efficiency of vehicles and electrical appliances that China produces and exports, is to improve energy efficiency for the rest of the world (IEA 2007b: 45). As a rising global power and large energy consumer, China is on a trajectory that could potentially reshape the global energy landscape. This may be especially true in the areas of conservation and efficient use of fossil fuels, as well as the subsequent global incorporation of renewable energy sources through China’s own technological advances and emulation by other countries of its clean energy practices. This potential intersection of economic and political rise with the global energy markets is reminiscent of the increased U.S. demand for oil and dependence on imports, which coincided with its growing strategic power during the 20th Century. As China grows economically, it increasingly plays an important role in determining global technical standards and promoting their convergence. China’s growing weight in the global economy can contribute to revolutionizing the world’s energy system (Cornelius and Story 2007: 15). The United States’ energy landscape The United States is currently the world’s largest economy, although there are projections of it being topped by the Chinese economy. With a population of almost 314 million, the United States is the second largest consumer of total energy. The United States is almost entirely dependent on fossil fuels for its energy supply, and renewable sources account for only a small portion of its total matrix. Like China, the United States is self-sufficient in coal and heavily dependent on imported oil. Meanwhile, its demand for energy is expected to continue to increase due to population and economic growth. The latter is driven mainly by an increased demand in the residential and transport sectors, although all areas have seen an increase in demand (IEA 2007a: 15). The U.S. energy matrix includes: Oil: Most of the United States’ energy consumption, about 36 percent, comes from oil. The country is heavily dependent on imported oil, due to increased demand in the residential and transport sectors. The United States is the largest oil importer in the world, followed by China (Gallagher 2013). Gas: Natural gas accounts for about 25 percent of the country’s energy consumption. Energy from shale gas sources in the United States increased by more than 50 percent annually between 2007 and 2012, increasing total U.S. gas production from 5 percent to 39 percent. In light of these shale gas developments, the United States is ‘about to become an energy superpower’ (Blackwill and O’Sullivan 2014). Coal: Nearly 20 percent of U.S. energy consumption is met by coal. Alternative sources: About 8 percent of U.S. energy consumption is powered by nuclear energy and 9 percent by renewable energy, including solar, geothermal, biomass, and hydro sources. The Energy Policy Act of 2005 describes the use of clean energy in the country, especially a strong movement toward nuclear energy (U.S. EIA). The United States also has significant renewable energy sources in a way that has the potential to lead the world in renewable energy despite its natural endowment of fossil fuels. For example, its wind resources could exceed the total of the projected electricity demand for the entire country, and the conditions for solar energy also look promising. Of note is that countries with less favorable conditions for renewable energy, including China and Germany, have approved greater renewable energy policies (Gallagher 2013). Like China, the United States is exerting global influence over the future development of energy. The country has served as a global leader in energy research and development, and has advanced energy technologies. The U.S. government is the largest funder in the world of energy research and development, which historically has promoted the advancement of all energy fields, including fossil, nuclear, and renewable fuels. The government partners with private and educational institutions and international organizations to promote its agenda. The objectives of its policies guide the research and development of energy technologies. These investments in research and development are an important policy tool to meet the country’s energy goals. The U.S. government is also the world leader in international collaboration on technology and participates in international organizations focused on energy best practices, such as the International Partnership for the Hydrogen Economy. The United States has several research and development strategies that coordinate the investments in research and technology development, including the Climate Change Technology Program, which is an investment program of several billion dollars for the research, development, and implementation of climate-related technologies. Another example, the Advanced Energy Initiative, works to promote energy efficiency technologies and reduce reliance on imports, including investments in cleaner coal plants and alternative and renewable sources (IEA 2007a: 31, 50). Energy security and renewable Energy Non-renewable energy sources provide about 90 percent of the world’s commercial energy, while nuclear power and hydropower provide most of the remaining amount (Podobnik 2002: 253). The problem of energy security can be seen simply as supply and demand: energy needs are growing and showing no signs of slowing yet, at the same time, known sources cannot keep up with this pace of growth. Due to the fact that the world’s largest energy consumers cannot meet their energy needs through domestic supplies, and the global supply seems unable to meet future demands, we can see a shift towards renewable energy sources. While this pressure can, and will likely be, mitigated by technological advances and the discovery of new sources, the shortage resulting from the current rate of consumption will lead to competition for access and control, which will increase tension between states (Podobnik 2002). Both China and the United States are in an unsustainable energy situation. Because of their current high energy consumption, both countries are almost completely dependent on fossil fuels, while renewable sources make up only a small portion of the energy supply. Both countries are self-sufficient in coal, largely self-sufficient in natural gas and heavily dependent on imported oil. Meanwhile, energy demand will continue to increase because of population and economic growth. The latter is mainly driven by increased demand in the residential and transport sectors, although all areas have contributed to the increased demand (IEA 2007a: 15). It is expected that global demand for energy will exceed known sources and most of the major energy consumers in the world will not have a sufficient domestic supply, especially of oil, to meet this future projected demand. Meanwhile, there is considerable political pressure to diversify away from coal consumption because it is considered a major source of pollution and a serious danger to public health. However, governments are also under pressure to promote economic growth in which energy plays a key role. This means that energy security is deeply rooted in foreign policy and is an important factor in relations between states. Therefore, the most important powers in the world are increasing their investments in renewable and sustainable alternatives, including solar, wind, and hydropower. Meanwhile, less powerful states seek to imitate the most powerful states in the world. This is evidenced in some developing nations, like Brazil, India and South Africa, which try to emulate the clean energy policies of the European Union. The high energy consumption of both China and the United States is a threat to global energy security, and therefore one of their most important political challenges seems to be to develop the ability to meet long-term energy needs reliably, safely, economically, and in an environmentally friendly way. Common challenges include pollution and environmental degradation, inefficient and intensive use of energy, and the depletion of non-renewable resources. Both countries are addressing these challenges in a similar way, with political goals aimed at reducing dependence on imports, reducing emissions of greenhouse gases, and increasing energy efficiency. Both China and the United States have implemented the following national energy policies: carbon cap carbon market, renewable energy standard, tax incentives for clean energy efficient standards, feed-in tariffs and green bonds (PEW 2014: 37, 50). Political action to reduce demand, coupled with increased energy efficiency and the development of new sources, particularly renewables, can be an alternative for these two nations. There is an intersection between energy security, national development and states’ policies (Pautasso and Kerr 2008). Most states are challenged by competition for resources, shortages in energy supply, environmental impacts, and the search for energy policy solutions to address these challenges and to promote world order. In general, the objectives of energy policy include ensuring energy supply safety, generating economic growth and facilitating the preservation of the environment. A comparison of the energy policies and scenarios (energy supply, demand and reserves) of China and the United States suggests that a change in the energy policies of these states is critical in order to meet the world’s contemporary energy security needs. While many of the Chinese and U.S. energy policy solutions are similar, the two countries have little in common in terms of collaboration or cooperation. There does seem to be a great opportunity for cooperation between these states in developing and implementing long-term sustainable energy policies. The world would benefit from energy cooperation between China and the United States as well as a potential transition to a predominantly renewable energy system. The effects of clean energy are far-reaching. Renewable energy sources contribute to energy security by diversifying energy sources, both technologically and geographically. They affect the economy through imports, exports, job creation, global energy prices, public health and environmental degradation mitigation (IEA.org; Gallagher 2013). Both China and the United States have enough of their own renewable sources to meet all of their potential demand for domestic energy. In addition, the United States has such a significant endowment of renewable energy resources that it could lead the world in renewable energy (Gallagher 2013), despite its recent boom in shale gas. Fundamental changes in the global energy system occur more easily during the decline of a great power and when the international system is in disarray (Podobnik 2006), as in the current situation of the relative economic decline the United States and the rise of China (Arrighi 2008). The role of the accumulation of resources and state power is evident in hegemonic transition periods, as were the two previous transitions in the 19th and 20th Centuries. Now, China is emerging as a global economic power in the 21st Century. This hegemonic transition prompts competition and innovation around the globe (Podobnik 2002), not just between the powers in transition. Energy security is no exception. Developed countries and developing countries spend billions of dollars annually incorporating renewables into their energy security policies and for the last eight years there has been a growing trend for larger investments by developing countries. In recent years, China has led the world in investment in renewable energy, followed by the United States. Four developing countries were among the 10 largest investors in renewable energy in 2012: China, India, Brazil and South Africa, four of the five BRICS nations. These nations’ billion-dollar investments place them at the level of major powers, like the United States, Germany, Japan, Italy, the U.K. and France. Russia, the remaining BRICS nation, is an exporter of energy that is also incorporating renewable energy into its national policies. Competition for energy resources also seems to be spurring the development of renewable energy as conventional energy prices continue to rise (Podobnik 2002). History shows that a crisis in a dominant source of energy was mitigated by the transition to another energy source, such as the transition from coal to oil in Great Britain during the 19th Century. Podobnik (2006) suggests that the inevitable oil crisis today will, in part, cause a shift towards renewable energy sources. The last two centuries show two major transitions of power during periods of industrial growth: the shift from charcoal to coal in the mid-19th Century, and when oil became the dominant world energy source in the mid-20th Century. Many countries appeared to be self-sufficient in energy until around 1950, when they began to become increasingly dependent on energy imports, leading to the transition to oil. Due to the fact that the major powers did not have significant oil reserves, energy needs were underpinned by imports. This strategy does not seem tenable for future energy needs and also seems to be prompting new, and in some cases, more, investments in renewable energy options. Perhaps the energy transition of the 21st Century will be defined by a shift from non-renewable fossil fuels to renewable energy sources. Hegemonic advancement can be seen during the energy transition periods, including the transitions of 1750-1850 from peat and charcoal to coal, and the 1900-1950 transition from coal to oil. Coal and steam power, in combination with capital and empire, increased ownership and led to an ecological surplus resulting in food, labor, and cheap energy. The cheap coal, and later (after 1945), cheap oil led to increased consumption and a significant expansion of consumer markets. In addition, cheap raw materials, that is, vital goods such as food, raw materials, and energy were instrumental in the creation and maintenance of large waves of accumulation because this ecological surplus reduces production costs and increases the rate of profit (Moore 2013). Today, we see close races for fossil fuels (with the global supply becoming increasingly limited in the medium- and long-term), while countries seek to diversify their respective energy matrices to include alternative sources, such as shale gas extraction and renewable energy to meet their energy needs. It seems that the current global energy system is in transition, with its unsustainable reliance on the use of fossil fuels, including their exhaustion, pollutant nature, and increased demand, as well as the intersection of three systemic dynamics identified by Podobnik (2006) as necessary conditions for a shift in global power. They are: 1) geopolitical rivalry, 2) commercial competition and 3) social conflict. Each of these dynamics is evident today, as we see: 1) competition for existing limited fossil fuels in the world, specifically oil, 2) economic competition for energy technologies, such as foreign investment opportunities and the export of renewable energy, and 3) the chaos that is associated with the hegemonic transition. In sum, China and the United States are competing for resources, striving for market share and fighting against environmental degradation caused by the excessive use of fossil fuels. Now is the time for an energy transition, but whether it will be in the direction of renewable energy is still uncertain. Moreover, it is necessary to monitor in detail whether China, which has so far been unable to replicate the shale gas boom in the United States, will continue to increase its investment in the use of renewable energy sources to help secure its energy security. In other words, it is worth further investigation based on the current divergence of investments in renewable energy by both China and the United States. FINAL CONSIDERATIONS Concerns about the current state of energy security could trigger deep structural changes in the global energy system (Cornelius and Story 2007: 14). Renewable energy offers the long-term promise of sustainability on several fronts for countries around the world (Heiman and Solomon 2004). Currently, the world’s energy needs are growing without showing signs of slowing, while at the same time, known sources of non-renewable energy will not be able to sustain this rate of growth. Although the pressure to meet increasing demands can, and probably will, be mitigated by technological advances and the discovery of new sources (Cornelius and Story 2007), renewable sources appear to be a viable solution to contemporary energy challenges for many countries around the world. As a global power and the world’s highest energy consumer, China is on a path to potentially reshape the global energy landscape, especially in the areas of fossil fuels conservation, more efficient energy use, and the subsequent global incorporation of renewable energy sources. This may be possible through China’s own technological advances and the other countries’ emulation of its clean energy practices. As it grows economically, China will increasingly play an important role in determining overall technical standards and in the promotion of energy convergence. Its growing weight in the global economy could help revolutionize the world’s energy system (Cornelius and Story 2007: 15). Energy challenges in China are no different from other countries with the same problem, but the extent and speed at which change is occurring is unique. Like other countries, China’s energy policy challenges go hand-in-hand with its economic policy objectives. The country needs to maintain its rapid development and economic growth, but in a much less energy-intensive way. This is widely recognized by the Chinese government, but significant changes in energy consumption relative to economic output could mean major changes in its economic structure (IEA 2007b: 271-2). The role of the United States in renewable energy should not be discounted, even if it is incorporating proportionally less than China in this area. The United States is the global leader in energy research and development and, furthermore, has always progressed energy technologies. The U.S. government is the world’s largest contributor to energy research and development, which has historically provided huge advances such as in the energy fields of fossil fuels, nuclear power, and renewable sources. However, the abundance of shale gas and the increasing reliance on this resource may slow the country’s move towards greater incorporation of renewable sources in its energy matrix. Despite its renewable energy resources and capacity to meet energy demands with these sources, the United States appears set to continue its reliance on nonrenewable energy sources because of its abundant natural endowment of shale gas. Pautasso and Kerr (2008) state that the new world order should be structured based on the symbiotic relationship of the rise of China and the United States’ reaction to this rise. Such a transition could result in a change in the balance of power in the international system toward China. A major factor in this transition is related to energy security, as we have seen in previous hegemonic transitions. Stronger cooperation between China and the United States is vital to address the common challenges of energy security, including market stability and supply, as well as new advances in renewable energy that benefit energy consumption, boost economies, and mitigate environmental impacts. However, China and the United States seem to have a long way to go to achieve their respective policy goals for energy efficiency and environmental sustainability. Energy-related relations between them seem to be characterized by a mixture of cooperation, coexistence and competition. Renewable energy is often portrayed as a zero-sum game, but there are reasons for cooperation (Zweig and Jianhai 2005; Murray et al. 2011). As stated by Murray et al. (2011: 7): ‘It is not uncommon for the terminology to frame the impetus for the development of clean technologies as a war, with the implication that one country will win and others will lose...’ However, other countries ‘can also win by having access to cleaner energy and use energy more efficiently than they would normally, even if the technologies that produce the energy originates in another country’ (Murray et al. 2011). It is important to stress that relations between China and the United States have been characterized by interdependence. These two great powers are both in competition with each other and mutually dependent on each other in, for example, trade and investments. As noted by Morris (2012), the interactions between these two countries are complex and marked by both cooperation and conflict. China is highly dependent on the U.S. consumer market for its exports and the United States, in turn, depends on large volumes of inexpensive goods produced by China as well as Chinese funding for a significant portion of its current account deficits (Arrighi 2008; Ho-Fung 2009). Therefore, it is unlikely that China will directly challenge U.S. energy supply sources – after all, it still depends on U.S. investments and the U.S. market. Taking this into consideration, this article aims to show that China is incorporating and investing in more renewable energy resources, quite possibly with the intent of global leadership in this sector, inclusive of its technological innovations, as highlighted by Klare (2013). In regard to the United States, the race for renewable energy incorporation has already been acknowledged as a challenge by the U.S. government. In 2014, President Barack Obama announced the expansion of the country’s cooperation with China on climate change and clean energy (U.S.- China Joint Announcement 2014). Such an announcement can be understood as the United States’ reaction to China’s prominence in the field of renewable energy, as demonstrated by the data presented in this article. Moreover, as highlighted by Klare (2013), the dynamics of the American political process should also be taken into consideration when considering the country’s investments in renewable energy. For example, as in the present situation, a U.S. congress with a Republican majority probably will not authorize more resources and new projects in the renewable energy sector.3 Because the issue of energy is crucial for the power-capital-accumulation processes, China’s greater use and development of renewable energy, as presented in this article, are indicators that this country, which has led East Asia’ as the most dynamic region in the world economy, also seems to be aiming for world leadership in this strategic sector. Maintaining or even expanding the current scenario described in this article, the divergence between China and the United States in the development, control of, and leadership in renewable energy appears to provide empirical evidence of the end of the American hegemony, defended by Wallerstein and Arrighi. Although it is too premature to make statements about a new hegemony, China, as an emerging global power and the world’s largest energy consumer, is able potentially to reshape the global energy landscape, primarily in the efficient use and conservation of fossil fuels, as well as through the incorporation of renewable energy sources into its energy matrix. However, as highlighted by Arrighi (2008: 392), ‘inspired by others in the Western way of excessive energy consumption, China’s rapid economic growth has not yet created for itself and the world an ecologically sustainable path of development’.

#### Elimination puts a large dent in warming—conservative estimates

**Gerasimchuk et al 17** [Ivetta, Economics from the Moscow State Institute for International Relations; Andrea M. Bassi, Ph.D. and M.Phil. in System Dynamics from the University of Bergen; Carlos Dominguez Ordonez, Alexander Doukas, Laura Merrill and Shelagh Whitley] “Zombie Energy: Climate benefits of ending subsidies to fossil fuel production” International Institute for Sustainable Development, February 2017 RE

A lot of studies consider emission reduction (or growth) resulting from a given policy against business-as-usual scenarios that would lead to levels of climate warming far beyond what has been agreed in international forums. By contrast, it is also possible to measure climate benefits of policies using a different point of departure: carbon budgets for 1.5°C and 2°C targets, which is the volume of GHGs that can still be released while staying within the globally agreed climate limits. We use both approaches discussing the climate benefits of subsidy removal against both business-as-usual baselines and carbon budgets outlined in Table 1 in Section 1.3. The impact of production subsidy removal on GHG emissions from fuel combustion is highly sensitive to market prices for fossil fuels. Against the Current Policies scenario—a scenario that assumes up to a price of USD 145 per barrel of oil by 2050 and takes the climate change to above 5°C—the emission reduction from combustion is estimated up to 37 gigatonnes (Gt) of CO2 . This is equivalent to 6 per cent of the reduction25 that we need to reach the 2°C target with a 66 per cent chance of success, or 4 per cent of the reduction that we need to reach the 1.5°C target with a 50 per cent chance (see Table 8 for aggregate estimates of avoided emissions over 2017–2050). This cumulative reduction of up to 37 Gt of CO2 over 2017–2050 averages at approximately 1.1 Gt of CO2 per year, or 2 per cent relative to the Current Policies baseline in the period 2017–2050. This would be roughly equivalent to eliminating all emissions from the aviation sector: according to business-as-usual projections, between 2016 and 2050 global aviation would generate an estimated 43 Gt of CO2 emissions (Pardee, 2015). If, by contrast, fossil fuel prices remain at the level of 2015–2016 (approximately USD 50 per barrel for oil), 138 Gt of CO2 in energy reserves affected by production subsidy removal would never be extracted.26 This is because while these reserves remain uneconomical to produce due to both low prices and production subsidy removal, the role of these fossil fuels in providing energy services would be taken by other energy sources, including renewables. These energy reserves would thus not be burned, bringing the aggregate CO2 emissions reduction up to 175 (37+138) Gt of CO2 over 2017–2050. This is equivalent to 29 per cent of the reduction27 that we need to reach the 2°C target with a 66 per cent chance of success, or 17 per cent of the reduction that we need to reach the 1.5°C target with a 50 per cent chance. 25 Under the Current Policies scenario, the projected emissions over 2017–2050 will amount to 1,395 Gt. Compared with the carbon budgets presented in Table 1, this means an overshoot of 1,045 Gt over the target compatible with 50 per cent of 1.5°C, and an overshoot of 595 Gt over the target compatible with 66 per cent chance of 2°C. 26 This is a simplified hypothetical interpretation for CO2 emissions only, while the simulation for the Current Policies scenario is for all GHG emissions, not just CO2 . In this interpretation, we also assume that only fossil fuel prices change due to exogenous factors, and all other factors remain the same as in the Current Policies scenario. 27 Under the Current Policies scenario, the projected emissions over 2017–2050 will amount to 1,395 Gt. Compared with the carbon budgets presented in Table 1, this means an overshoot of 1,045 Gt over the target compatible with 50 per cent chance of 1.5°C, and an overshoot of 595 Gt over the target compatible with 66 per cent chance of 2°C. Thus, depending on fossil fuel prices, the GHG emission reductions from a removal of production subsidies could be anywhere between 37 and 175 Gt of CO2 , and, provided that demand for fossil fuels follows the baseline, the lower market prices for fossil fuels will be, the greater the climate benefits of a production subsidy removal (see Table 8 for aggregate estimates of avoided emissions over 2017–2050). Overall, the climate benefits are likely to be underestimated in the GSI-IF(p) simulations for several reasons. First, underlying estimates of subsidies to fossil fuel production rely on incomplete data, whereas many of the already-identified subsidies in G20 countries have yet to be quantified. Second, for the input data it assumes that most subsidies are targeted at all production and not just marginal fields. Third, the modelling itself focuses on the emissions reductions and energy reserves rendered uneconomical to produce as a result of demand response to changes in production, which, in turn, is triggered by subsidy removal. It does not capture several other important factors discussed below with view to future research, such as a possible domino effect of subsidy removal on private sector divestment. At the same time, these conservative estimates place the phase-out of subsidies to fossil fuel production on the policy-makers’ table as a solid option among other climate change mitigation policies. This is particularly true for the countries that are significant producers of fossil fuels, since the GHG savings for them will be greater

#### 4] The aff is uniquely key.

#### Fed key – there’s Greentech progress at the state and regional level that needs fed oversight.

Pyper 18 Julia Pyper, 7-19-2018, Julia Pyper is a Senior Editor at Greentech Media covering clean energy policy, the solar industry, grid edge technologies and electric mobility. She previously reported for E&E Publishing, and has covered clean energy and climate change issues across the U.S. and abroad, including in Haiti, Israel and the Maldives. "No Longer a Novelty, Clean Energy Technologies Boom All Across the US", No Publication, https://www.greentechmedia.com/articles/read/no-longer-a-novelty-clean-energy-technologies-boom-across-the-us, Accessed on 10-28-2019 // JPark

It was 1997, and stakeholders were working hard to help craft the first renewable energy standard in the State of Massachusetts, which ultimately passed as part of an electric utility restructuring act. At that time, the notion that Massachusetts would be one of the top solar states in the country was almost laughable, recalls Rob Sargent, who currently leads the energy program at Environment America. Today, renewable energy is taking off in virtually every state in the nation. A new report and interactive map released this week by Environment America takes stock of U.S. clean energy progress to date. It finds that leadership is no longer concentrated in select parts of the country, but that it is distributed across states with varying economic and democratic makeups. “You’re seeing an evolution that’s happening everywhere; and it will be interesting to see what will happen 10 years from now,” Sargent said. Today, the U.S. produces nearly six times as much renewable electricity from the sun and the wind as it did in 2008, and nine states now get more than 20 percent of their electricity from renewables. Last year, the U.S. produced a record amount of solar power, generating 39 times more solar power than a decade ago. In 2008, solar produced 0.05 percent of electricity in the U.S. But by the end of 2017, solar generation reached more than 2 percent of the electricity mix — enough to power 7 million average American homes. Wind has also seen dramatic growth over the last decade. From 2008 through 2017, American wind energy generation grew nearly fivefold. Last year, wind turbines produced 6.9 percent of America’s electricity, enough to power nearly 24 million homes. And the forecast shows even more growth as America’s offshore wind industry begins to take off. Meanwhile, the average American uses nearly 8 percent less energy today than a decade ago, thanks in large part to energy efficiency improvements. The U.S. transportation fleet is also transforming. Last year, all-electric vehicles broke past 100,000 annual sales for the first time, with 104,000 units sold. As recently as 2010, the number of EVs on American roads numbered in the hundreds, even including plug-in hybrid vehicles. Now there are more than 20 pure-electric models on the market, ranging from affordable commuter cars to ultra-fast luxury vehicles. On the energy storage front, nine of the 10 states that have added the most battery storage capacity to date had zero utility-scale battery capacity in 2008. California, Illinois and Texas are among the battery storage state leaders. In one benchmarking development, a bid to build solar-plus-storage in Arizona beat out competing bids for new natural-gas peaker plants. Environment America’s state-by-state breakdown offers a handy way to track clean energy deployments across the country. To view progress on solar, wind, electric vehicles and energy storage by state, explore the interactive map below. The report leverages data from the U.S. Energy Information Administration, the American Council for an Energy-Efficient Economy, the Auto Alliance and the Solar Energy Industries Association, among others. Thanks to policies like the renewable portfolio standard Sargent and others helped to pass, the report shows Massachusetts saw 247-fold growth in solar generation over the last decade, with an increase from 10 gigawatt-hours in 2008 to 2,554 gigawatt-hours in 2017. Massachusetts is now a top 10 state for solar growth. California is the clear U.S. solar leader, but solar market expansion isn't limited to politically progressive states. Georgia, for instance, is also on the top 10 list. The Southern state produced just 1 gigawatt-hour of solar in 2008. A decade later, Georgia generated 2,364 gigawatt-hours of solar — just shy of the production in solar-incentive-friendly Massachusetts. Source: Environment America In other parts of the country — and Texas, Oklahoma, Kansas, Iowa and North Dakota in particular — strong wind resources have made wind power the predominant renewable energy source. Source: Environment America Announcements such as Xcel Colorado’s proposal to retire two coal plants and deploy 1,800 megawatts of solar and wind, paired with 275 megawatts of battery storage, and NV Energy’s plan to build more than 1,000 megawatts of new solar and 100 megawatts of battery storage, seem to indicate the U.S. clean energy boom will continue. But that’s not a guarantee. Distributed energy resources are facing pushback as utilities figure out how to integrate and manage new technologies on the grid. Large-scale renewables are also coping with opposition as these resources compete head-to-head against conventional energy sources, including coal, nuclear and even natural gas. “People are starting to notice that renewables are happening, but they still think of it as a niche part of our energy mix — and it is a small fraction of it,” Sargent said. “But if renewable energy keeps growing at the rate it's grown over the past 10 years, the notion that you could meet all our current electricity needs with renewable energy is not that far-fetched.” Getting all the way to 100 percent renewable energy is controversial, though, both technically and politically. Even in California, where there’s widespread support for renewables, a 100 percent renewable energy proposal failed in the state legislature last year. And while the bill (SB 100) is now moving through the legislature once more, lawmakers have had to loosen up the language around “100 percent renewable energy” to also include “eligible zero-carbon resources.” Still, Sargent is generally optimistic about the future. “There are very, very few places where someone adopts a clean energy policy and then says, ‘That was stupid; let's get rid of it,’” he said. “Partly because once you do it at scale, it’s cheaper. Also because people see it and like it and want more of it — there’s growing public acceptance of it.” The challenge he sees is that while clean energy is growing substantially in states across the nation, there will ultimately need to be some form leadership at the top, at the federal level — which he said doesn’t exist right now. “It’s frustrating to have one foot on the accelerator and one on the brake,” Sargent said. “We’d go a lot faster if we weren’t doing that.”

#### Advantage counterplans miss the boat—supply-side approaches like the aff are a necessary complement and utilizing every tool in the toolbox is essential

**Roberts 18** [David, writes about energy and climate change.] "It’s time to think seriously about cutting off the supply of fossil fuels," Vox, https://www.vox.com/energy-and-environment/2018/4/3/17187606/fossil-fuel-supply 4-3-2018 RE

\*citing a paper by Fergus Green of the London School of Economics and Richard Denniss of the Australia Institute\*

As Green and Denniss say over and over, no one is arguing that RSS policies are better than demand-side policies, or a substitute for them. The exact economic and political effects of any set of policies will always depend on context-dependent factors; different portfolios will be appropriate for different times and places. But RSS policies are an excellent complement to demand-side policies, with economic and political strengths that help fill in the gaps. They are simple, transparent, easy for the public to grasp, and unmistakable signs of good faith in international climate negotiations. It’s easy enough to understand why the political establishments of most countries are leery of RSS policies, given the ubiquitous influence of the fossil fuel industry. But it’s time for climate analysts and wonks to get past the sneering attitude they’ve traditionally had toward such policies and the activists who support them. Yes, at this point, everyone gets it: An economy-wide, steadily rising, fuel- and technology-agnostic price on carbon is the optimal policy. But we don’t live in an optimal world, so yacking on about it isn’t much help. We live in this world, where a variety of political constraints means that no such policy has passed or seems likely to pass anytime soon. In this world, limited (thus suboptimal) demand-side policies need supplementing. In this world, it makes sense to draw on all four quadrants — to use the portfolio approach taken for granted in so many other areas of policy. Climate change is a big problem. We can’t afford to leave any tools in the toolbox.

## 1AC---DAPL

#### **I never broke this aff, but a couple of people I prepped with did.**

### 1AC – Advantage

#### The Dakota Access pipeline is planning to double oil content – that causes massive structural violence on communities.

Mckenna 8-20 Phil Mckenna, 8-20-2019, Phil McKenna is a Boston-based reporter for InsideClimate News. Before joining ICN in 2016, he was a freelance writer covering energy and the environment for publications including The New York Times, Smithsonian, Audubon and WIRED. Uprising, a story he wrote about gas leaks under U.S. cities, won the AAAS Kavli Science Journalism Award and the 2014 NASW Science in Society Award. Phil has a master's degree in science writing from the Massachusetts Institute of Technology and was an Environmental Journalism Fellow at Middlebury College., "Standing Rock Asks Court to Shut Down Dakota Access Pipeline as Company Plans to Double Capacity", InsideClimate News, https://insideclimatenews.org/news/20082019/standing-rock-dakota-access-pipeline-impact-assessment-court-double-capacity, Accessed on 10-21-2019 // JPark

The Standing Rock Sioux Tribe is asking a judge to throw out a federal permit for the Dakota Access oil pipeline, arguing that the government shut the tribe out of a court-ordered second environmental review and ignored its concerns. The challenge comes as Energy Transfer, the company behind the pipeline, is now seeking to double how much oil the pipeline can carry. The Dakota Access pipeline (DAPL) passes under the Missouri River, the tribe's water supply, just upstream from the Standing Rock Reservation. The Army Corps of Engineers "never engaged with the Tribe or its technical experts, shared critical information, or responded to the Tribe's concerns," the tribe writes in a legal motion filed Friday in federal court. "The result is an irretrievably flawed decision, developed through a process that fell far short of legal standards. With DAPL's proposal to double the flow of the pipeline, the unexamined risks to the Tribe continue to grow." The motion is the latest volley in a lawsuit first filed by the tribe against the Corps over its permitting of the controversial pipeline in 2016. Standing Rock won a partial victory in 2017 when a federal court determined that the Corps' initial environmental review for the Dakota Access pipeline did not adequately address the impact a potential spill would have on the tribe. The judge ordered the Corps to go back and do a thorough environmental assessment, saying "the Court expects the Corps not to treat remand as an exercise in filling out the proper paperwork." The Corps completed the remand process in August 2018, saying that it did not find "significant new circumstance[s] or information relevant to environmental concerns." The tribe is now arguing that this subsequent assessment also failed to address its concerns. "The remand was insincere," Mike Faith, Jr., chairman of the Standing Rock Sioux Tribe, said in a written statement. "The Corps ignored the Tribe's concerns and worked with DAPL to justify a foregone decision. This illegal and dangerous pipeline must be shut down." Energy Transfer Now Plans to Double Capacity The pipeline's construction spurred months of protests and hundreds of arrests over its location just upstream of the Standing Rock Reservation. The 1,172-mile pipeline from North Dakota to Illinois has had at least 10 spills totaling hundreds of gallons of crude oil since it began operations in June 2017, according to federal data analyzed by the Pipeline Safety Trust. This latest in a years-long legal challenge by the tribe comes less than two months after Dakota Access LLC, a subsidiary of Energy Transfer, notified North Dakota's Public Service Commission that it seeks to double the amount of crude oil it can ship through the Dakota Access pipeline to 1.1 million barrels per day. The company's June 20 request to "optimize" its pipeline considered local impacts of building a new pumping station such as erosion and dust control during construction of the facility. It did not, however, consider the impacts of a potential spill from a pipeline shipping twice the volume of oil compared to its original permit. Map: Dakota Access pipeline route and the Standing Rock Reservation "This expansion is incredibly reckless," Jan Hasselman of Earthjustice, an attorney representing the Standing Rock tribe, said. "You don't put double the amount of material in the same space and expect nothing to change in terms of the risks, in terms of the consequences of a spill. It's a different project, and before anyone approves something like this, there has to be another careful analysis of whether it's safe." U.S. Army Corps of Engineers was notified of the plan to double the pipeline's capacity on June 12, according to the company's letter to the state utility commission. Neither Energy Transfer nor the Army Corps responded to a request from InsideClimate News as to whether the company was seeking new permits from the Army Corps to double the pipeline's capacity. "My expectation is they will try to do this without them, because if they go and ask for new permits, that is a new environmental analysis," Hasselman said. "It's a big hang up." Tribe 'Lives with the Risk of an Oil Spill' The tribe, whose drinking water supply would be jeopardized if a spill were to occur where the pipeline crosses the Missouri River, urged the state utility commission to hold a hearing on the proposed pipeline capacity expansion. "The Standing Rock Sioux Tribe lives with the risk of an oil spill today—a risk that has never been properly evaluated by any state or federal agency," Faith wrote in a July 29 letter to the Public Service Commission. "We feel that this risk jeopardizes our way of life on the Standing Rock Reservation—a risk that is increased by the ETP application. We are North Dakotans too, and our concerns deserve to be heard." An attorney for Dakota Access LLC wrote to the commission, saying "the purported concerns raised by Standing Rock's request are not within the jurisdiction of the Commission." "These concerns are already addressed by federal law, and Dakota Access is in compliance with those requirements," the letter stated.

#### DAPL disrupts indigenous ways of life.

Fredericks 18 CARLA F. FREDERICKS, MARK MEANEY, NICHOLAS PELOSI, AND KATE R. FINN, November 2018, “SOCIAL COST AND MATERIAL LOSS: THE DAKOTA ACCESS PIPELINE” University of Colorado Boulder, First Peoples Worldwide, First Peoples Worldwide addresses the unique social and environmental impacts of development in indigenous communities, while preparing current and future leaders to meet the pressing social responsibility challenges facing today's businesses. https://www.colorado.edu/program/fpw/sites/default/files/attached-files/social\_cost\_and\_material\_loss\_0.pdf, Accessed on 11-5-2019 // JPark

All development comes with benefits and costs, but they are not always evenly distributed.206 The benefits of DAPL—which primarily took the form of jobs and corporate profits—did not flow to communities along the pipeline route.207 And, the Standing Rock Sioux Tribe incurred significant additional costs to manage the activities related to construction of the pipeline, as separate from the costs associated with the influx of people to the camp, by documenting the environmental and cultural impacts of the pipeline in the absence of comprehensive reports by another entity.208 The most glaring cost to the local community as a result of DAPL would be in the event of an oil spill.209 At first, the data surrounding the impacts of an oil spill from DAPL was not initially disclosed by ETP, which prevented the Standing Rock Sioux Tribe from fully understanding the risks and bolstering their opposition. 210 Further, no mitigation plan was proactively put forward to the tribes directly impacted.211 On December 4, 2017, Judge Boasberg ordered USACE and Dakota Access, LLC to work with the listed tribes to complete oil spill response plans.212 On August 31, 2018 the USACE submitted a Memorandum stating that their review of the potential impacts of an incident did not reveal any significant impacts to hunting and fishing resources.213 This document stands in direct contrast to information compiled by the Standing Rock Sioux Tribe.214 In February of 2018, the Standing Rock Sioux Tribe issued a report, Impacts of an Oil Spill from the Dakota Access Pipeline on the Standing Rock Sioux Tribe.215 The report has several findings, notably that an Environmental Impact Statement is necessary to properly understand and evaluate the impacts of an oil spill from DAPL on the fish and wildlife on the Standing Rock Sioux Indian Reservation as well as on the local communities.216 The report refers extensively to a 2017 report prepared by the Standing Rock Sioux Tribe Department of Game and Fish that documents what the impacts of an oil spill would be from DAPL on wildlife and sensitive wetlands.217 The report measures the specific effects of Bakken crude oil, the rates of spillage and leak detection in underground pipelines such as DAPL, and the timelines for emergency response procedures, among other factors.218 Among other findings, the reports note that the USACE’s findings are based on unrealistic assumptions about the environmental impacts of an oil spill and that the effects of a worst case oil discharge would be far worse than currently documented by the USACE and Dakota Access, LLC.219 The significant cultural and spiritual uses of the land would further compound the economic and environmental losses due to an oil spill along the pipeline route.220 As the Standing Rock Sioux Tribe report details, subsistence hunting and fishing are integral to the Lakota and Dakota way of life and flow into cultural and spiritual practices held sacred by many.221 An oil spill would jeopardize the wetlands and habitat that link these communities to their cultural heritage.222 The costs of an oil spill on the cultural and spiritual uses of the lands are difficult to quantify because they are mathematically somewhat intangible, but still need to be considered for when assessing benefits and costs of the project.223

#### Specifically, oil spills are horrible for human health.

Clarke 17 Chris Clarke, 5-2-2017, Prior to joining NPCA, Chris was environment editor at Los Angeles-based KCET, the nation’s largest independent public television station, where he was responsible for breaking numerous stories about threats to desert national parks. Before that, Chris worked as publications director at Earth Island Institute, where he published the award-winning Earth Island Journal — whose content shifted noticeably toward a focus on desert issues during his tenure."Who's at Risk from a Dakota Access Pipeline Accident? All of Us.", KCET, https://www.kcet.org/shows/earth-focus/we-all-live-downstream-at-risk-from-the-dakota-access-pipeline, Accessed on 11-5-2019 // JPark

Oil spills are an increasing threat to human health worldwide. That’s true enough when crude oil spills on land: it ruins any soil it touches, and pollutes the air as its volatile components evaporate. Spill that crude in water, and the damage can become far more widespread. Wetlands, streams and rivers can carry spilled oil many miles away from the site of the spill. As the heavier substances in the oil settle out, they can permanently damage the waterway and all the living things that depend on it. Meanwhile the lighter fractions of that crude can be carried farther, hundreds or even thousands of miles away. The Dakota Access Pipeline will carry at least 450,000 barrels of crude oil a day along 1,172 miles of 30-inch-wide pipeline from the Bakken oil fields in North Dakota to an oil terminal at Patoka, Illinois. Along the way, it will cross and recross major rivers belonging to the nation’s largest watershed, the Missouri-Mississippi. At 22 of those crossings, the risk of spills from a conventional pipeline is severe enough that DAPL’s owners, Energy Transfer Partners, have tunneled deep under the river beds to reduce the likelihood that a spill will affect surface water. At the controversial crossing of Lake Oahe near the Standing Rock Sioux Reservation, the pipeline will be up to 90 feet beneath the riverbed. But even the pipeline’s most ardent defenders don’t claim DAPL won’t leak. The simple reason: all pipelines leak. Buried pipelines, in fact, may pose a much more serious threat to public health than those on the surface. An above-ground pipeline can be monitored and repaired much more easily with even a small leak. A leak in a hardened pipeline 90 feet below the Missouri River may not be detected for months, and cleanup may prove impossible. That means the leaked oil is free to percolate into the river, there to endanger the health of those downstream. There are a lot of people downstream of the DAPL’s many river crossings. Approximately 17 million people rely on downstream portions of the Missouri and Mississippi rivers for their drinking water, more than 10 million of them in the nine major metropolitan areas downstream: Bismarck, Sioux City, Omaha, Kansas City, St. Louis, Des Moines, Memphis, Baton Rouge, and New Orleans. And that’s not counting the many smaller communities, some of them far from affluent, along the Missouri and Mississippi in 11 states. As geographer Jennifer Veilleux notes, some of those more rural downstream communities include Native nations. The Standing Rock and Cheyenne River reservations got a lot of press on the topic of their vulnerability to DAPL, but spills from the Dakota Access Pipeline could also harm the water supply for other downstream reservations including the Crow Creek, Iowa, Omaha, Ponca, Rosebud, Sac and Fox Nation, Santee, Lower Brule, Mandan Hidatsa Arikara, Winnebago and Yankton reservations. The effects of oil contamination are wide-ranging. There’s the direct harm to human health done by short-term exposure to petroleum products, which can include poisoning, respiratory damage and apparent nervous system damage. These ailments can be experienced by anyone in proximity to a spill, but they’re especially dangerous for anyone working on cleaning up the oil, whether they’re operating booms to skim oil off the water or cleaning affected wildlife. Secondly, there are the long-term effects from consistent exposure to smaller amounts of petroleum and its components. These are too varied to create a complete list; petroleum can contain dozens or even hundreds of different hydrocarbon compounds, each with its own set of health risks, and crude oil’s chemical composition varies depending on where it comes from. But in general, chronic exposure to the constituents of crude oil causes a range of cancers as well as respiratory ailments such as bronchitis and asthma, and has been linked to reproductive disorders including miscarriage and stillbirth, central nervous system disorders, and mental health problems. People are also hurt by spilled crude oil’s effect on other organisms. When the 1989 Exxon Valdez spill in Alaska wiped out the salmon and herring fisheries in and near Prince William Sound, fishing-dependent communities such as Cordova were devastated. That toll fell especially hard on Native communities with salmon-based cultures. In places like the oil-drenched Cross Rivers State in Nigeria, traditional farmers and herders suffer from oil contamination of their livestock and game. Much the same thing happened in the wake of the Deepwater Horizon disaster in 2010, as the shrimp fishery was devastated, tourism collapsed and real estate values for coastal properties affected by the spill nose-dived. Cleaning up after a major oil spill | Photo: MPCA, some rights reservedCleaning up after a major oil spill | Photo: MPCA, some rights reserved In the vicinity of a large spill from DAPL or other pipelines, we can expect to see similar health problems and economic dislocation. But significant accidents can even affect communities far downstream. While the levels of contaminants in the Mississippi River at New Orleans may not be significantly affected by a large accident near Bismarck, each accident does add to the overall burden of pollution endured by communities downstream. The Missouri and Mississippi watersheds are among the most heavily industrialized in the world, and pollution from Montana to Ohio and New York washes downstream toward the Gulf. The burden of toxic substances is great enough to cause a “dead zone” in the Gulf offshore from the Mississippi Delta. Pollutants in the river don’t just flow downstream. Water from the Missouri-Mississippi watershed is used in consumer food and hygiene products, as irrigation water for food crops, and to slake the thirst of livestock. Persistent organic pollutants from an oil spill — or more likely, a series of spills — may end up in your food, beverages, and toothpaste even if you live hundreds of miles outside of the Missouri-Mississippi watershed.

#### Thus, the plan – Resolved: The United States federal government should eliminate fossil fuel subsidies for the Dakota Access pipeline.

Doukas 16 Alex Doukas, 9-1-2016, Alex Doukas is a Senior Campaigner at Oil Change International. His work focuses on ending international subsidies and public finance for fossil fuels, and shifting public resources toward building a clean energy future, including access to clean energy for all. Previously, Alex worked with the World Resources Institute, where he focused on making international climate finance more effective, including through the design of the Green Climate Fund, as well as catalyzing finance for clean energy access, "Briefing: Dakota Access's Massive Subsidies", Oil Change International, http://priceofoil.org/2016/09/20/24020/, Accessed on 11-5-2019 // JPark

Summary The following analysis shows that the Dakota Access Pipeline’s two largest owners – Enbridge Energy Partners (EEP) and Energy Transfer Partners (ETP) – cost taxpayers as much as $665 million in 2015, by avoiding corporate taxes. Furthermore, the Federal Energy Regulatory Commission (FERC) allows pipeline companies to charge their customers for some of those avoided taxes, meaning that EEP and ETP can pass along to customers a “cost” they never paid in the first place, in a double whammy to taxpayers and ratepayers. The companies also benefit from additional state and federal tax breaks and subsidies not estimated here. Background The proposed Dakota Access Pipeline would transport up to 570,000 barrels per day of fracked crude oil across the states of North Dakota, South Dakota, Iowa, and Illinois, with additional pipelines then carrying it south to Gulf Coast refineries in Texas and Louisiana. For months, Native American tribes, farmers, and landowners along the route have attempted to stop construction of the pipeline. Among several major concerns are that its proposed route crosses sacred Standing Rock Sioux Tribe burial grounds, and that the route makes two crossings of the Missouri River, which is the tribe’s main source of drinking water. Like many fossil fuel infrastructure projects, the Dakota Access Pipeline benefits from exorbitant government subsidies at the expense of American taxpayers. Yet, to justify the pipeline’s construction, proponents claim that it will create jobs and economic benefits, including local, state, and federal tax revenues. More importantly, they also claim that these benefits outweigh the damages caused by the construction of the pipeline, the risks of a potentially catastrophic spill, and the threat to the climate the oil transported would represent – which Oil Change International recently estimated to be equivalent to the emissions of building 29.5 coal plants, or adding 21.4 million cars to the roads. But these company 1 claims are undermined by the substantial subsidies enjoyed by the owners of Dakota Access. Dakota Access Pipeline Owners The Dakota Access Pipeline project is owned by a number of different entities, many of which are legally structured as corporate entities called Master Limited Partnerships (MLPs). These MLPs avoid corporate-level federal income taxes entirely, and can also distribute cash on a tax-deferred basis, giving them special tax breaks that amount to a huge subsidy. The two largest investors in Dakota Access are Enbridge Energy Partners and Energy Transfer Partners. ETP is a massive MLP, second-largest in the United States, with a market capitalization of over $21 billion as of September 2016. Yet this multi-billion dollar entity effectively pays zero corporate income tax. Tax shelters provided by MLPs are one of the single largest subsidies for fossil fuel production in the United States, reaching record levels as high as $4.4 billion annually in recent years. This is a very significant portion of the more than $20 billion in U.S. subsidies that flow to oil, gas, and coal companies each year.2 Just how big of a subsidy are EEP and ETP benefiting from each year due to their MLP structure? In Table 1, we approximate how much tax revenue has been lost to these entities, compared to a regular corporate structure taxed at statutory rates. To make this estimate, we employ a simplified method for assessing the tax revenues lost as a result of MLPs, building on an illustrative approach used by the National Association of Publicly Traded Partnerships (an MLP advocate), and further built upon in a 2013 report on MLPs prepared by Earth Track for Oil Change International, “Too Big to Ignore: Subsidies to Fossil Fuel Master Limited Partnerships.”3 We find that Enbridge Energy Partners and Energy Transfer Partners have collectively cost the United States Treasury as much as $665 million solely in 2015, as the result of this single subsidy (tax breaks to MLPs). This subsidy is only one among many enjoyed by the Dakota Access Pipeline and its owners. Charging Customers to Recoup Phantom Taxes To make matters worse, the U.S. federal regulation system for pipelines, overseen by FERC under the Interstate Commerce Act, allows pipelines owned by MLPs to charge customers rates that allow for recovery of income taxes – even though MLPs do not pay these taxes in the first place. These phantom charges make energy more expensive for consumers while giving the MLPs windfall profits. While the U.S. Court of Appeals for the District of Columbia Circuit recently ruled against this practice, sending the issue back to FERC for further consideration, it remains unclear whether, how, and when FERC will resolve this issue. We 4 don’t have enough data to know how much Enbridge Energy Partners and Energy Transfer Partners are specifically benefiting from this subsidy, but tax expert David Cay Johnston estimates that the pipeline industry as a whole benefits to the tune of $3.4 billion annually, and a federal judge indicated the subsidy amount could be as high as $6.8 billion each year.5 Federal Liability Limits: Another Potentially Massive Subsidy Federal liability limits are yet another way in which taxpayers could end up subsidizing the Dakota Access Pipeline. These limits shield companies like EEP and ETP, and projects like the Dakota Access Pipeline, from potential risk. Current regulation states that if an onshore oil spill occurs, project owners must pay the first $634 million of cleanup costs – but if the cost of cleanup exceeds $634 million, the public will bear the remaining costs unless the owners are found to have been criminally negligent. A spill that contaminated the 6 Missouri River or the Ogallala Aquifer could easily outstrip that figure for cleanup alone, to say nothing of associated impacts (it is estimated that the aquifer supports more than $20 billion per year in food and fiber production). 7 Conclusion In sum, we can say authoritatively that the Dakota Access Pipeline project and its owners are being heavily subsidized by U.S. taxpayers. Enbridge Energy Partners and Energy Transfer Partners alone received as much as $665 million in tax breaks last year as the result of a single subsidy, and they benefit from many more subsidies that were not quantified in this analysis. As such, the total amount of subsidies they receive is almost certainly much higher than the estimate provided here. As climate impacts mount and important questions of native sovereignty, property rights, and clean water are raised by communities impacted by fossil fuel infrastructure, it is time for the United States to end subsidies to fossil fuel producers once and for all.

#### Plan solves – ends cycles of exploitation.

McGirk '16 (Jan Mcgirk; Jan McGirk reports on environmental issues and climate change around the Pacific Rim. 8-12-2016; "Subsidised Dakota pipeline a heavy cost for indigenous tribes"; https://www.chinadialogue.net/article/show/single/en/9470-Subsidised-Dakota-pipeline-a-heavy-cost-for-indigenous-tribes, No Publication, accessed 11-19-2019; JPark)

Oil subsidies Despite the pledge of the Obama Administration to phase out fossil fuel subsides, **oil and gas companies continue to collect billions** of dollars per year in the form of government **tax incentives and tax breaks**. **Reforms** have been repeatedly blocked by the Republican majority in Congress and oil producers have come to rely on federal support, funded by taxpayers, even as the profitability of oil companies falls globally. The US government supports the oil and gas sector to the order of US$4 billion every year according to G20 assessments. Others have put the estimate higher, at around US$17 billion. However, the American Petroleum Institute, the lobbying arm of the oil and gas industry, argues that its industries are not uniquely subsidised, in fact many of the tax provisions labelled as “subsidies for oil and gas” also apply to other industries. “At a time when scientists tell us we need to reduce carbon pollution to prevent catastrophic climate change, it is absurd to provide massive taxpayer subsidies that pad fossil-fuel companies’ already enormous profits,” points out Vermont Senator Bernie Sanders, who last year proposed an End Polluter Welfare Act, which would cut US$135 billion of US subsidies for fossil fuel companies over ten years. Without the estimated US$665 million in tax breaks it received last year, it is doubtful that the Dakota Access Pipeline **would be shovel-ready.** Instead, transport companies could have retrofitted and upgraded existing pipelines in order to move the Bakken crude across state lines to refineries. But their cash outlay would have been considerably higher. Many Native American **tribes are understandably cynical** about their chances of real cooperation with energy companies. For decades, Sioux tribes have been trying to get compensation for the loss of towns inundated for hydroelectric power. The eventual price of treating a range of medical issues related to **pollution** or **emissions-linked climate change** is difficult to figure even if no accidents occur. Loss of revenue from tourists who hike, fish, and camp near the scenic Lake Oahe will hit North Dakota hard once construction crews tunnel under the Missouri River and foul its pristine water. Hundreds of native bald eagles have already been disturbed by the people and machines assembling at Standing Rock. But loss of dignity is also a reality. Native Americans who gather in solidarity to express their concerns complain that law officials treat them like **insurrectionists** instead of like citizens with constitutionally guaranteed rights. Justice for who? Failure to **consult local tribes** on pipelines or to secure their permission to build them has long provoked ire against energy conglomerates. Resistance against the Keystone XL pipeline and the Northern Gateway pipeline in Canada is based on environmental justice concerns and qualms about long-term carbon emissions and pollution risks. What’s more, when Native Americans attempt to assert their legal rights and protect traditional sacred spaces that happen to be located near fossil fuel resources, they find themselves up against big money and continual delays. For instance, the Blackfeet Nation in Montana tried to block construction for thirty years before federal agencies cancelled all but two of the drilling leases for natural gas and oil in their pristine Badger-Two Medicine area. (Seventeen leases were issued with inadequate environmental impact reports during the Reagan era. Drilling has not commenced.) Bordering their reservation and Glacier National Park, the rugged terrain is the setting for the tribe’s creation myth. During the Blackfeet’s vision quest, specific rocks, peaks and springs are considered portals to the spiritual world. Medicinal herbs grow wild in what is also a critical migration corridor for grizzly bear and elk. US interior secretary Sally Jewell, who announced the cancellation in mid-November, recognises that the area is too wild to drill. “It should not have been leased to begin with,” she said. “This sets the right tone for how business should be done in the future." The Blackfeet chief now plans to bring wild bison back to the sacred lands. Rich lands The US Department of the Interior estimates at least 15 million acres of potential energy and mineral resources lie untapped on Native American-owned lands. Nearly 20% of known oil and gas reserves are located on reservations, along with 30% of the nation’s coal reserves west of the Mississippi, and 50% of potential uranium reserves. Significant sources of oil shale, copper, and rare earth minerals have been discovered, too. Some tribal lands also hold considerable potential for solar and wind power. Petroleum and mining companies are eager to start **exploiting** these tribal resources. Last April, the US Senate amended energy policy in order to remove obstacles to exploration. This was purportedly done to create economic opportunities for impoverished tribes, some saddled with unemployment rates of 85%. The policy to increase **American energy independence** already **has major repercussions** in the western United States, where technological advances such as directional drilling and fracking have opened up huge new areas for exploitation. Government subsidies for energy companies are generous: mainly through tax breaks or loan guarantees, some US$20.5 billion (141.3 billion yuan) is paid to support oil, gas and coal production every year. An oil rig brought to the reservation by the Blackfeet for the purpose of drilling for oil. Although the tribe is arguing against drilling in the Badger -Two Medicine area, they have actively invited oil drilling elsewhere on the reservation. (Image by Tony Bynum) Land rights, land wrongs Land rights are a sticking point. On most Native American reservations, property ownership is a jigsaw of private lots and trust lands. Under trust tenure, the government maintains the title to an individual owner’s property as well as to tribal lands and oversees their use. Technically, contracts can be negotiated directly between a tribal council and the oil industry, but the Bureau of Indian Affairs is supposed to ensure that any lease meets “the best interest” of Native Americans. However, federal law also guarantees traditional tribal hunting, trapping, and fishing rights. It protects burial grounds, sacred sites and access to medicinal herbs. Priorities have changed since the 19th century, when many of America’s indigenous people were either killed by soldiers or displaced from their homelands by immigrant settlers seeking farmland. Tribes were pushed onto reservations located far from fertile fields and population centres. Geographic isolation and deprivation ensued. Citing eminent domain, the government can tweak the treaty terms and take back land deemed indispensable for public use. Hydroelectric dams came first, followed by gas and oil wells, then pipelines. Power to the people comes at a hefty price to the land’s original inhabitants, who make up less than 2% of the US population. “Fossil fuel companies are determined to dig up **every lump of coal and drill every ounce of oil and gas** they can get their hands on – no matter the damage they cause to treasured public lands,” said Friends of the Earth, an environmental campaign group. “And as long as they are allowed to keep extracting fossil fuels, the disastrous impacts of climate change will only worsen.” Fossil fuel exploration in the US doesn’t always pit corporations against Native peoples. In fact, some Navajo and Crow tribes have extracted and processed their own coal for years, which is used to power state grids. For more than 500 years, the Seneca tribe has harvested oil by skimming off natural seepage, and viewed the black ooze as a sacred medicine. Its historic use as a tonic, purge, salve or mosquito repellent is well documented. But the scale of some proposed fossil fuel projects is **staggering**. Until a moratorium was called, plans for the mammoth Gateway Pacific Terminal and deep water port at Cherry Point, Washington, included a 900-metre dock where up to 487 tankers would load up with coal from arriving trains for shipment to China. The potential environmental damage alarmed the Lummi people, a tribe of salmon fishers that once controlled all of Puget Sound. To rally Native Americans from other tribes to protect their own ancestral lands from fossil fuel extractors and their toxins, the Lummi hauled a totem pole from the Pacific coast halfway across America four years in a row. New peril Pipeline companies argue that moving flammable fuels by rail is fraught with perils, pointing to two dozen derailments or explosions in the past three years alone. But oil pipelines are not hazard-proof either. Small pipeline leaks contaminate the land slowly and detection sensors are often inadequate. Large ruptures can be utterly catastrophic. When this happens, usually as a result of mechanical failure or corrosion, cleanup is a challenge. Crude oil from tar sands is classified as “heavy sour” and must first be thinned with volatile and carcinogenic chemicals before it can flow through pipelines. Such dense oil will not float, as in an ordinary oil spill. Instead, the diluted bitumen (dilbit) sinks to the bottom where it mixes with river sediments and is very difficult to retrieve. When operators of the Enbridge Pipeline disregarded their system alarms in 2010, crude oil spurted out of a hole for 17 hours into a tributary of the Kalamazoo River in Michigan. Damage control took four years, yet some oil still remains unrecoverable. New regulations obviously are overdue. The dilbit that will flow through the disputed pipelines is currently exempt from an excise tax designed to fund oil spill mitigation. When the law was passed 36 years ago, thick bitumen from the tar sands was not yet considered to be crude oil. According to Dallas Goldtooth, a prominent activist from the Indigenous Environmental Network, “The best part of the work we do is that it’s not what we’re fighting against but what we’re fighting for. We advocate for localised, small-scale renewable energy production,” he says.

#### Courts have failed to rescind permits for DAPL – the aff is try or die.

Crunden 8-19 E.A. Crunden, 8-19-2019, "Tribe raises stakes in Dakota Access pipeline fight amid surge in Democratic 2020 support", No Publication, https://thinkprogress.org/standing-rock-sioux-dakota-access-2020-pipeline-opposition-trump-ad10898fc20e/, Accessed on 10-21-2019 // JPark

On Friday, the Standing Rock Sioux asked a federal court to throw out what the tribe says is a flawed environmental assessment of DAPL’s potential impacts. The Army Corps of Engineers “never engaged with the Tribe or its technical experts, shared critical information, or responded to the Tribe’s concerns,” the 63-page motion reads. At issue is a key February 2017 environmental easement which enabled the Corps to proceed with DAPL construction. That easement allowed Energy Transfer Partners, which controls the pipeline, to avoid an environmental impact statement, which would have required a thorough review of DAPL’s potential impacts to water and wildlife. In June 2017, a federal district judge ordered the Army Corps to consider environmental impacts following litigation from the tribe. That ruling yielded no real change, however — the government still allowed the pipeline to go forward. But the Standing Rock Sioux say the Army Corps failed to engage with them over DAPL’s environmental threat, and that they remain at risk of an oil spill. Earthjustice, an environmental legal group, filed Friday’s motion on behalf of the tribe, arguing for a pause in construction while DAPL’s potential impacts are assessed again, this time with input from the tribe. Moreover, the tribe is taking aim at a newly-proposed expansion of the pipeline, announced in June of this year, that would see its capacity enlarged to 1.1 million barrels of oil per day. DAPL currently produces around half that amount. “With DAPL’s proposal to double the flow of the pipeline, the unexamined risks to the Tribe continue to grow,” the tribe asserts.

#### DAPL is a settler colonial structure – the plan empowers indigenous relationships to land.

Whyte '17 (Kyle Whyte; Michigan State University - Department of Philosophy, Timnick Chair in the Humanities at Michigan State University. Professor of Philosophy and Community Sustainability, a faculty member of the Environmental Philosophy & Ethics graduate concentration, and a faculty affiliate of the American Indian & Indigenous Studies and Environmental Science & Policy programs; 2-28-2017; "The Dakota Access Pipeline, Environmental Injustice, and U.S. Colonialism by Kyle Whyte :: SSRN"; https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2925513, No Publication, accessed 11-20-2019; JPark)

The Injustice of DAPL As a Potawatomi scholar-activist, I am concerned with how critics of #NoDAPL often focus on defending the pipeline’s safety precautions or the many attempts ACE made at consultation. Many such critics even claim that it is tragic how U.S. and corporate relations with the Tribe broke down given all the precautions and accommodations made by ETM and ACE.20 Yet critics rarely engage what LaDonna Brave Bull Allard, in the epigraph to this essay, calls “the larger story.” To me, as an Indigenous supporter of #NoDAPL, the larger story concerns how DAPL is an injustice against the Tribe. The type of injustice is one that many other Indigenous peoples can identify with—U.S. settler colonialism. I write this essay from my own perspective to show at least some of the relevant reasons why DAPL is an injustice of a certain settler colonial type. I am against the view that the Tribe’s ordeal with DAPL is merely about a breakdown in consultative relations or an isolated disagreement over safety. I seek to show how there are many layers to the settler colonial injustice behind DAPL that will take me, by the end of this essay, from U.S. disrespect of treaty promises in the 19th century to environmental sustainability and climate change in the 21st century. Though, before I cover all that, I will begin with some more abstract definitions. An injustice occurs when one or more groups of people seek to achieve their own perceived economic, cultural, and political aspirations by systematically inflicting harms and risks on one or more other groups of people. Infliction is systematic when the perpetrators gain at the expense of others under the conscious or tacit auspices that doing so is acceptable because the others are of certain skin-colors, cultures, genders, disabilities, and other social identities. Perpetrators often create and impose these social identities on people who they perceive to be instrumental to or to standing in the way of the achievement of their aspirations. Racism is a type of injustice, then, as is sexism, ableism, ethnocentrism, and settler colonialism. As an injustice, settler colonialism refers to complex social processes in which at least one society seeks to move permanently onto the terrestrial, aquatic, and aerial places lived in by one or more other societies who already derive economic vitality, cultural flourishing, and political self-determination from the relationships they have established with the plants, animals, physical entities, and ecosystems of those places. When the process of settler colonialism takes place or has already occurred in some region, the societies moving in or who have already done so can be called “settlers,” the societies already living there at the beginning of settlement, “Indigenous peoples.” The settlers’ aspirations are to transform Indigenous homelands into settler homelands. Settlers create moralizing narratives about why it is (or was) necessary to destroy other peoples (e.g. military or cultural inferiority) or they take great pains to forget or cover up the inevitable 20 Patrick Springer, “ND Governer Says Pipeline Company ‘Abdicated” Role in Defending Project,” Grand Forks Herald, 8 December 2016; Associated Press, “Dakota Access CEO Vows to Truck on with Oil Pipeline Despite Violent Protests,” Fox News, 14 September 2016; Montgomery; Boasberg. 5 violence of settlement. Settlement is deeply harmful and risk-laden for Indigenous peoples because settlers are literally seeking to erase Indigenous economies, cultures, and political organizations for the sake of establishing their own. Settler colonialism, then, is a type of injustice driven by settlers’ desire, conscious and tacit, to erase Indigenous peoples. 21 The concept of settler colonialism, as I use it here, is meant to highlight one type of injustice that has occurred widely throughout the world, the U.S. being a major example. The concept helps to shed light on some key reasons why the Tribe and many Indigenous peoples everywhere are justified in opposing DAPL. I am not using the concept here in some attempt to accurately represent or stereotype the motivations and histories of every nonIndigenous arrivant or immigrant to North America as nothing but “settler,” or to suggest that all oppression in the U.S. context boils down to some struggle between settler and Indigenous populations, though a strong case can be made that, in the U.S. context, it is more than just “white” people who are perpetrators, in different ways, of settler colonial injustice. I also do not use the concept to suggest that colonialism is exclusive from or more fundamental than other injustices, such as global imperialism, capitalism, racism, or patriarchy. An analysis more detailed than what I offer here would certainly attempt to intertwine them all where appropriate. U.S. settler colonialism emerges in the experiences of Indigenous peoples as a recent, highly disruptive type of injustice amid an exponentially longer history our peoples have in North America. Indeed, Indigenous peoples everywhere in North America have longstanding traditions of comprehensive governance systems designed to relate to places with particular ecological conditions for the sake of ensuring cultural integrity, economic vitality, and political self-determination for current and future generations. In my own work, I look at how Indigenous governance systems operate quite differently than, say, those of the U.S. federal government, in operations ranging from the selection processes for leadership to the construction of gender and gender fluidity to environmental ethics. Indeed, the ceremonies at the #NoDAPL camps, expressions such as “water is life,” the sacredness of the Black Hills, the leadership of women, and the many other moral claims about plants, animals, and ecosystems that protectors are making arise from the time-tested knowledges of Dakota and Lakota governance systems that preexist U.S. settlement. From what I have learned through personal experiences with friends and colleagues and the writings of protectors cited earlier, Dakota and Lakota governance systems were organized to operate flexibly throughout the year to ensure they were attuned to the dynamics of local ecosystems, especially seasonality. Lakota and Dakota peoples developed complex spiritual relationships to the places they still inhabit or live nearby that furnish highly practical knowledge of how to steward bison or grasslands or keep water clean. They developed ceremonies, such as 21 A reference featuring diverse scholarship on settler colonialism, including from Indigenous Studies and by Indigenous scholars, is Tate Lefevre, “Settler Colonialism,” in Oxford Bibliographies in Anthropology (Oxford: Oxford U. Press, 2015). 6 giveaways, that reaffirm norms in which sharing, not hoarding, are incentivized, which some Indigenous Studies scholars have shown to be integral to environmental sustainability.22 **Dakota and Lakota peoples’ origin** and other stories connect them intimately to places, such as the Black Hills or place of sacred stones, **in ways that are intrinsically valuable to their cultural flourishing and spiritual health**. The water protectors’ morality flows, then, from Indigenous governance systems that support cultural integrity, economic vitality, and political selfdetermination and the capacity to shift and adjust to the dynamics of ecosystems. In the 19th century, U.S. settlers sought to move to the places in which Dakota and Lakota peoples already had complex cultural, economic, and political relationships. U.S. settlers had diverse motivations, such as fur trading, gold mining, farming, and establishing settlements beyond the so-called frontier. While peoples have to adapt to different changes in different historic periods, such as the Indigenous adoption of the horse in North America, U.S. settler colonialism viciously imposed harms and risks on the ancestors of the Standing Rock Sioux Tribe that continue on through the DAPL ordeal. It is precisely this social process of settler colonialism that explains why it is no accident that ETM sought to build a key segment DAPL through Tribally significant land and water. Many public resources document this history of settler colonialism, including the Tribe’s website, the Standing Rock Syllabus, the North Dakota Studies portal, and conventional academic research. 23 In what follows, I briefly describe some of that history of settler colonialism in order to express my limited version of the “larger story” of the #NoDAPL movement, drawing widely from many public sources given this information is, ironically, highly accessible to anyone, but little known. The Colonial Déjà Vu of Indigenous Erasure Dakota and Lakota peoples historically maintained peaceful and conflictive diplomatic and trade relations with many other Indigenous peoples in the plains and woodland regions of North America and beyond. A different challenge emerged in the middle of the 19th century. Enter U.S. settlers, who began overharvesting bison for furs to ship to distant markets without concern for the relationship between bison and bison habitat to Dakota and Lakota peoples. When gold was discovered in California in the late 1840s, many more settlers arrived. In 1851, the U.S. negotiated the first Treaty of Ft. Laramie with a limited set of Sioux leaders to define territories where each particular Tribal group ranged according to their own governance systems, which amounted to about 134 million acres in what are now the states of North Dakota, South Dakota, Montana, Wyoming, and Nebraska. 22 For example, Ronald L. Trosper, “Northwest Coast Indigenous Institutions that Supported Resilience and Sustainability,” Ecological Economies 41.2 (2002), 329-344; Nick Estes, “Lakota Giving and Justice,” Old Wars, 16 November 2015. 23 Nick Estes’ “Fighting for Our Lives: #NoDAPL in Historical Context,” Red Nation, 9 September 2016, provides a comprehensive account. 7 However, the U.S. refused to engage in a treaty-making process that would allow Indigenous leaders to gain consensus among themselves according to the protocols of their Indigenous governance systems. Settlers ended up violating the treaty repeatedly by entering the territory and many Tribal groups did not ultimately respect its non-consensus status. Due to further settler immigration, military intervention, the construction of railroads, wagon roads, and mail stations, and desires to explore for gold, the U.S. negotiated the 1868 Treaty of Ft. Laramie. This treaty reduced the Indigenous land base to 25 million acres contained within what is now the state of South Dakota, forming the Great Sioux Reservation. Despite the 1851 and 1868 treaties, settlers continued to enter Sioux lands illegally, disrupting Dakota and Lakota peoples. Analogous to the armed guards for DAPL builders who engage in constant surveillance of the protectors, the U.S. military set up strategic positions, such as forts, to ensure settlers could pursue their business ventures without encountering resistance. Again, instead of honoring the original treaty agreements, the U.S. forced the ancestors of the present-day Standing Rock Sioux Tribe to sever more of their relationships to the places that mattered to their cultures, economies, and political self-determination. The U.S. instantiated the 1877 Starve or Sell Bill, in which it self-authorized access to the Black Hills for gold mining With the passage of the Sioux Bill in 1889, the U.S., wanting control over additional Indigenous places, liquidated the Great Sioux Reservation into six smaller reservations, the Standing Rock one being about 2 million acres. The lack of Indigenous consent to these actions led the U.S. Supreme Court in 1980 to claim that “[a] more ripe and rank case of dishonorable dealings will never, in all probability, be found in our history.”24 The Sioux Bill, as the local instantiation of the Dawes Allotment Act (1887), further broke up the Standing Rock reservation into private property (often 160 acre parcels) for Tribal members, an effort intended to force Indigenous peoples to adopt farming lifestyles that would pose less resistance to settlement. Settlers took the rest of the parcels—usually the most arable lands. The U.S. eventually made it impossible for immediate or extended family groups to manage allotments cooperatively. Tribal members could not sell their allotments for 25 years unless they were deemed “competent” by the U.S. The U.S. developed many schemes to divest Indigenous persons of their allotments before 25 years. Indigenous persons, who typically had to farm arid land and received inadequate support from the U.S. to transition into farming, were often considered so incompetent that the U.S. leased their land to settlers. The U.S. required Indigenous allotments to be divided equally among the heirs, creating land with owners too numerous to make use of the land. As a result, the land was often leased to settlers. The U.S. agents exercised tax codes corruptly, making it so that Indigenous persons “declared competent” owed more in taxes than they could afford to pay. The large 24 United States v. Sioux Nation of Indians, 448 U.S. 371 (1980). 8 region of diverse and dynamic ecosystems from which Dakota and Lakota governance systems arose had been reduced in size exponentially; its ecological conditions were transformed due to mining, farming, grazing, and settler infrastructure. Well into the 20th century, the U.S., via its government or supported by churches, sent many Dakota and Lakota children to boarding schools, some as far away as Virginia and Pennsylvania. The schools divested students of their language, cultures, and knowledges, replacing them with technical skills for settler occupations. The children were sometimes physically abused or even murdered. Back in their homelands, the U.S. made Dakota and Lakota cultures “illegal” in 1883, including a ban on giveaways and many other ceremonies that were vital for reaffirming land- and water-based ethics and knowledges of Indigenous governance systems. During this entire narrative, the U.S. military frequently attacked Indigenous communities that continued to live according to their own governance systems, including the massacre of Whitestone Hill (1863) referenced in the epigraph. 25 Because of the economic pressures of the 1930s, which were felt nationally but were more severe within Tribes as a result of land dispossession from allotment, the U.S. sought to create new laws and programs on reservations. The U.S. Bureau of Indian Affairs (BIA), however, exercised control over economic development programs, such as community ranching or other land leasing, which often meant Tribal members got less money than they deserved through actions like the BIA underselling to settler buyers. The U.S. also created incentives for loan programs for Tribes to consolidate lands and promote economic development, yet to access the money, Tribes had to yield aspects of their political self-determination by organizing their governments according to U.S. standards for corporate charters and elected Tribal councils under the Indian Reorganization Act (1934). The BIA held authority over the decisions of these councils, putting Tribes in the dilemma of choosing between certain immediate economic incentives and maintaining political selfdetermination. The Standing Rock Tribe initially rejected the act. In the late 1940s, ACE created a major dam as part of the Pick-Sloan Missouri River Basin Program seeking to improve irrigation and other forms of water control to improve settlers’ business ventures and living conditions. While many settlers benefited from the Lake Oahe Dam, its reservoir shrunk the Tribe’s land base, displacing many Tribal members and destroying quality timberlands and soils for cultivation and wildlife habitats. From the beginning, Standing Rock leaders were adamantly against the construction of the dam. As would any community facing these conditions for over hundred years, the people living on the Tribe’s reservation today endure high unemployment and heightened health risks that historically were not problems of comparable severity for their ancestors. U.S. settlement sought to erase Dakota and Lakota peoples to make way for the business ventures and other 25 Allard. 9 aspirations of settlers.26 They erased political self-determination through disrespecting treaties and pressuring the adoption of BIA controlled constitutions, erased economic vitality through transforming ecosystems and dividing Indigenous lands, and erased cultural integrity through stripping Indigenous peoples of their languages and ceremonies. Today, many settler Americans in North Dakota and South Dakota actually believe moralizing narratives that Dakota and Lakota peoples are pathologically dependent on the U.S. for bare survival.27 Public education in those states does not attend equally to Indigenous and settler histories, being complicit in covering up the violence of settlement. Acts of anti-Indigenous discrimination occur daily against many persons. 28 Now imagine what it felt like for Tribal members most immediately, but also Indigenous peoples everywhere, when it became known that DAPL, a settler business venture, was rerouted from a location farther away from the Tribe because of threats to the water quality of the settler city of Bismarck, North Dakota. And that law enforcement was willing to step in to block protectors from expressing themselves through prayer, ceremony, and thanksgiving. Colonial déjà vu!

#### Environmental exploitation epitomizes the settler colonial logic of erasure – the affirmative is necessary to allow indigenous relationships to land.

Temin 17 (“Custer’s Sins: Vine Deloria Jr. and the Settler-Colonial Politics of Civic Inclusion”, David Myer Temin, Political Theory ﻿1– 23 © 2017 SAGE Publications Reprints and permissions: sagepub.com/journalsPermissions.nav DOI: 10.1177/0090591717712151 journals.sagepub.com/home/ptx)

Deloria’s reflections on the differences between the illusory redemption of inclusion and more horizontal relations of solidarity illuminate the potential implications of the struggle between the Standing Rock Sioux Tribe and North Dakota and Energy Transfer Partners, L.P., over the construction of the Dakota Access pipeline on 1868 Treaty land one-half mile from the reservation—a pipeline diverted from its original path through Bismarck to cross tribal burial grounds and the Missouri River at Lake Oahe. Deloria’s analysis reveals two aspects of the current conflict: the struggle over sovereign boundaries and the struggle to establish respectful relations between peoples and lands beyond current practices of sovereignty. First, Deloria shows how the spatial boundaries of US sovereignty are continually reproduced through the redemptive temporality of the “grand drama of American progress” as innocent of colonial violence.46 For Deloria, this ability to avoid connecting the dots among these “precedents” of erasure enables the contested boundaries between peoples to fade into retrospectively inevitable extensions of US sovereign political space (30). For example, the construction of the Oahe dam—part of the spree of dam-building that coincided with and accelerated Termination—flooded the lands of and displaced the very communities along the Missouri River that will be most affected by any potential spill from the Dakota Access Pipeline.47 Deloria contributes, then, to a structural analysis and a rhetoric insisting on ongoing Native 18 Political Theory 00(0) presence, which show how conflicts over pipelines are mediated through a series of “conquest-oriented” practices. Deloria’s writing gives analytical yet necessarily historical traction on how the US settler state establishes the fiction of its sovereignty in relation to the political life of specific tribal nations like the Standing Rock Sioux. While narratives of civic inclusion dis-embed these struggles from the territorial politics in which they are rooted, Deloria draws attention back to these successive layers of violence etched into the land and in the histories of tribal communities. Second, Deloria’s work also points beyond moments of struggle over sovereign space to possibilities of cultivating alternative conceptions of relationship and responsibility in tension with sovereignty. Beyond his critique of American political discourse, Deloria also reconstructively articulated the ways in which Indigenous communities differently imagined their own relations to land. In God Is Red, Deloria theorized how Indigenous peoples exercise their collective peoplehood through specific caretaking relations with lands rather than primarily through a sovereignty exercised in “homogenous” historical time.48 Deloria explained that land is not an inert object or background setting to human activity but has a “spirit” able to “grab groups of men and reorient them.”49 As Glen Coulthard argues, Deloria is “attempting to explicate the position that land occupies as an ontological framework for understanding relationships.”50 Instead of Locke’s earth waiting to be made the proprietary grounds of sovereignty, “land” figures a communally specific set of “relationships and experiences” to human and non-human kin that generate caretaking duties for the collectivity inhabiting (with) it.51 Deloria pointedly argued that non-Indigenous peoples would have to learn this lesson from Indigenous peoples without engaging in a civic inclusion–style politics that would privilege the psychic and political needs of settlers for their own sovereign myths of belonging that elide the colonial violence of state-formation. These potentials move beyond civic inclusion and towards an account of connections between peoples that respect specific responsibilities to lands and one another. With regard to Standing Rock, the 1851 Treaty of Fort Laramie contains a clause protecting signatory tribes against settler depredations, and the 1868 Treaty of Fort Laramie contains one that reserves usufruct rights to the Lakota people.52 The pipeline would seem to violate the letter and spirit of each of these, suggesting responsibilities of non-Indigenous peoples to respect the terms of political association that the US itself extracted under duress from Lakota leaders. Consider also the broad circulation of the Lakota phrase, “Mni Wiconi,” meaning “Water is Life,” which activists and observers have amplified as the slogan of an emerging environmental movement made up of Native nations, Native-based NGOs, and mainstream NGOs.53 Deloria’s writing raises a difficult question: Does this powerful shift in the rhetorical commitments of the mainstream environmental movement signal an emerging openness among non-Indigenous peoples already inclined to resist “integrationist-individualist” imperatives for their own reasons to also engage Native nations on the latter’s terms? Deloria shows how such possibilities might be deepened by linking a heightened awareness of the colonial context of the political and moral claims of the Standing Rock Sioux and other Native nations to a responsibility exercised in relation to lands. In the place of narratives of inclusion, Deloria’s analysis thus opens up connections between struggles over the terms of sovereignty and forms of ecologically sound belonging and place-making that demand reciprocal relations between plural peoples and lands beyond sovereignty.

#### Political strategies are key – anything else is paternalism and cedes the possibility for material change.

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Many activists still believe, however, that legal strategies are the best option for advancing the indigenous struggle. Expressing disappointment over the Supreme Court decision, former INI Director Mat´ıas Alonso said, “All three branches of government have turned their back on the indigenous people. . . . ” Nevertheless, he insisted that the courts continued to be the most viable arena of struggle, noting that in the absence of congressional support the executive branch has very little room to maneuver.23 In this regard, indigenous activists view the courts as an independent arena of politics with the potential power to stand up to the Executive and to the Congress. They think of the courts as a complementary political option or strategy and not as a withdrawal from politics. ILO Convention 169 and the Indigenous Law act as instruments that have opened space for the contestation of indigenous status through legal and political channels, with some possibility of success. The strategy of mounting constitutional challenges to the Supreme Court against the 2001 Indigenous Rights legislation also exposed a new range of action to the political opposition. The Otom´ı appeal to the OAS Court represents an additional tactical breakthrough, as does the official ANIPA complaint to the ILO against the Mexican government. Regardless of the eventual success of these strategic maneuvers, it seems evident that opposition activists have employed the indigenous subject position to advantage in carving out new political spaces and expanding the room of the rural poor to maneuver politically. Activists are not mistaken when they treat the courts as an alternative site of politics rather than as an alternative to politics, as some critics of courts and legal strategies allege (Gabel and Kennedy, 1984; Poole, 1999; Tushnet, 1984). ii. the issues that orient indigenous politics Indigenous identity has not only moved rural Mexican politics from the fields and the streets to Geneva, the Office of the President, and the Supreme Court. Indigenous identity has also given Mexico’s rural poor access to a range of issues that carry the movement beyond the limits of redistribution and recognition and have helped situate its distinctly contemporary political position. Indigenous people insert their voices into debates about democracy and democratization, selfdetermination and citizenship, and globalization and the environment. The alliance between indigenous and women’s rights activists has also played a role in locating the indigenous rights movement politically.

#### Prefer high probability – risk analysis is a settler move to innocence that perpetuates the erasure of settler colonial histories.

Dalley 16 Hamish Dalley (2016): The deaths of settler colonialism: extinction as a metaphor of decolonization in contemporary settler literature, Settler Colonial Studies, DOI: 10.1080/2201473X.2016.1238160 //JPark

Settlers love to contemplate the possibility of their own extinction; to read many contemporary literary representations of settler colonialism is to find settlers strangely satisfied in dreaming of ends that never come. This tendency is widely prevalent in English-language representations of settler colonialism produced since the 1980s: the possibility of an ending – the likelihood that the settler race will one day die out – is a common theme in literary and pop culture considerations of colonialism’s future. Yet it has barely been remarked how surprising it is that this theme is so present. For settlers, of all people, to obsessively ruminate on their own finitude is counterintuitive, for few modern social formations have been more resistant to change than settler colonialism. With a few exceptions (French Algeria being the largest), the settler societies established in the last 300 years in the Americas, Australasia, and Southern Africa have all retained the basic features that define them as settler states – namely, the structural privileging of settlers at the expense of indigenous peoples, and the normalization of whiteness as the marker of political agency and rights – and they have done so notwithstanding the sustained resistance that has been mounted whenever such an order has been built. Settlers think all the time that they might one day end, even though (perhaps because) that ending seems unlikely ever to happen. The significance of this paradox for settler-colonial literature is the subject of this article. Considering the problem of futurity offers a useful foil to traditional analyses of settler colonial narrative, which typically examine settlers’ attitudes towards history in order to highlight a constitutive anxiety about the past – about origins. Settler colonialism, the argument goes, has a problem with historical narration that arises from a contradiction in its founding mythology. In Stephen Turner’s formulation, the settler subject is by definition one who comes from elsewhere but who strives to make this place home. The settlement narrative must explain how this gap – which is at once geographical, historical, and existential – has been bridged, and the settler transformed from outsider into indigene. Yet the transformation must remain constitutively incomplete, because the desire to be at home necessarily invokes the spectre of the native, whose existence (which cannot be disavowed completely because it is needed to define the settler’s difference, superiority, and hence claim to the land) inscribes the settler’s foreignness, thus reinstating the gap between settler and colony that the narrative was meant to efface.1 Settler-colonial narrative is thus shaped around its need to erase and evoke the native, to make the indigene both invisible and present in a contradictory pattern that prevents settlers from ever moving on from the moment of colonization.2 As evidence of this constitutive contradiction, critics have identified in settler-colonial discourse symptoms of psychic distress such as disavowal, inversion, and repression.3 Indeed, the frozen temporality of settler-colonial narrative, fixated on the moment of the frontier, recalls nothing so much as Freud’s description of the ‘repetition compulsion’ attending trauma.4 As Lorenzo Veracini puts it, because: ‘settler society’ can thus be seen as a fantasy where a perception of a constant struggle is juxtaposed against an ideal of ‘peace’ that can never be reached, settler projects embrace and reject violence at the same time. The settler colonial situation is thus a circumstance where the tension between contradictory impulses produces long-lasting psychic conflicts and a number of associated psychopathologies.5 Current scholarship has thus focused primarily on settler-colonial narrative’s view of the past, asking how such a contradictory and troubled relationship to history might affect present-day ideological formations. Critics have rarely considered what such narratological tensions might produce when the settler gaze is turned to the future. Few social formations are more stubbornly resistant to change than settlement, suggesting that a future beyond settler colonialism might be simply unthinkable. Veracini, indeed, suggests that settler-colonial narrative can never contemplate an ending: that settler decolonization is inconceivable because settlers lack the metaphorical tools to imagine their own demise.6 This article outlines why I partly disagree with that view. I argue that the narratological paradox that defines settler-colonial narrative does make the future a problematic object of contemplation. But that does not make settler decolonization unthinkable per se; as I will show, settlers do often try to imagine their demise – but they do so in a way that reasserts the paradoxes of their founding ideology, with the result that the radical potentiality of decolonization is undone even as it is invoked. I argue that, notwithstanding Veracini’s analysis, there is a metaphor via which the end of settler colonialism unspools – the quasi-biological concept of extinction, which, when deployed as a narrative trope, offers settlers a chance to consider and disavow their demise, just as they consider and then disavow the violence of their origins. This article traces the importance of the trope of extinction for contemporary settler-colonial literature, with a focus on South Africa, Canada, and Australia. It explores variations in how the death of settler colonialism is conceptualized, drawing a distinction between historio-civilizational narratives of the rise and fall of empires, and a species-oriented notion of extinction that draws force from public anxiety about climate change – an invocation that adds another level of ambivalence by drawing on ‘rational’ fears for the future (because climate change may well render the planet uninhabitable to humans) in order to narrativize a form of social death that, strictly speaking, belongs to a different order of knowledge altogether. As such, my analysis is intended to draw the attention of settler colonial studies toward futurity and the ambivalence of settler paranoia, while highlighting a potential point of cross-fertilization between settler-colonial and eco-critical approaches to contemporary literature. That ‘extinction’ should be a key word in the settler-colonial lexicon is no surprise. In Patrick Wolfe’s phrase,7 settler colonialism is predicated on a ‘logic of elimination’ that tends towards the extermination – by one means or another – of indigenous peoples.8 This logic is apparent in archetypal settler narratives like James Fenimore Cooper’s The Last of the Mohicans (1826), a historical novel whose very title blends the melancholia and triumph that demarcate settlers’ affective responses to the supposed inevitability of indigenous extinction. Concepts like ‘stadial development’ – by which societies progress through stages, progressively eliminating earlier social forms – and ‘fatal impact’ – which names the biological inevitability of strong peoples supplanting weak – all contribute to the notion that settler colonialism is a kind of ‘ecological process’ 9 that necessitates the extinction of inferior races. What is surprising, though, is how often the trope of extinction also appears with reference to settlers themselves; it makes sense for settlers to narrate how their presence entails others’ destruction, but it is less clear why their attempts to imagine futures should presume extinction to be their own logical end as well. The idea appears repeatedly in English-language literary treatments of settler colonialism. Consider, for instance, the following rumination on the future of South African settler society, from Olive Schreiner’s 1883 Story of an African Farm: It was one of them, one of those wild old Bushmen, that painted those pictures there. He did not know why he painted but he wanted to make something, so he made these. […] Now the Boers have shot them all, so that we never see a yellow face peeping out among the stones. […] And the wild bucks have gone, and those days, and we are here. But we will be gone soon, and only the stones will lie on, looking at everything like they look now.10 In this example, the narrating settler character, Waldo, recognizes prior indigenous inhabitation but his knowledge comes freighted with an expected sense of biological superiority, made apparent by his description of the ‘Bushman’s’ ‘yellow face’, and lack of mental self-awareness. What is not clear is why Waldo’s contemplation of colonial genocide should turn immediately to the assumption that a similar fate awaits his people as well. A similar presumption of racial vulnerability permeates other late nineteenth century novels from the imperial metropole, such as Dracula and War of the Worlds, which are plotted around the prospect of invasions that would see the extinction of British imperialism, and, in the process, the human species. Such anxieties draw energy from a pattern of settler defensiveness that can be observed across numerous settler-colonial contexts. Marilyn Lake’s and Henry Reynold’s account of the emergence of transnational ‘whiteness’ highlights the paradoxical fact that while white male settlers have been arguably the most privileged class in history, they have routinely perceived themselves to be ‘under siege’, threatened with destruction to the extent that their very identity of ‘whiteness was born in the apprehension of imminent loss’. 11 The fear of looming annihilation serves a powerful ideological function in settler communities, working to foster racial solidarity, suppress dissent, and legitimate violence against indigenous populations who, by any objective measure, are far more at risk of extermination than the settlers who fear them. Ann Curthoys and Dirk Moses have traced this pattern in Australia and Israel-Palestine, respectively.12 This scholarship suggests that narratives of settler extinction are acts of ideological mystification, obscuring the brutal inequalities of the frontier behind a mask of white vulnerability – an argument with which I sympathize. However, this article shows how there is more to settler-colonial extinction narratives than bad faith. I argue that we need a more nuanced understanding of how they encode a specifically settler-colonial framework for imagining the future, one that has implications for how we understand contemporary literatures from settler societies, and which allows us to see extinction as a genuine, if flawed, attempt to envisage social change. In the remainder of this paper I consider extinction’s function as a metaphor of decolonization. I use this phrase to invoke, without completely endorsing, Tuck and Yang’s argument that to treat decolonization figuratively, as I argue extinction narratives do, is necessarily to preclude radical change, creating opportunities for settler ‘moves to innocence’ that re-legitimate racial inequality.13 The counterview to this pessimistic perspective is offered by Veracini, who suggests that progressive change to settler-colonial relationships will only happen if narratives can be found that make decolonization thinkable.14 This article enters the debate between these two perspectives by asking what it means for settler writers to imagine the future via the trope of extinction. Does extinction offer a meaningful way to think about ending settler colonialism, or does it re-activate settler-colonial patterns of thought that allow exclusionary social structures to persist? I explore this question with reference to examples of contemporary literary treatments of extinction from select English-speaking settler-colonial contexts: South Africa, Australia, and Canada.15 The next section of this article traces key elements of extinction narrative in a range of settler-colonial texts, while the section that follows offers a detailed reading of one of the best examples of a sustained literary exploration of human finitude, Margaret Atwood’s Maddaddam trilogy (2003–2013). I advance four specific arguments. First, extinction narratives take at least two forms depending on whether the ‘end’ of settler society is framed primarily in historical-civilizational terms or in a stronger, biological sense; the key question is whether the ‘thing’ that is going extinct is a society or a species. Second, biologically oriented extinction narratives rely on a more or less conscious slippage between ‘the settler’ and ‘the human’. Third, this slippage is ideologically ambivalent: on the one hand, it contains a radical charge that invokes environmentalist discourse and climate-change anxiety to imagine social forms that re-write settler-colonial dynamics; on the other, it replicates a core aspect of imperialist ideology by normalizing whiteness as equivalent to humanity. Fourth, these ideological effects are mediated by gender, insofar as extinction narratives invoke issues of biological reproduction, community protection, and violence that function to differentiate and reify masculine and feminine roles in the putative de-colonial future. Overall, my central claim is that extinction is a core trope through which settler futurity emerges, one with crucial narrative and ideological effects that shape much of the contemporary literature emerging from white colonial settings.

## 1AR---Case

#### **Some of the CP/DA cards are from Needham ZL (cards tagged //ZL)**

### 1AR – Short

#### Vote aff – warming causes massive biodiversity loss that makes the earth uninhabitable which causes extinction. Plan solves – spurs quick transitions to green energy, decks fossil fuel companies, and leads to global modeling.

### 1AR – Long

#### Vote aff – it’s try or die – fossil fuel companies will add 6 billion tons of CO2 into the atmosphere in the next decades. Warming outweighs every other impact – it’s probable, high magnitude, and small time frame.

#### 1] Biodiversity – species lose habitats and disrupt biospheres – that makes the earth uninhabitable which causes extinction – that’s Plumer – proves catastrophe is inevitable absent major changes.

#### 2] Wars – The Economist proves warming causes civil wars and resource conflicts – every standard deviation increases risk by 14% – causes structural violence and escalates into global wars.

Other impacts – Carrington AIR POLLUTION and Callahan SOCIAL EMPOWERMENT – resolves structural violence

#### Plan solves – First is collapse – Roberts and Goldman – we bankrupt oil companies and keep reserves undeveloped which gives us time. Second is fill in – that’s TRI – green energy is just waiting to fill in and offsets emissions without disturbing the economy. Third is modelling – a] US key – Bukharin proves other countries need the US to take the first action b] Steeves proves China and the US are competing to develop Greentech and spills over to more R&D – necessary to spread pro-climate efforts. Fourth **is elimination – Gerasimchuk proves it’s enough to puts a large dent in carbon emissions with the most conservative estimates.**

### 2AR

#### It’s try or die to stop fossil fuel companies from putting 6 billion more tons of CO2 into the atmosphere and causing extinction.

I’m going for war –

I’m going for bio d --

#### The framing issue for this round is renewable fill in – renewables are ready now and all they need is to be competitive with the market.

1] takes out neg strats like “we need energy”

2] proves viability

#### Warming outweighs –

1] alt actors can’t check – makes the world unlivable

2] cannot negotiate with the environment

3] it’s linear and accumulating

4] sci consensus – most probable

### ! – BioD Extinction

#### Biodiversity loss will cause the 6th major extinction.

Gray 3-4 Richard Gray, 3-4-2019, Summary of research by Professor Mace, who advises the EU on biodiversity issues and has worked with the EU-funded BiodivERsA consortium which promotes pan-European research on biodiversity and ecosystems. "Sixth mass extinction could destroy life as we know it– biodiversity expert", Horizon: the EU Research &amp; Innovation magazine, https://horizon-magazine.eu/article/sixth-mass-extinction-could-destroy-life-we-know-it-biodiversity-expert.html, Accessed on 10-23-2019 // JPark

Alarming declines in the number of insects, vertebrates and plant species around the world have raised fears that we are in the midst of a sixth major extinction that could cause a collapse of the natural ecosystems we rely upon to survive. Urgent international action is needed to halt this potentially catastrophic decline in biodiversity, according to Professor Georgina Mace, head of the Centre for Biodiversity and Environmental Research at University College London, UK. While Prof. Mace believes that we’re only on the brink of this extinction, she says the threat is so severe that biodiversity loss needs to be addressed on a global scale in a similar way to climate change. ‘The evidence from all of the recent studies … indicates it is increasing. We're losing biodiversity more quickly than we did in the past. ‘If you look at extinction rates, which is hard because you need to be sure something is really extinct, they are probably 100-1,000 times higher than in pre-human times. ‘Another way of measuring (biodiversity) is to look at the abundance of life rather than numbers of species. For vertebrates (birds, fish, amphibians, reptiles, mammals) there is a fairly good estimate that more than 50% of the vertebrate abundance has been lost in the past 50 years. The information for invertebrates and plants is less good, but there is some evidence to suggest insects are declining just as quickly, if not more so. One recent paper showed the mass of insects is falling by 2.5% a year. For methodological reasons, this is likely to be an over-estimate, but there can be little doubt that certain insect groups are undergoing very significant declines. ‘Then we are also losing the interactions between these species.’ Why should we be worried? ‘The diversity of life on Earth is the defining feature of our planet – we don’t know of any other planets that have life on them. We developed and evolved with other species here, and their diversity allows us to thrive. So, it's very reckless to assume that we can do without them and that we don't have some responsibility for all those other species. ‘Then there are some of the benefits of **biodiversity** that we largely take for granted. These are things like primary production, which is the way plants convert energy from the sun and is the basis for all life on Earth. Wild species break down organic material back into nutrients, so it can be recycled and used again. The water cycle also relies heavily on living organisms. ‘Finally, there is a utilitarian view about the value of nature to us. It provides us with goods and services like pollinating crops, or timber production or novel drugs from tropical plants. If we lose pollinators that are specially adapted to a particular plant, even if we have more widespread invasive pollinators coming in, they may not be able to pollinate that plant.’ 'The diversity of life on Earth is the defining feature of our planet.' Professor Georgina Mace, University College London, UK

### AT Companies Key To Greentech

#### 1] This is false – Goldman proves they only diversify to look good and some reject it on principle – the probability of this evidence is near 0.

#### 2] We don’t need Exxon – Monasterolo proves green capital investments happen anyways so other companies will just fill in.

### AT Alt Causes

#### 1] Production subsidies are the biggest root cause – that’s Roberts – fossil fuel companies face no economic pushback and the aff is key to bankrupting their capabilities – that’s Goldman.

#### 2] Yes spillover – the Steeves ev is excellent and shows the US’s large contribution to global emissions makes us a global leader in both clean energy use and R&D.

### AT Scarcity Rent/Green Paradox

#### 1] Don’t have time to “use or lose” – fiat is immediate

#### 2] Regulations solve – it’s ridiculous to assume they do whatever they want

#### 3] Don’t have resources

### AT Clean Energy Bad

#### Shifting to clean energy is necessary and good – best models prove.

Wang 10-15 Isabella Wang, 10-15-2019, "Could clean energy cause a spike in global warming? Duke study dispels new concern", Chronicle, https://www.dukechronicle.com/article/2019/10/clean-energy-global-warming-duke-study, Accessed on 10-21-2019 // JPark

A Duke professor recently cast doubt on the argument that transitioning to clean energy will lead to a sharp increase in global warming. When climate representatives in the United Nations met to approve a new Intergovernmental Panel on Climate Change report, some representatives insisted that a transition to clean energy would cause air pollution to drop, resulting in a short-term increase in global temperature. Drew Shindell, Nicholas professor of earth science at Duke, was part of a team that demonstrated that these fears are unfounded. He and Christopher Smith, a research fellow with the School of Earth and Environment at the University of Leeds, analyzed 42 scenarios representing rapid worldwide transitions from fossil fuels to clean energy. The pair found that steady reduction of fossil fuel emissions would likely reduce air pollution, prevent premature deaths and decrease warming rates within two decades. “Phasing out fossil fuels is still the best way of meeting stringent temperature targets from the Paris Agreement,” Smith said. “What we’ve shown is that you don’t have negative climate impact if you reduce air pollution by phasing out fossil fuels. It’s a win-win for air quality, health, and the climate.” Smith’s research contradicts other studies that predicted that, because burning fossil fuels releases pollutants that cool the atmosphere—like soot, carbon and sulfate aerosols—changing to clean energy could increase global temperatures. However, Smith noted the temperature would continue to warm in the short term given the quantity of greenhouse gases that humans have already emitted. “If we stopped emitting everything today, hypothetically, it answers an interesting and important question: how much climate change have we already locked in?” he said. “You’ll find that the air will clean itself up in a matter of days, or a couple of weeks. On the other hand, the carbon dioxide sticks around for a long time.” Shindell and Smith looked for simple climate models to help them evaluate the impact of transitioning to green energy. The 42 emissions scenarios they chose considered how the global population, technology and economy would develop over the next century in an attempt to produce plausible models of a complete transition to renewable energy. The researchers ran each model 1,000 times, with each one producing a final temperature prediction for each trial. The only changing variable was the predicted temperature increase caused by a given amount of carbon dioxide, as the researchers held the value of emissions over time constant. Out of the 42 scenarios, 41 assumed that a technological fix would occur over the course of the transition. Almost every scenario made use of negative emissions technologies, which burn bioenergy to capture carbon dioxide in the air.

### AT Biofuels Bad

<https://www.theguardian.com/environment/climate-consensus-97-per-cent/2018/mar/14/biofuels-can-help-solve-climate-change-especially-with-a-carbon-tax>

### AT Nuclear

#### Nuclear power is unlikely – normal means is a shift to renewables.

Samuel 18 Molly Samuel, 7-25-2018, Molly Samuel joined WABE as a reporter in November 2014. Before coming on board, she was a science producer and reporter at KQED in San Francisco, where she won awards for her reporting on hydropower and on crude oil. Molly was a fellow with the Middlebury Fellowships in Environmental Journalism and a journalist-in-residence at the National Evolutionary Synthesis Center. She’s from Atlanta, has a degree in Ancient Greek from Oberlin College and is a co-founder of the record label True Panther Sounds"Study: US Unlikely To See New Nuclear Power Anytime Soon", 90.1 FM WABE, https://www.wabe.org/study-us-unlikely-to-see-new-nuclear-power-anytime-soon/#targetText=Nuclear%20power%20doesn't%20have,there%20are%20major%20policy%20changes.&amp;targetText=A%20fifth%20of%20the%20nation's,number%20of%20plants%20is%20shrinking., Accessed on 10-27-2019 // JPark

Nuclear power doesn’t have much of a future in the U.S., according to a recent paper that says the country is unlikely to see many new reactors in coming decades, unless there are major policy changes. That means the only nuclear reactors under construction in the country right now, which are here in Georgia, could be the last ones built in the U.S. for years. A fifth of the nation’s electricity comes from nuclear power, but the number of plants is shrinking. Some have already closed, and others are scheduled to. Low natural gas prices have made building new nuclear reactors less competitive, and renewable energy is getting more competitive. The troubled outlook for nuclear is bad news to Granger Morgan, a professor in the department of engineering and public policy at Carnegie Mellon University in Pittsburgh, because he said once nuclear plants are up and running they don’t release carbon dioxide. “One of the things, of course, that are really important in the context of climate change is figuring out how to decarbonize the energy system,” he said, “that is how to produce electricity and the other things we need without producing a lot of carbon dioxide into the atmosphere.” In a paper he recently co-wrote for the journal Proceedings of the National Academy of Sciences, he doesn’t find much promise for the U.S. nuclear industry. “Reluctantly, we’ve reached the conclusion that for at least the next few decades, which is the critical period for avoiding serious climate change, nuclear power is probably not going to make much of a new contribution,” he said. That’s because, beyond the existing fleet aging, there’s not much new coming down the line. Morgan said he found that the technology for the next generation of big reactors is lagging, and there’s little market for smaller reactors. Marilyn Brown, who runs the climate and energy policy lab at Georgia Tech, agrees with Morgan that nuclear power is important for addressing climate change, and she said the paper, which she was not involved with, is a fair assessment of the challenges for nuclear. But, she said, her outlook for the future isn’t quite as grim as Morgan’s. She said she would like to see the U.S. build a few more nuclear reactors, but she also believes that renewable sources of energy and battery technology will keep improving. “I think we can manage no new nuclear. I just don’t want to see a bunch of good plants retired,” Brown said The findings in the paper weren’t a surprise to Sara Barczak, regional advocacy director with the Southern Alliance for Clean Energy, a group that has been critical of the nuclear expansion at Plant Vogtle in Georgia.

### AT Ecuador

### AT No Warming

#### There’s an unquestionable scientific consensus about warming.

Nuccitelli 16 — Dana Nuccitelli, Climate Writer for the *Guardian*, Environmental Scientist at Tetra Tech—a private environmental consulting firm, holds an M.A. in Physics from the University of California-Davis and a B.A. in Astrophysics from the University of California-Berkeley, 2016 (“It’s settled: 90–100% of climate experts agree on human-caused global warming,” *Climate Consensus – The 97%*—a *Guardian* blog about climate change, April 13th, Available Online at <https://www.theguardian.com/environment/climate-consensus-97-per-cent/2016/apr/13/its-settled-90100-of-climate-experts-agree-on-human-caused-global-warming>, Accessed 07-15-2016)

There is an overwhelming expert scientific consensus on human-caused global warming. Authors of seven previous climate consensus studies — including Naomi Oreskes, Peter Doran, William Anderegg, Bart Verheggen, Ed Maibach, J. Stuart Carlton, John Cook, myself, and six of our colleagues — have co-authored a new paper that should settle this question once and for all. The two key conclusions from the paper are: 1) Depending on exactly how you measure the expert consensus, it’s somewhere between 90% and 100% that agree humans are responsible for climate change, with most of our studies finding 97% consensus among publishing climate scientists. 2) The greater the climate expertise among those surveyed, the higher the consensus on human-caused global warming. [Graphic Omitted] Expert consensus is a powerful thing. People know we don’t have the time or capacity to learn about everything, and so we frequently defer to the conclusions of experts. It’s why we visit doctors when we’re ill. The same is true of climate change: most people defer to the expert consensus of climate scientists. Crucially, as we note in our paper: Public perception of the scientific consensus has been found to be a gateway belief, affecting other climate beliefs and attitudes including policy support. That’s why those who oppose taking action to curb climate change have engaged in a misinformation campaign to deny the existence of the expert consensus. They’ve been largely successful, as the public badly underestimate the expert consensus, in what we call the “consensus gap.” Only 12% of Americans realize that the consensus is above 90%. [Video Omitted] Consensus misrepresentations Our latest paper was written in response to a critique published by Richard Tol in Environmental Research Letters, commenting on the 2013 paper published in the same journal by John Cook, myself, and colleagues finding a 97% consensus on human-caused global warming in the peer-reviewed literature. Tol argues that when considering results from previous consensus studies, the Cook 97% figure is an outlier, which he claims is much higher than most other climate consensus estimates. He makes this argument by looking at sub-samples from previous surveys. For example, Doran’s 2009 study broke down the survey data by profession – the consensus was 47% among economic geologists, 64% among meteorologists, 82% among all Earth scientists, and 97% among publishing climate scientists. The lower the climate expertise in each group, the lower the consensus. [Graph Omitted] Like several of these consensus surveys, Doran cast a wide net and included responses from many non-experts, but among the experts, the consensus is consistently between 90% and 100%. However, by including the non-expert samples, it’s possible to find low “consensus” values. The flaw in this approach is especially clear when we consider the most ridiculous sub-sample included in Tol’s critique: Verheggen’s 2015 study included a grouping of predominantly non-experts who were “unconvinced” by human-caused global warming, among whom the consensus was 7%. The only surprising thing about this number is that more than zero of those “unconvinced” by human-caused global warming agree that humans are the main cause of global warming. In his paper, Tol included this 7% “unconvinced,” non-expert sub-sample as a data point in his argument that the 97% consensus result is unusually high. By breaking out all of these sub-samples of non-experts, the critique thus misrepresented a number of previous consensus studies in an effort to paint our 97% result as an outlier. The authors of those misrepresented studies were not impressed with this approach, denouncing the misrepresentations of their work in no uncertain terms. We subsequently collaborated with those authors in this newly-published scholarly response, bringing together an all-star lineup of climate consensus experts. The following quote from the paper sums up our feelings about the critique’s treatment of our research: Tol’s (2016) conflation of unrepresentative non-expert sub-samples and samples of climate experts is a misrepresentation of the results of previous studies, including those published by a number of coauthors of this paper. Consensus on consensus In our paper, we show that including non-experts is the only way to argue for a consensus below 90–100%. The greater the climate expertise among those included in the survey sample, the higher the consensus on human-caused global warming. Similarly, if you want to know if you need open heart surgery, you’ll get much more consistent answers (higher consensus) if you only ask cardiologists than if you also survey podiatrists, neurologists, and dentists. That’s because, as we all know, expertise matters. It’s easy to manufacture a smaller non-expert “consensus” number and argue that it contradicts the 97% figure. As our new paper shows, when you ask the climate experts, the consensus on human-caused global warming is between 90% and 100%, with several studies finding 97% consensus among publishing climate scientists. There’s some variation in the percentage, depending on exactly how the survey is done and how the question is worded, but ultimately it’s still true that there’s a 97% consensus in the peer-reviewed scientific literature on human-caused global warming. In fact, even Richard Tol has agreed: The consensus is of course in the high nineties. Is the consensus 97% or 99.9%? In fact, some believe our 97% consensus estimate was too low. These claims are usually based on an analysis done by James Powell, and the difference simply boils down to how “consensus” is defined. Powell evaluated the percentage of papers that don’t explicitly reject human-caused global warming in their abstracts. That includes 99.83% of papers published between 1991 and 2012, and 99.96% of papers published in 2013. In short, 97% of peer-reviewed climate research that states a position on human-caused warming endorses the consensus, and about 99.9% of the total climate research doesn’t explicitly reject human-caused global warming. Our two analyses simply answer different questions. The percentage of experts and their research that endorse the theory is a better description of “consensus.” However, Powell’s analysis is useful in showing how few peer-reviewed scientific papers explicitly reject human-caused global warming. In any case, there’s really no question that humans are the driving force causing global warming. The experts are almost universally convinced because the scientific evidence is overwhelming. Denying the consensus by misrepresenting the research won’t change that reality. With all of the consensus authors teaming up to show the 90–100% expert consensus on human-caused global warming, and most finding 97% consensus among publishing climate scientists, this paper should be the final word on the subject.

### AT SO2 Screw

#### High levels of SO2 causes global warming.

Ward 09 — Peter Ward, former Chief of the Branch of Seismology at United States Geological Survey in Menlo Park, California, Ph.D. in Seismology from Columbia University, B.A. in Geophysics from Dartmouth University, 2009 (“Sulfur dioxide initiates global climate change in four ways,” *Science Direct*, April 2nd, Available Online at <https://www.sciencedirect.com/science/article/pii/S0040609009000169>, Accessed 07-13-2018)

10. Conclusions The concentration of SO2 in the atmosphere appears to initiate global climate change in four ways: I. Very low concentrations allow the atmosphere to cleanse itself by oxidizing most pollutants. This thins the atmospheric blanket, cooling the earth and causing drought. II. Sporadic “large” volcanic eruptions cause cooling of the earth for approximately three years by forming a sulfuric acid aerosol in the lower stratosphere. A sequence of such eruptions can increment the world into an ice age. III. When “large” volcanic eruptions occur in quick succession at the rate of at least one each year for ten or more years, the oxidizing capacity of the atmosphere is severely impaired, greenhouse gases accumulate, causing global warming. IV. Every 20 million years or so, the eruption of millions of cubic kilometers of flood basalts overwhelms the oxidizing capacity of the atmosphere for tens of thousands of years or more, causing mass extinctions. Humans burning fossil fuels are currently emitting as much SO2 every 1.7 years measured in Greenland as one “large” volcanic eruption. Such a high level of SO2 is causing not only global warming but widespread extinction of many species. Humans are also emitting 2 to 3 orders of magnitude more CO2 than large volcanic eruptions, compounding global warming. Both CO2 and SO2 emissions must be reduced significantly to reverse global warming, but reducing SO2 should be the highest priority.Humans have developed many ways to reduce significantly the amount of SO2 emitted; we need to implement them widely and aggressively. It might even be possible in the future to carefully maintain a constant ideal level of SO2 by supplementing natural releases with controlled human releases.

#### Aerosol particles don’t prevent global warming — models are flawed.

Gesellschaft 13 — Max Planck Gesellschaft, independent non-governmental and non-profit association of German research institutes, 2013 (“Sulfate aerosols cool climate less than assumed,” *Science Daily,* May 14th, Available Online at <https://www.sciencedaily.com/releases/2013/05/130514085309.htm>, Accessed 07-13-2018).

Sulfur dioxide is as antagonist of greenhouse gases less effective than previously assumed. It forms sulfate aerosol particles in the air, which reflect sunlight, and as so-called cloud condensation nuclei influence the chemical processes within clouds. Therefore, sulfate aerosol particles help to cool Earth, making them an important factor in climate models. However, a team around researchers from the Max Planck Institute for Chemistry found out that it is likely most models overestimate the cooling effect of these particles. The reason is a largely disregarded reaction pathway catalysed by mineral dust within clouds, which has a strong influence on the life span of sulfate aerosol particles and their ability to reflect sunlight. In their role as condensation nuclei, aerosol particles are an important trigger for the formation of clouds. As humidity accumulates on the particles droplets are formed, which later develop into clouds. Within the clouds, however, the chemical composition of these aerosol particles changes. In order to find out exactly what happens within the clouds, Eliza Harris and Bärbel Sinha from the Max Planck Institute for Chemistry, together with other scientists form Mainz and further research institutes, investigated different air parcels. The special feature of their experiments was that they investigated a cloud which formed on top of a mountain. The scientists could therefore trace how the aerosol particles changed while the cloud was forming. Eliza Harris' main focus was the analysis of sulfur compounds. She investigated their composition in air samples which were collected at different times: Before the parcels entered the cloud, while they were in the cloud, and after they left the cloud. The sulfur compounds in the samples differed in the distribution of sulfur isotopes. Isotopes are atoms of the same elements differing in the number of neutrons in the core and thus can be differentiated with the help of a mass spectrometer. The NanoSIMS ion microprobe, a highly sensitive mass spectrometer, enabled Harris to look into the chemical processes. "The relative reaction rates of isotopes are like fingerprints, which tell us how the sulfate was formed from the sulfur dioxide," Eliza Harris explains her method, which was part of her doctoral research in the group of Peter Hoppe at the Max Planck Institute for Chemistry. Harris' measurements showed that sulfate in clouds forms mostly through the oxidation of sulfur dioxide (SO2) by oxygen (O2). This reaction is catalysed by so-called transition metal ions (TMI) like iron, manganese, titanium or chromium. In addition, sulfate production mostly occurred in cloud droplets which formed on large mineral dust particles, the most important source of transition metal ions. Much less often the trail led to the oxidation of SO2 by hydrogen peroxide (H2O2) and ozone (O3). "As my colleagues and I compared the basic assumptions of climate models with my results we were very surprised, because only one of twelve models considers the role of transition metal ions in the formation of sulfate," says the scientist, who is now working at the Massachusetts Institute of Technology (MIT) in the USA. Instead, most of the models used the alternative pathways of sulfur dioxide oxidation by hydrogen peroxide (H2O2), ozone (O3) and the hydroxyl radical (OH). Sulfate produced catalytically through transition metal ions are formed on relatively large mineral dust particles, making them bigger than those formed through the reaction with hydrogen peroxide. Due to their size, they fall from the air at a faster rate -- by force of gravity. The time frame for climate cooling by sulfate particles could therefore be shorter than has been believed. Eliza Harris assumes that the models have overestimated the climate cooling effect of sulfate aerosols. So far it is not quantifiable to what degree Harris' discovery will impact climate prognoses. However, future models should consider the TMI catalysis reaction as an important pathway for the oxidation of sulfur dioxide, says the scientist. She thinks that the impact on climate models of European regions might probably be low, as mineral dust concentrations in the air are small and sulfur dioxide (SO2)emissions are declining. "In India and China, however, where sulfur dioxide emissions are expected to rise in the near future, combined with significantly higher concentrations of mineral dust in the air, the effect could be stronger," assumes Harris. Future studies will show. The study, which has been published in the journal Science (Vol…), was conducted in collaboration with the following institutes: the Max Planck Institute for Chemistry in Mainz, the Leibniz Institute for Tropospheric Research in Leipzig, the Department of Atmospheric Science at Colorado State University, the Earth System Science Research Centre at the Institute of Geosciences at the University of Mainz, and the Institute of Atmospheric Physics at the University of Mainz.

### AT CO2 Ag

#### Wrong – CO2 gives diminishing returns but temp increases massively vamp up food insecurity

Nucitelli 16 (Nuccitelli, Dana. “New Study Undercuts Favorite Climate Myth 'More CO2 Is Good for Plants' | Dana Nuccitelli.” The Guardian, Guardian News and Media, 19 Sept. 2016, [www.theguardian.com/environment/climate-consensus-97-per-cent/2016/sep/19/new-study-undercuts-favorite-climate-myth-more-co2-is-good-for-plants. [Dana Nuccitelli is an environmental scientist, and author of Climatology versus Pseudoscience. He has published 10 papers related to climate change in peer-reviewed journals, including three studies on the expert climate consensus. Nuccitelli has written about climate science for SkepticalScience.com since 2010, for The Guardian since 2013, and for Yale Climate Connections since 2018.])//LK](http://www.theguardian.com/environment/climate-consensus-97-per-cent/2016/sep/19/new-study-undercuts-favorite-climate-myth-more-co2-is-good-for-plants.%20%5bDana%20Nuccitelli%20is%20an%20environmental%20scientist,%20and%20author%20of%20Climatology%20versus%20Pseudoscience.%20He%20has%20published%2010%20papers%20related%20to%20climate%20change%20in%20peer-reviewed%20journals,%20including%20three%20studies%20on%20the%20expert%20climate%20consensus.%20Nuccitelli%20has%20written%20about%20climate%20science%20for%20SkepticalScience.com%20since%202010,%20for%20The%20Guardian%20since%202013,%20and%20for%20Yale%20Climate%20Connections%20since%202018.%5d)//LK) [Accessed 10/30/19]

A 16-year study found that we’re at a point where more CO2 won’t keep increasing plant production, but higher temperatures will decrease it. A new study by scientists at Stanford University, published in the Proceedings of the National Academy of Sciences, tested whether hotter temperatures and higher carbon dioxide levels that we’ll see post-2050 will benefit the kinds of plants that live in California grasslands. They found that carbon dioxide at higher levels than today (400 ppm) did not significantly change plant growth, while higher temperatures had a negative effect. The oversimplified myth of ‘CO2 is plant food’ Those who benefit from the status quo of burning copious amounts of fossil fuels love to argue that more carbon dioxide in the atmosphere will benefit plant life. It’s a favorite claim of climate contrarians like Matt Ridley and Rupert Murdoch. It seems like a great counter-argument to the fact that carbon dioxide is a dangerous pollutant – a fact that contrarians often dispute. However, reality is far more complicated than the oversimplification of ‘CO2 is plant food.’ Unlike in the controlled environment of a greenhouse, the increasing greenhouse effect on Earth causes temperatures to rise and the climate to change in various ways that can be bad for plant life. We can’t control all the other variables the way we can in a greenhouse. So far, as contrarians like Rupert Murdoch love to point out, the plant food effect has won out. Earth has become greener in recent decades (although that trend may now be reversing). The situation is not unlike a human diet – at relatively low calorie levels, more food is beneficial. But as calorie intake continues to rise, at a certain point it’s no longer benefiting the human body. More food is good, but only up to a certain point, as the global obesity epidemic makes clear. The experiment The Stanford scientists set up 132 plots of flowers and grass in California and introduced varying levels of carbon dioxide, temperature, water, and nitrogen. The scientists conducted the experiments over 16 growing seasons between 1998 and 2014. They found that only higher nitrogen levels resulted in higher plant productivity, while higher temperatures caused it to decline. While this experiment was specific to California grasslands, other studies have similarly undermined the ‘more CO2 is great’ myth. For example, a 2012 paper found that higher temperatures are detrimental to French corn yields. While French corn production has increased steadily in recent decades due to a combination of technological improvements and CO2 fertilization (the former far more than the latter), yields have leveled off in recent years, and were particularly low when struck by heat waves. A significant reduction in maize yield is found for each day with a maximum temperature above 32°C, in broad agreement with previous estimates. The recent increase in such hot days has likely contributed to the observed yield stagnation. Another study published in Nature Climate Change last week concluded that higher temperatures will cause wheat production to decline. Just a 1°C rise in global temperature will decrease wheat yields by about 5% (approximately 35 million tons). Climate change is bad news for several of our staple crops. Carbon pollution and rapid climate change are dangerous The evidence thus suggests we’re at or near the point where rising atmospheric CO2 levels will no longer benefit overall plant growth, while the rising heat that comes along with that carbon are generally detrimental to plant productivity. There are also many ways in which dumping more carbon pollution into the atmosphere has negative effects, on plants and also animal species. Climate change is causing increased heat waves, flooding, and other extreme weather events; national security threats; ocean acidification; sea level rise; wide-scale species extinctions; and so on. There will certainly be some positive climate change outcomes as well, but all evidence suggests the negatives will far outweigh the positives. Cherry picking one possible positive outcome and ignoring all the negatives as an excuse to maintain the status quo is simply a failure of basic risk management. And with a threat as dangerous as global climate change, engaging in proper risk management is incredibly important. Failure is simply not an option.

#### Studies prove it’s diminishing returns and increasing harms – the earth absorbs less CO2 and extreme weather kills more plants.

Pierre-Louis 19 (Pierre-louis, Kendra. “As Climate Warms, Plants Will Absorb Less CO₂, Study Finds.” The New York Times, The New York Times, 23 Jan. 2019, [www.nytimes.com/2019/01/23/climate/plants-co2-climate-change.html. [Kendra Pierre-Louis is a reporter on the New York Times climate team. Before joining The Times in December 2017, she was a staff reporter with Popular Science, where she covered science and the environment.])//LK](http://www.nytimes.com/2019/01/23/climate/plants-co2-climate-change.html.%20%5bKendra%20Pierre-Louis%20is%20a%20reporter%20on%20the%20New%20York%20Times%20climate%20team.%20Before%20joining%20The%20Times%20in%20December%202017,%20she%20was%20a%20staff%20reporter%20with%20Popular%20Science,%20where%20she%20covered%20science%20and%20the%20environment.%5d)//LK) [Accessed 10/30/19]

The last time the atmosphere contained as much carbon dioxide as it does now, birdlike dinosaurs roamed what was then a verdant landscape. The earth’s lushness was at least partly caused by the abundance of CO₂, which plants use for photosynthesis. That has led to the idea that more CO₂ in the atmosphere could create a literally greener planet. Today, plants and soil around the world absorb roughly a quarter of the greenhouse gases that humans release into the atmosphere, helping the Earth avoid some of the worst effects of climate change. In an ideal situation, as levels of carbon dioxide increased, plants would soak up more of these emissions, helping to fuel their growth. But in a study published Wednesday in the journal Nature, researchers found that under a warming climate, rather than absorbing more greenhouse gas emissions, plants and soil may start absorbing less, accelerating the rate of change. “We have this image of the planet getting very, very green as we move into the future,” said Pierre Gentine, a professor in the Department of Earth and Environmental Engineering at Columbia University and an author of the study. “But it may be the opposite.” What on Earth Is Going On? Sign up for our weekly newsletter to get our latest stories and insights about climate change — along with answers to your questions and tips on how to help. It is well known among climate researchers that atmospheric concentrations of carbon dioxide increase during dry years, a sign that the earth is absorbing fewer emissions. When the soil is dry, plants are stressed and can’t absorb as much CO₂ to perform photosynthesis. At the same time, because dry conditions are often accompanied by warm temperatures, microorganisms in the soil, which are more productive when it’s warm, release more CO₂. As the climate changes, scientists know that there will be more years of extreme weather. That means extreme droughts, followed by years of heavier than normal rainfall, will become more likely. Dr. Gentine and his colleagues wondered if those conditions would balance out. To check, they ran four different climate simulations and used satellite observations that essentially allowed them to observe photosynthesis from space. The goal was to see the impact that soil moisture had on Earth’s ability to absorb greenhouse gas emissions. Though plants and soil could absorb more CO₂ during the wetter years, it did not make up for their reduced ability to absorb CO₂ in the years when soil was dry. Editors’ Picks ‘Unspeakable Acts’ Revisits a Pivotal Moment in the Art World’s Treatment of Sexual Violence A Lineman Became a Doctor, but Dementia Made Him Retire. He’s Only 42. The Secret Ingredient That Improves Meat Every Time “Basically, carbon uptake is not a zero-sum game,” Dr. Gentine said. Even when a drought year is followed by a year as wet as the previous one was dry, it is not enough to compensate for the dry year, the researchers found. Scientists are already beginning to see more of these sorts of climactic seesaws. As they occur, they will reinforce global warming, the new research suggests. Caitlin E. Hicks Pries, an assistant professor of biological sciences at Dartmouth College who was not involved in the study, said in an email that the study was “a wake-up call to climate-change scientists like myself to prioritize responses to moisture in our experiments and observations of terrestrial ecosystems.”

#### Your studies are done in a vacuum and can’t account for real world impacts of climate change – food production actually goes down and becomes less nutritious

Sneed 18 (Sneed, Annie. “Ask the Experts: Does Rising CO2 Benefit Plants?” Scientific American, 23 Jan. 2018, [www.scientificamerican.com/article/ask-the-experts-does-rising-co2-benefit-plants1/. [Annie Sneed is a San Francisco-based science journalist. She writes stories on topics ranging from beer microbiology to infectious diseases to the science of design for Fast Company, Wired, and Scientific American.])//LK](http://www.scientificamerican.com/article/ask-the-experts-does-rising-co2-benefit-plants1/.%20%5bAnnie%20Sneed%20is%20a%20San%20Francisco-based%20science%20journalist.%20She%20writes%20stories%20on%20topics%20ranging%20from%20beer%20microbiology%20to%20infectious%20diseases%20to%20the%20science%20of%20design%20for%20Fast%20Company,%20Wired,%20and%20Scientific%20American.%5d)//LK) [Accessed 10/30/19]

Climate change skeptics have an arsenal of arguments for why humans need not cut their carbon emissions. Some assert rising CO2 levels benefit plants, so global warming is not as bad as scientists proclaim. “A higher concentration of carbon dioxide in our atmosphere would aid photosynthesis, which in turn contributes to increased plant growth,” Rep. Lamar Smith (R–Texas) wrote in an op-ed last year. “This correlates to a greater volume of food production and better quality food.” Scientists and others calling for emission cuts are being hysterical, he contends. So is it true rising atmospheric CO2 will help plants, including food crops? Scientific American asked several experts to talk about the science behind this question. There is a kernel of truth in this argument, experts say, based on what scientists call the CO2 fertilization effect. “CO2 is essential for photosynthesis,” says Richard Norby, a corporate research fellow in the Environmental Sciences Division and Climate Change Science Institute of Oak Ridge National Laboratory. “If you isolate a leaf [in a laboratory] and you increase the level of CO2, photosynthesis will increase. That’s well established.” But Norby notes the results scientists produce in labs are generally not what happens in the vastly more complex world outside; many other factors are involved in plant growth in untended forests, fields and other ecosystems. For example, “nitrogen is often in short enough supply that it’s the primary controller of how much biomass is produced” in an ecosystem, he says. “If nitrogen is limited, the benefit of the CO2 increase is limited…. You can’t just look at CO2, because the overall context really matters.” Scientists have observed the CO2 fertilization effect in natural ecosystems, including in a series of trials conducted over the past couple decades in outdoor forest plots. In those experiments artificially doubling CO2 from pre-industrial levels increased trees’ productivity by around 23 percent, according to Norby, who was involved in the trials. For one of the experiments, however, that effect significantly diminished over time due to a nitrogen limitation. That suggests “we cannot assume the CO2 fertilization effect will persist indefinitely,” Norby says. In addition to ignoring the long-term outlook, he says, many skeptics also fail to mention the potentially most harmful outcome of rising atmospheric CO2 on vegetation: climate change itself. Its negative consequences—such as drought and heat stress—would likely overwhelm any direct benefits that rising CO2 might offer plant life. “It’s not appropriate to look at the CO2 fertilization effect in isolation,” he says. “You can have positive and negative things going at once, and it’s the net balance that matters.” So although there is a basic truth to skeptics’ claim, he says, “what’s missing from that argument is that it’s not the whole picture.” Scientists have also looked specifically at the effects of rising CO2 on agricultural plants and found a fertilization effect. “For a lot of crops, [more CO2] is like having extra material in the atmosphere that they can use to grow,” says Frances Moore, an assistant professor of environmental science and policy at the University of California, Davis. She and other experts note there is an exception for certain types of plants such as corn, which access CO2 for photosynthesis in a unique way. But for most of the other plants humans eat—including wheat, rice and soybeans—“having higher CO2 will help them directly,” Moore says. Doubling CO2 from pre-industrial levels, she adds, does boost the productivity of crops like wheat by some 11.5 percent and of those such as corn by around 8.4 percent. A lack of nitrogen or other nutrients does not affect agricultural plants as much as wild ones, thanks to fertilizer. Still, research shows plants “get some benefits early on from higher CO2, but that [benefit] starts to saturate” after the gas reaches a certain level, Moore says—adding, “The more CO2 you have, the less and less benefit you get.” And while rising carbon dioxide might seem like a boon for agriculture, Moore also emphasizes any potential positive effects cannot be considered in isolation, and will likely be outweighed by many drawbacks. “Even with the benefit of CO2 fertilization, when you start getting up to 1 to 2 degrees of warming, you see negative effects,” she says. “There are a lot of different pathways by which temperature can negatively affect crop yield: soil moisture deficit [or] heat directly damaging the plants and interfering with their reproductive process.” On top of all that, Moore points out increased CO2 also benefits weeds that compete with farm plants. Rising CO2’s effect on crops could also harm human health. “We know unequivocally that when you grow food at elevated CO2 levels in fields, it becomes less nutritious,” notes Samuel Myers, principal research scientist in environmental health at Harvard University. “[Food crops] lose significant amounts of iron and zinc—and grains [also] lose protein.” Myers and other researchers have found atmospheric CO2 levels predicted for mid-century—around 550 parts per million—could make food crops lose enough of those key nutrients to cause a protein deficiency in an estimated 150 million people and a zinc deficit in an additional 150 million to 200 million. (Both of those figures are in addition to the number of people who already have such a shortfall.) A total of 1.4 billion women of child-bearing age and young children who live in countries with a high prevalence of anemia would lose more than 3.8 percent of their dietary iron at such CO2 levels, according to Meyers. Researchers do not yet know why higher atmospheric CO2 alters crops’ nutritional content. But, Myers says, “the bottom line is, we know that rising CO2 reduces the concentration of critical nutrients around the world,” adding that these kinds of nutritional deficiencies are already significant public health threats, and will only worsen as CO2 levels go up. “The problem with [the skeptics’] argument is that it’s as if you can cherry-pick the CO2 fertilization effect from the overall effect of adding carbon dioxide to the atmosphere,” Myers says. But that is not how the world—or its climate—works.

## 1AR---DA

### 1AR---Impeachment Thumps All

#### Impeachment subsumes all legislative priorities

Carney 10/25 [Jordain; reporter for Defense News and staff writer for the Hotline, covering congressional agenda; 10/25/2019; “Senators concerned impeachment will consume agenda”; <https://thehill.com/homenews/senate/467390-senators-worry-impeachment-will-consume-agenda>; The Hill; accessed: 11/20/2019; MohulA]

Senators are growing increasingly alarmed that the hyperfocus on impeachment has killed their legislative agenda heading into 2020. The House impeachment inquiry has quickly sucked up the political oxygen in Washington, ramping up tensions between Congress and the White House ahead of next year’s elections. The high-stakes standoff is now raising questions about what, if anything, will get signed into law. “We only have so much bandwidth, and if the bandwidth is all going to be used up pursuing this futile effort to remove the president, then that’s going to come at a cost. And I think the cost will be legislation that we could pass,” said Sen. John Cornyn (R-Texas), an adviser to Senate Majority Leader Mitch McConnell (R-Ky.). Pressed on the fate of “must-pass legislation” like funding the government and a mammoth defense policy bill, Cornyn added, “hopefully those won’t be casualties, but around here it’s anybody’s guess.” Lawmakers are pointing fingers about who is to blame for the fallout as bicameral legislation slows to a crawl. The last bill signed into law that was substantial enough to require a roll call vote in the Senate was September’s continuing resolution. Since then, the House formally launched its impeachment inquiry, leading the White House to warn that Democrats had “destroyed any chances of legislative progress.” Gun background check talks, which had been ongoing before the impeachment inquiry, have fallen off the map. And a meeting with congressional leadership went off the rails when Trump called Pelosi a “third-rate politician” and Democrats stormed out. Asked how the White House had done promoting a legislative agenda during the impeachment fight, Sen. Dick Durbin (Ill.), the No. 2 Senate Democrat, laughed. “Put a gun to my head and ask me to name the Senate congressional liaison, and I’ll tell you just pull the trigger. I don’t even know who it is,” Durbin said. The stalemate on major bills comes as Congress has roughly 20 legislative days left before 2020. Within that span of time they’re faced with funding the government, reauthorizing controversial surveillance programs, passing a mammoth defense policy bill and trying to tick off wish-list items like drug pricing and Trump’s trade agreement with Canada and Mexico. Senate Finance Committee Chairman Chuck Grassley (R-Iowa) warned that he didn’t think the trade deal, known as the United States-Mexico-Canada Agreement (USMCA), would get passed this year. “The Democratically-controlled House of Representatives looks increasingly less likely to act this year on USMCA. That threatens passage of the trilateral trade deal this Congress, as next year is a presidential election year,” he said. Asked about the White House’s legislative agenda, Sen. Ron Johnson (R-Wis.) noted regulatory reforms and restructuring within the administration. When a reporter pointed out those items don’t require working with Congress, Johnson knocked Democrats over the pending trade agreement. “We’re trying to get USMCA passed,” he said. “Unfortunately, we have some real obstructions.” Senators are urging Trump and lawmakers to come to the table where they need to pass legislation, like funding the government, or other areas of potential bipartisan agreement. Sen. Lindsey Graham (R-S.C.) is urging Trump to follow the Clinton playbook and continue to reach out to lawmakers about legislation even as he’s the center of an impeachment inquiry. “I think he needs to reach out to Democrats and Republicans and say in the middle of all this mess, ‘Let’s see if we can do something on the USMCA and prescription drugs,’ ” Graham said. Sen. Roy Blunt (Mo.), a member of GOP leadership, pointed to tax extenders, trade agreements and funding the government as possible things that could move under the cloud of impeachment. “[It] continues to be one of the fundamental responsibilities of the Congress, along with the president, to fund the government so … I’m sure we’ll figure out how to do that,” Blunt said. Senate Appropriations Committee Chairman Richard Shelby (R-Ala.) added, "I think we'll have some bipartisan goodwill. I hope it's enough." Durbin, however, was more pessimistic, saying he didn’t think there was anything bipartisan enough to be able to pass. But, he acknowledged, “it would be” beneficial for the White House and Democrats to be able to show voters they accomplished something. “Infrastructure, remember that one? Blew up in our face,” he said. In a sign that both sides realize they need legislative victories ahead of Election Day, congressional leaders are trying to claim the mantle of being willing to work with the other side on bills. McConnell has repeatedly teed off against Democrats from the Senate floor, arguing they’re holding up the trade deal and military funding. “The needs of the American people have not been put on pause just because the Democrats have decided it doesn’t suit them to get along with the White House," McConnell said. In a separate speech this week, he said Democrats have insisted “the three-year-old quest to impeach the president will not prevent them from the substantive work. ... So far, the early results haven’t been promising.” Senate Minority Leader Charles Schumer (D-N.Y.) fired back, blasting McConnell over the “legislative graveyard,” a descriptor Democrats have adopted to knock the GOP leader for refusing to hold votes on their top priorities. “The Republican leader, in recent days, has charged that because the House of Representatives is now engaged in its constitutional duty to examine presidential wrongdoing, that somehow Democrats are not interested in legislating,” Schumer said. “Curious criticism coming from leader McConnell … the man who proudly calls himself the ‘Grim Reaper.’ "

#### Failure on everything is inevitable---pelosi and mconnell are at each others throats and impeachment is a ticking time bomb

Everett and Caygle 10/23 [John Burgess, congressional reporter for POLITICO, and Heather, also a congressional reporter for POLITICO, 10/23/19, “Pelosi and McConnell are on an impeachment collision course,” <https://www.politico.com/news/2019/10/23/pelosi-mcconnell-relationship-trump-impeachment-055073>//ZZ]

Nancy Pelosi and Mitch McConnell are attacking each other in increasingly pointed terms as House Democrats burrow deeper into their impeachment inquiry. But if the top two congressional leaders can’t find a way to come together soon, the government could plunge into a shutdown and any last hopes for legislating before the presidential election will vanish. The speaker and Senate majority leader have been trading grievances increasingly over the past several months. Pelosi is lashing McConnell for sitting on House-passed legislation addressing gun violence and ethics reforms; McConnell says Pelosi has done nothing to follow through on her claims that the House won’t come to a “standstill” during impeachment. “There’s certain things that we have to do. And I don’t have any doubt that we can work with each other,” McConnell said in a brief interview. “Her problem at the moment is internal [in her caucus], not with us, but how to manage that whole process and how can we fit other things in it.” Pelosi spokesman Drew Hammill shot back: “The majority leader knows as much about what goes on in the Democratic Caucus as he does about passing legislation: absolutely nothing.” Pelosi and McConnell have barely spoken recently about funding the government, according to multiple people familiar with their interactions. Instead, the No. 2 House Democrat, Majority Leader Steny Hoyer, called McConnell on Monday to talk spending bills. “McConnell wants to get these bills done, and that's fine. I want to get the bills done,” Hoyer told reporters Tuesday. “There’s no reason whatsoever from a process standpoint that we can’t do the appropriations process by” the next deadline. People close to the speaker say her relationship with McConnell soured after the border funding debacle over the summer. McConnell refused to bring up a House-passed border aid package that included additional protections for migrant children, forcing Pelosi to [take up a Senate bill](https://www.politico.com/story/2019/06/27/house-vote-emergency-border-package-1385222) that lacked those restrictions. These days, McConnell said “there’s no particular reason” to talk with Pelosi about funding the government, noting he and the speaker recently worked closely to pass a large-scale budget deal intended to ease the threat of a government shutdown. “I don’t have any advice to give her on [her internal politics], except I wish she’d pass USMCA and we could at least rack up a victory,” McConnell said in the interview, referring to the U.S.-Mexico-Canada trade agreement. The two longtime party leaders are recognized even by their adversaries as consummate dealmakers, able to separate political beefs from the must-do business of Congress. Their manners are also diametrically opposed: At a White House meeting last week Pelosi was seen standing and chastising the president after he called her a third-rate politician; McConnell didn’t speak in the meeting or afterward about the blow-up. The impeachment drive will test whether the two can stave off legislative disaster as the House seeks to remove a president that McConnell’s eager to protect and Pelosi openly loathes. The next funding deadline is likely to come at a politically inopportune time — as the House is moving rapidly toward an impeachment vote and when bipartisan cooperation will be in short supply. House leaders have said they want to move as expeditiously as possible in their investigation into President Donald Trump, with lawmakers privately speculating a vote on articles of impeachment will happen by the end of the year if not sooner. McConnell has told Republicans to prepare for a December trial, possibly ending around Christmas. And Trump remains the X-factor. Even if Pelosi and McConnell can reach a deal, the president must go along with it, or the government will shut down once again. “Right now, the president seems to want to see this branch as chaotic as his branch. And I worry that McConnell will play into that,” said Rep. Dan Kildee (D-Mich.). Almost everyone in the Capitol acknowledges that the prospects for passing ambitious legislation like a new North American trade deal, background checks on gun sales and prescription drug price reform have taken a major hit over the past month as the impeachment push cranked up. Yet it’s the routine business of funding the government, as well as passing an annual defense bill that will prove the real measure of Washington’s dysfunction. “They’re both professionals, right? I don’t think either one of them are the type of people that let political emotions get in the way of doing what they think is in their caucuses’ best interest,” said Sen. Chris Murphy (D-Conn.). “I don’t think Donald Trump can, but he’s not going to be in the room.” Others aren’t as optimistic. Pelosi and McConnell have less than a month to fund the government past Nov. 21 and until the end of the year to pass the National Defense Authorization Act, one of Congress’ few annual legislative successes. And with lawmakers projecting that impeachment will suck up most of November and December, it’s not hard to see the pile-up coming. “We only have so much bandwidth. And if the bandwidth is going to be all used up pursuing this futile effort to remove the president, that’s going to come at a cost,” said Sen. John Cornyn (R-Texas), who is close to McConnell. “Hopefully, [government funding and defense bills] won’t be casualties. But around here, it’s anybody’s guess.” Lawmakers are already talking openly about the likelihood that Congress delays a final funding agreement and passes some kind of stopgap bill to keep the government open until early next year, when the impeachment inquiry is finished. Even if Pelosi and McConnell came together in the next three weeks, passing long-term spending legislation would be a huge lift. A best-case scenario, laid out by Republicans, is to again fund the majority of the government and isolate key funding disputes on perhaps the wall and Department of Homeland Security. “You still may be dealing with Homeland Security and the wall issue,” said Senate Majority Whip John Thune (R-S.D.) “But it’s a much smaller universe.” The Senate hasn’t passed any appropriations bills, although it advanced a package of four bills on Tuesday. But a vote on defense and labor spending could fail later this month over Democratic opposition to Trump’s move to shift military funds to build his border wall. Congressional leaders haven’t even settled the topline spending levels for federal agencies, prompting Hoyer to reach out to McConnell this week to avoid a complete debacle like the historic 35-day shutdown earlier this year. Meanwhile the two congressional leaders are going at it. McConnell repeatedly called out Pelosi this week for not passing the UMSCA, accused her of bowing to the “far left,” and said “the only thing that seems to really inspire House Democrats these days is their obsession with overturning the results of the 2016 election.” Pelosi recently alluded to McConnell as a turtle who rarely “comes out of his shell” during White House meetings and has begun calling him “Moscow Mitch,” a nickname that deeply irritates the Kentucky Republican. And it’s going to only get uglier. “I don’t know what their relationship is. I have to imagine it’s harder when you’ve got stuff like this going on,” said Sen. Lisa Murkowski (R-Alaska). “Much harder.”

### 1AR---AT Blackouts

#### Blackout estimates are wrong – best research shows.

DiChristopher 17 Tom Dichristopher, 6-2-2017, Tom DiChristopher is an award-winning multimedia journalist who covers energy for CNBC.com. He previously coordinated online coverage of broadcast guests for a number of CNBC’s Business Day programs. “Trump is ‘totally wrong’ that renewable energy will lead to ‘blackouts’”, CNBC, https://www.cnbc.com/2017/06/02/trump-is-totally-wrong-that-renewable-energy-will-lead-to-blackouts.html, Accessed on 10-27-2019 // JPark

President Donald Trump was “totally wrong” when he said shifting to renewable energy sources would starve parts of the country of electricity and plunge them into darkness, according to people who make a living studying energy. Trump issued his warning on Thursday after announcing he would pull the United States out of the Paris Agreement, an international effort to mitigate the effects of climate change. Relying on renewable energy sources, he claimed, would leave the country with too little power to accelerate economic growth — or even go about business as usual. “We need all forms of available American energy, or the country will be at grave risks of brownouts and blackouts,” he said. “Our businesses will come to a halt in many cases, and the American family will suffer the consequences in the form of lost jobs and a very diminished quality of life.” I don’t think any country would take what they do under that agreement to the point where their people are suffering ... Nobody was going to do that anyway. Ted Kury DIRECTOR OF ENERGY STUDIES, UF’S WARRINGTON COLLEGE OF BUSINESS But the University of Minnesota’s Massoud Amin, who studies the electricity grid, said Trump is talking about problems that don’t exist. “In a nutshell, with all due respect to the president’s office, he is totally wrong,” Amin told CNBC. “The challenges are not what President Trump is noticing,” he said. “The challenges are how to upgrade the transmission and distribution networks” to make the U.S. electric grid flexible and resilient enough to accommodate renewable energy. Inadequacies in the U.S. electricity grid already cost the economy $80 billion annually, Amin concluded in a 2011 white paper. WATCH NOW VIDEO02:53 Trump defends climate decision based on jobs and economy If the White House wants to prevent blackouts, it should focus on improving the physical infrastructure of the grid, Amin said. His research shows that would improve national security, create jobs and cut carbon emissions. Utilities will still need to rely on other energy sources to provide electricity when the wind is not blowing and the sun is not shining, but power companies typically have reserve capacity equal to 15 to 20 percent of the total, said Ted Kury, director of energy studies at the University of Florida’s Warrington College of Business. Where future energy will come from, according to the Department of Energy Much of the new capacity is coming from natural gas, which burns cleaner than coal and is replacing coal because it’s cheaper. “An all-of-the-above strategy is important, but this idea that we’re anywhere close to a point where renewable penetration in the country is endangering the grid — I don’t think that’s a valid concern,” he told CNBC. Kury also noted that the Paris Agreement gives signatories a tremendous amount of flexibility and lacks mechanisms to punish countries that don’t meet their targets. “I don’t think any country would take what they do under that agreement to the point where their people are suffering,” he said. “So to me, [Trump’s] statement is a bit of a straw man. Nobody was going to do that anyway.”

### 1AR---Grid ! D

#### Grid resilient – backups solve and empirically denied

Douglas Birch 12, former foreign correspondent for the Associated Press and the Baltimore Sun who has written extensively on technology and public policy, "Forget Revolution," October 1, Foreign Policy, www.foreignpolicy.com/articles/2012/10/01/forget\_revolution?page=full

But are cyber attacks really a clear and present danger to society's critical life support systems, capable of inflicting thousands of casualties? Or has fear of full-blown cybergeddon at the hands of America's enemies become just another feverish national obsession -- another of the long, dark shadows of the 9/11 attacks?¶ Worries about a large-scale, devastating cyber attack on the United States date back several decades, but escalated following attacks on Estonian government and media websites during a diplomatic conflict with Russia in 2007. That digital ambush was followed by a cyber attack on Georgian websites a year later in the run-up to the brief shooting war between Tbilisi and Moscow, as well as allegations of a colossal, ongoing cyber espionage campaign against the United States by hackers linked to the Chinese army.¶ Much of the concern has focused on potential attacks on the U.S. electrical grid. "If I were an attacker and I wanted to do strategic damage to the United States...I probably would sack electric power on the U.S. East Coast, maybe the West Coast, and attempt to cause a cascading effect," retired Admiral Mike McConnell said in a 2010 interview with CBS's 60 Minutes.¶ But the scenarios sketched out above are not solely the realm of fantasy. This summer, the United States and India were hit by two massive electrical outages -- caused not by ninja cyber assault teams but by force majeure. And, for most people anyway, the results were less terrifying than imagined.¶ First, the freak "derecho" storm that barreled across a heavily-populated swath of the eastern United States on the afternoon of June 29 knocked down trees that crushed cars, bashed holes in roofs, blocked roads, and sliced through power lines.¶ According to an August report by the U.S. Department of Energy, 4.2 million homes and businesses lost power as a result of the storm, with the blackout stretching across 11 states and the District of Columbia. More than 1 million customers were still without power five days later, and in some areas power wasn't restored for 10 days. Reuters put the death toll at 23 people as of July 5, all killed by storms or heat stroke.¶ The second incident occurred in late July, when 670 million people in northern India, or about 10 percent of the world's population, lost power in the largest blackout in history. The failure of this huge chunk of India's electric grid was attributed to higher-than-normal demand due to late monsoon rains, which led farmers to use more electricity in order to draw water from wells. Indian officials told the media there were no reports of deaths directly linked to the blackouts.¶ But this cataclysmic event didn't cause widespread chaos in India -- indeed, for some, it didn't even interrupt their daily routine. "[M]any people in major cities barely noticed the disruption because localized blackouts are so common that many businesses, hospitals, offices and middle-class homes have backup diesel generators," the New York Times reported.¶ The most important thing about both events is what didn't happen. Planes didn't fall out of the sky. Governments didn't collapse. Thousands of people weren't killed. Despite disruption and delay, harried public officials, emergency workers, and beleaguered publics mostly muddled through.¶ The summer's blackouts strongly suggest that a cyber weapon that took down an electric grid even for several days could turn out to be little more than a weapon of mass inconvenience.¶ "Reasonable people would have expected a lot of bad things to happen" in the storm's aftermath, said Neal A. Pollard, a terrorism expert who teaches at Georgetown University and has served on the United Nation's Expert Working Group on the use of the Internet for terrorist purposes. However, he said, emergency services, hospitals, and air traffic control towers have backup systems to handle short-term disruptions in power supplies. After the derecho, Pollard noted, a generator truck even showed up in the parking lot of his supermarket.¶ The response wasn't perfect, judging by the heat-related deaths and lengthy delays in the United States in restoring power. But nor were the people without power as helpless or clueless as is sometimes assumed.¶ That doesn't mean the United States can relax. James Lewis, director of the technology program at the Center for Strategic and International Studies, believes that hackers threaten the security of U.S. utilities and industries, and recently penned an op-ed for the New York Times calling the United States "defenseless" to a cyber-assault. But he told Foreign Policy the recent derecho showed that even a large-scale blackout would not necessarily have catastrophic consequences.¶ "That's a good example of what some kind of attacks would be like," he said. "You don't want to overestimate the risks. You don't want somebody to be able to do this whenever they felt like it, which is the situation now. But this is not the end of the world."

#### Cyber-attacks can’t harm the grid. Prefer our ev—their authors have an economic incentive to hype the threat.

Conn HALLINAN, Foreign Policy In Focus columnist, 12 [January 11, 2012, “Cyber War: Reality or Hype?” Foreign Policy in Focus, http://www.fpif.org/articles/cyber\_war\_reality\_or\_hype]

But consider the sources for all this scare talk: Clarke is the chair of a firm that consults on cyber security, and McConnell is the executive vice-president of defense contractor Booz Allen Hamilton. Both are currently doing business with the Pentagon.

Arms giants like Lockheed Martin, Raytheon, Northrop Grumman, Boeing, and other munitions manufactures are moving heavily into the cyber security market. In 2010, Boeing snapped up Argon ST and Narus, two cyber security firms with an estimated value of $2.4 billion. Raytheon bought Applied Signal Technology, General Dynamics absorbed Network Connectivity Solutions, and Britain’s major arms firm, BAE, purchased Norkom and ETI.

“There is a feeding frenzy right now to provide products and services to meet the demands of governments, law enforcement, and the military,” says Ron Deibert, director of the Canada Center for Global Security Studies.

There are big bucks at stake. Between the Defense Department and Homeland Security, the United States will spend some $10.5 billion for cyber security by 2015. The Pentagon’s new Cyber Command is slated to have a staff of 10,000, and according to Northrop executive Kent Schneider, the market for cyber arms and security in the United States is $100 billion.

But is cyber war everything it’s cracked up to be, and is the United States really so behind the curve in the scramble to develop cyber weapons?

According to investigative journalist Seymour Hersh, the potential for cyber mayhem has “been exaggerated,” and the Defense Department and cyber security firms have blurred the line between cyber espionage and cyber war. The former is the kind of thing that goes on, day in and day out, among governments and industry, except its medium is the Internet. The latter is an attack on another country’s ability to wage war, defend itself, or run its basic infrastructure.

Most experts say the end-of-the-world scenarios drawn up by people like Clarke are largely fiction. How could an enemy shut down the U.S. national power grid when there is no such thing? A cyber attack would have to disrupt more than 100 separate power systems throughout the nation to crash the U.S. grid.

Most financial institutions are also protected. The one example of a successful cyber attack in that area was an apparent North Korean cyber assault this past March on the South Korean bank Nonghyup that crashed the institution’s computers. But an investigation found that the bank had been extremely remiss in changing passwords and controlling access to its computers. According to Peter Sommer, author of the OECD report Reducing Systemic Cybersecurity Risk, the cyber threat to banks “is a bit of nonsense.”

However, given that many Americans rely on computers, cell phones, smart devices, and the like, any hint that an “enemy” could disrupt access to those devices is likely to get attention. Throw in some scary scenarios and a cunning enemy—China—and it’s pretty easy to make people nervous.

But contrary to McConnell’s statement, the United States is more advanced in computers than other countries in the world, and the charge that the country is behind the curve sounds suspiciously like the “bomber gap” with the Russians in the 1950s and the “missile gap” in the 1960s. Both were illusions that had more to do with U.S. presidential elections and arms industry lobbying than anything in the real world.

#### No cyber pearl harbor—squirrels are more likely to shut down the grid

Sydney J. FREEDBERG Jr., deputy editor for Breaking Defense, 14 [“Cyberwar: what people keep missing about the threat," January 6, 2014, http://breakingdefense.com/2014/01/cyberwar-what-people-keep-missing-about-the-threat/]

Singer and Friedman also do a valuable service in beating back the hype about “Cyber Pearl Harbors” and “Cyber 9/11s” or the US suffering countless millions of “attacks.” Those alarmist statistics lump together everything from a virus easily stopped by someone’s firewall to credit card theft to the loss of secret schematics for the F-35 stealth fighter. Those “attacks” vary from trivial, to significant losses for one particular business, to actual matters of national security, but none of them does as much damage as a good old-fashioned bomb, they argue. Even if hackers shut down the national electrical grid for weeks on end, bad as that would be, it wouldn’t be as bad as a single nuclear explosion.

“It’s a lot like ‘Shark Week,’” Singer said about the overhyped dangers. “Squirrels have taken down the power grid more times than the zero times hackers have.” There’s lots of talk about how the attacker always has the advantage in cyberspace, he told an audience at Brookings this afternoon, but “a true cyber offense, an effective one, a Stuxnet style [attack] is something quite difficult.”

### 1AR---Thumpers

#### No chance of USMCA with impeachment – Trump cut off talks, and there isn’t enough time – IF it doesn’t thump, that proves lawmakers compartmentalize issues

Carney 9-26 [Jordain Carney, writer for The Hill, September 26, 2019. “Impeachment fight threatens trade deal.” https://thehill.com/homenews/senate/463118-impeachment-fight-threatens-trade-deal]

The growing fight over impeaching [President Trump](https://thehill.com/people/donald-trump) is threatening to scuttle any chance that Congress will pass his trade deal meant to replace the North American Free Trade Agreement (NAFTA). The Trump deal, known as United States-Mexico-Canada Agreement (USMCA), would hand the president and congressional Republicans a win after a months-long lobbying effort as they head toward the 2020 election. But Trump and GOP senators, who were already keeping a close eye on the calendar, are publicly fretting that it could fall victim to the high-stakes impeachment fight, which looks set to dominate the end of 2019. “I’ve got a great deal of concern,” said Sen. [Ron Johnson](https://thehill.com/people/ron-johnson) (R-Wis.). “I hope people can walk and chew gum at the same time.” Sen. [John Thune](https://thehill.com/people/john-thune) (R-S.D.) added that lawmakers are “going to have to learn how to multitask.” “The House going down this path is really getting in the way of the legislative agenda. It’s certainly a complicating factor,” he said. The USMCA curveball comes as administration officials, led by U.S. Trade Representative [Robert Lighthizer](https://thehill.com/people/robert-bob-lighthizer), have been holding closed-door negotiations with House Democrats for months as they try to get it through Congress. House Democrats focused much of their weekly caucus meeting Wednesday on the topic of the evolving trade deal. Rep. [Richard Neal](https://thehill.com/people/richard-neal) (D-Mass.), chairman of the House Ways and Means Committee, was hopeful the sides could reach a deal, but emphasized that enforcement mechanisms — a chief concern among labor unions — remain a sticking point. He also rejected the notion that the impeachment inquiry means all cooperation between Democrats and the White House will cease. “There is no reason to let the inquiry get in the way of what we’re doing in the Ways and Means Committee,” he said. But even as Democrats and White House officials remain publicly optimistic about the chances of an agreement, Trump cut off Lighthizer on Wednesday while the two were speaking in New York to pour cold water on USMCA getting a vote amid the impeachment fight. “It’s a fantastic deal for our country. And it’s possible they won’t vote. I mean, I know these people much better than you do,” Trump said as he interrupted Lighthizer. He added that he didn’t know if Speaker [Nancy Pelosi](https://thehill.com/people/nancy-pelosi) (D-Calif.) would “have time” to bring up USMCA while dealing with impeachment. “I don’t know whether or not they’re going to have time to do any deals. I don’t think they can do any deals. ... I don’t know that they’re ever going to get a vote because they’re all fighting,” Trump said. Republicans have been trying to increase pressure on the House to take up the trade agreement and for the administration to send up the implementation legislation. “Instead of bringing the USMCA bill to the floor, ... Nancy Pelosi is wasting her Speakership trying to undo the results of the 2016 election by impeaching the president with no basis,” House Minority Whip [Steve Scalise](https://thehill.com/people/steve-scalise) (R-La.) said Wednesday during a press conference. Lawmakers had initially hoped the administration would send the language to Capitol Hill in September, but that timeline slipped as negotiations dragged on. Once the implementation legislation is introduced, the House has to vote on it within 60 session days. Republicans view it as critical that the NAFTA replacement gets ratified this year. Letting it drag into 2020, they worry, would mean it could fall victim to campaign politics, when both sides will turn their focus to winning the White House and control of Congress. Senate Finance Committee Chairman [Chuck Grassley](https://thehill.com/people/chuck-grassley) (R-Iowa) warned Wednesday that “we’re running out of calendar days in 2019.” He also cautioned Democrats against letting the impeachment battle impact the trade deal’s chances, adding that “it would only show that the Democrats are more interested in politics than they are policy.”

#### Impeachment thumps USMCA – Trump lash-out

Parker 9/25 [Ashley Parker, a White House reporter for The Washington Post, September 25, 2019. "Seven days: Inside Trump’s frenetic response to the whistleblower complaint and the battle over impeachment", Washington Post, https://www.washingtonpost.com/politics/seven-days-inside-trumps-frenetic-response-to-the-whistleblower-complaint-and-the-battle-over-impeachment/2019/09/25/14ba426a-dfaa-11e9-be96-6adb81821e90\_story.html]

Some White House aides and outside confidants, however, worried that impeachment will also consume the remainder of Trump’s term. His trade deal with Canada and Mexico, for instance, is likely to be among the casualties, they said. And as with the Mueller investigation, there is the risk that Trump’s frustration over impeachment — which he views as an attack on the legitimacy of his presidency — will come to so enrage him that it prompts him to begin lashing out and behaving erratically. In the words of one former aide, “It may lead to less structured output from the White House.”

### 1AR---AT DD USMCA

#### Fights inevitable – their ev

**Rounds 10/30** (Mike ~US Senator~. "Pass the USMCA." Brookings Register. October 30, 2019. [https://brookingsregister.com/article/pass-the-usmc](https://brookingsregister.com/article/pass-the-usmca)) //ZL

Currently, the USMCA is awaiting a vote in the U.S. House of Representatives. Instead of taking up this important win for American workers and families, House Democrats are more intent on launching partisan attacks and engaging in political theater.

#### Won’t pass – their can pass evidence is very speculative

Rodriguez 3/13 (Sabrina Rodríguez is a reporter for the Pro Trade team. “Trump’s trade chief meets skepticism as he sells new NAFTA to Democrats.” https://www.politico.com/story/2019/03/13/trump-nafta-democrats-1266166)

President Donald Trump’s trade chief Robert Lighthizer will be on Capitol Hill on Wednesday to entice House Democrats into supporting the new North American trade pact, but already it’s becoming clear that outreach alone won’t get the votes needed. In the latest show of disapproval to the deal, leaders of the 90-plus members of Congressional Progressive Caucus announced on Tuesday that they want to reopen the new U.S.-Mexico-Canada Agreement that the Trump administration spent more than a year negotiating with the two U.S. trading partners. Lighthizer and other administration officials have been meeting for months with lawmakers to work out their concerns. But the trade representative is expected to have to confront a host of complaints from Democrats across the spectrum on widespread concerns over aspects of the pact. “I think Mr. Lighthizer is perceived as a professional, so I think he comes with a more positive attitude than some others,” said House Majority Leader Steny Hoyer. “But I also think there’s deep disagreement, perhaps, with the policies he may be talking about.” As White House efforts ramp up to sell the deal, it’s becoming increasingly clear that Lighthizer’s effort building goodwill will not be enough for the deal to make it through both chambers, especially in the Democrat-controlled House. The new pact, which will replace the 25-year-old North American Free Trade Agreement, would fulfill one of Trump’s signature promises to blow up what he pegged as a "historic trade blunder" and bring jobs back to the United States. Trump has previously threatened to withdraw from NAFTA as a way to pressure Congress into passing USMCA, but Lighthizer has been quietly trying to speak to lawmakers about their concerns. “We want to make sure we have a bill that works for labor, for the environment, for consumers,” said Rep. Mark Pocan (D-Wis.), co-chair of the Congressional Progressive Caucus. The group has taken particular issue with intellectual property protections that they say could lock in high prescription drug prices. Hoyer specified that “honestly there has not been broad discussion on this issue at this point in time because frankly the administration hasn’t been doing much.” But he added that he expects there will be many more talks after Lighthizer’s meeting with the caucus. Rep. Marcy Kaptur (D-Ohio) said she opposes the pact as it stands because it fails to help manufacturing-heavy communities like her district that were devastated by NAFTA and other trade policies. "We have a chance to repair the damage that was done, and I don’t think this proposal deals with that," Kaptur said in an interview with POLITICO. She said the House should hold hearings on the issue but should not go as far as a vote on the floor. "You put it on the shelf and let it be an issue in the presidential campaign," Kaptur said. The timetable for any vote in Congress remains in flux. The administration has not yet submitted the draft text for the bill that lawmakers would have to approve. Lighthizer has indicated he would want to address concerns through that bill, instead of by a full renegotiation of the agreement. But the final call on the path for the USMCA rests on House Speaker Nancy Pelosi. Lighthizer told lawmakers in a meeting Tuesday that he’d like to submit that bill as soon as possible, but timing will ultimately be up to Pelosi, according to a source in the room. He acknowledged that the Trump administration will not submit anything until she asks for it. In addition, some lawmakers are waiting for the results of an analysis that the U.S. International Trade Commission, an independent body, is producing on the economic impact of the deal. That is not expected to be released until mid-April. Democrats are also attacking Trump’s 2020 budget request for more border wall funding and deep cuts to safety net programs, which could complicate the White House’s ambitious timeline for getting USMCA through Congress this summer. “I’m afraid that the president is setting us up for another budget border wall fight this fall, which could suck the air out of getting anything done,” Rep. Ron Kind (D-Wis.), a member of the free-trade oriented New Democrat coalition, said. “Realistically, if we’re going to move it, we’re going to have to be serious about pre-August recess. Otherwise, we hit 2020 campaign and this thing could just not happen.” The White House, for its part, has been putting together an organized strategy in recent months to try and persuade House Speaker Nancy Pelosi to hold a vote for USMCA. But the administration has also been embroiled in another spat with Canada and Mexico over steel and aluminum tariffs that Trump imposed in the name of national security. The two neighbors have responded in kind by imposing their own counter-tariffs, mostly on American agricultural exports. That feud has captured the attention of Democrats and Republicans alike, who say the issue must be resolved before a vote can be taken on the new USMCA.

#### USMCA can’t overcome other alt causes to ag

Inside U.S. Trade 3/7 (“Study: Potential USMCA ag gains 'dwarfed' by tariffs, TPP withdrawal.” Vol. 37, Iss. 11, (Mar 15, 2019). Proquest)

March 07, 2019 at 3:21 PM A new study conducted by members of Purdue University's agricultural economics department shows that gains from the U.S.-Mexico-Canada Agreement for U.S. farmers would be significantly offset by an agricultural export decrease of nearly $10 billion due to retaliatory tariffs on U.S. goods and lost market share caused by the implementation of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. According to the March 4 study, retaliatory tariffs will cause agricultural exports to drop by $8.4 billion per year, while lost market share from the implementation of CPTPP will drop those exports by an additional $1.8 billion annually. Trump withdrew the U.S. from the Trans-Pacific Partnership in 2017; its successor, CPTPP, entered into force late last year. U.S. pork and poultry products "get the most sizeable hit" as a result of CPTPP implementation at -- -4.4 percent -- followed by dairy products at -2.9 percent. U.S. goods such as oil seeds, pigs and chickens are "not significantly impacted" by CPTPP, the study says. Meanwhile, USMCA ratification would provide a "modest" $454 million in additional market access for U.S. farmers, the report says. "USMCA is really dwarfed by these retaliatory measures," Dominique van der Mensbrugghe, an author of the study, said at a presentation on his findings this week. "In terms of agriculture, there's not a lot there [in USMCA] for U.S. farmers."]

### 1AR---Dependency

#### 1] Link turn – oil isn’t competitive anymore so US can rely on domestic Greentech – better than squo reliance on other countries like Saudi Arabia. Aff makes Greentech more appealing than fossil fuels – that’s 1AC Roberts.

#### 2] Link turn – other countries model after the US – that includes shifts to Greentech – Steeves proves China will participate and Bukharin proves US sends signals.

### ---AT Valley

#### 1] link is hot garbage – all aff evidence indicates greentech fill-in and renewables mean we don’t need oil and gas supplies

#### 2] this disad is so bad – it says oil dependency bad because of price shocks – the aff SHIFTS AWAY which is a link turn

#### No impact to heg

Benjamin H. Friedman et al 13, research fellow in defense and homeland security studies; Brendan Rittenhouse Green, the Stanley Kaplan Postdoctoral Fellow in Political Science and Leadership Studies at Williams College; Justin Logan, Director of Foreign Policy Studies at the Cato Institute Fall 2013, “Correspondence: Debating American Engagement: The Future of U.S. Grand Strategy,” International Security, Vol. 38, No. 2, p. 181-199

an increasingly peaceful world. An array of research, some of which Brooks et al. cite, indicates that factors other than U.S. power are diminishing interstate war and security competition.2 These factors combine to make the costs of military aggression very high, and its benefits low.3 A major reason for peace is that conquest has grown more costly. Nuclear weapons make it nearly suicidal in some cases.4 Asia, the region where future great power competition is most likely, has a “geography of peace”: its maritime and mountainous regions are formidable barriers to conflict.5 Conquest also yields lower economic returns than in the past. Post-industrial economies that rely heavily on human capital and information are more difficult to exploit.6 Communications and transport technologies aid nationalism and other identity politics that make foreigners harder to manage. The lowering of trade barriers limits the returns from their forcible opening.7 Although states are slow learners, they increasingly appreciate these trends. That should not surprise structural realists. Through two world wars, the international system "selected against" hyperaggressive states and demonstrated even to victors the costs of major war. Others adapt to the changed calculus of military aggression through socialization.8 managing revisionist states. Brooks et al. caution against betting on these positive trends. They worry that if states behave the way offensive realism predicts, then security competition will be fierce even if its costs are high. Or, if nonsecurity preferences such as prestige, status, or glory motivate states, even secure states may become aggressive (pp. 36-37).9 These scenarios, however, are a bigger problem for primacy than for restraint. Offensive realist security paranoia stems from states' uncertainty about intentions; such states see alliances as temporary expedients of last resort, and U.S. military commitments are unlikely to comfort or deter them.10 Nonsecurity preferences are, by definition, resistant to the security blandishments that the United States can offer under primacy Brooks et al.'s revisionist actors are unlikely to find additional costs sufficient reason to hold back, or the threat of those costs to be particularly credible. The literature that Brooks et al. cite in arguing that the United States restrains allies actually suggests that offensive realist and prestige-oriented states will be the most resistant to the restraining effects of U.S. power. These studies suggest that it is most difficult for strong states to prevent conflict between weaker allies and their rivals when the restraining state is defending nonvital interests; when potential adversaries and allies have other alignment options;11 when the stronger state struggles to mobilize power domestically12; when the stronger state perceives reputational costs for non-involvement;13 and when allies have hawkish interests and the stronger state has only moderately dovish interests.14 In other words, the cases where it would be most important to restrain U.S. allies are those in which Washington's efforts at restraint would be least effective. Highly motivated actors, by definition, have strong hawkish interests. Primacy puts limits on U.S. dovishness, lest its commitments lack the credibility to deter or reassure. Such credibility concerns create perceived reputational costs for restraining or not bailing out allies. The United States will be defending secondary interests, which will create domestic obstacles to mobilizing power. U.S. allies have other alliance options, especially in Asia. In short, if states are insensitive to the factors incentivizing peace, then the United States' ability to manage global security will be doubtful. Third-party security competition will likely ensue anyway. costs for whom? Fortunately, foreign security competition poses little risk to the United States. Its wealth and geography create natural security. Historically, the only threats to U.S. sovereignty, territorial integrity, safety, or power position have been potential regional hegemons that could mobilize their resources to project political and military power into the Western Hemisphere. Nazi Germany and the Soviet Union arguably posed such threats. None exist today. Brooks et al. argue that "China's rise puts the possibility of its attaining regional hegemony on the table, at least in the medium to long term" (p. 38). That possibility is remote, even assuming that China sustains its rapid wealth creation. Regional hegemony requires China to develop the capacity to conquer Asia's other regional powers. India lies across the Himalayas and has nuclear weapons. Japan is across a sea and has the wealth to quickly build up its military and develop nuclear weapons. A disengaged United States would have ample warning and time to form alliances or regenerate forces before China realizes such vast ambitions. Brooks et al. warn that a variety of states would develop nuclear weapons absent U.S. protection. We agree that a proliferation cascade would create danger and that restraint may cause some new states to seek nuclear weapons. Proliferation cascades are nonetheless an unconvincing rationale for primacy. Primacy likely causes more proliferation among adversaries than it prevents among allies. States crosswise with the United States realize that nuclear arsenals deter U.S. attack and diminish its coercive power. U.S. protection, meanwhile, does not reliably stop allied and friendly states from building nuclear weapons. Witness British, French, and Israeli decisionmaking. Proliferation cascades were frequently predicted but never realized during the Cold War, when security was scarcer.15 New research argues that security considerations are often a secondary factor in the proliferation of nuclear weapons, and that states with the strongest appetites for proliferation often lack the technical and managerial capacities to acquire the bomb.16 Finally, even if proliferation cascades occur, they do not threaten U.S. security. Few, if any, states would be irrational enough to court destruction at the hands of the U.S. nuclear arsenal, especially if the United States is not enmeshed in their conflicts.

#### No economic collapse from shocks – most comprehensive data.

**Khadduri**, 8/23/**2011** (Walid – former Middle East Economic Survey Editor-in-Chief, The impact of rising oil prices on the economies of importing nations, Al Arabiya News, p. http://english.alarabiya.net/views/2011/08/23/163590.html)

What is the impact of oil price shocks on the economies of importing nations? At first glance, there appears to be large-scale and extremely adverse repercussions for rising oil prices. However, a study published this month by researchers in the IMF Working Paper group suggests a different picture altogether (it is worth mentioning that the IMF has not endorsed its findings.) The study (Tobias N. Rasmussen & Agustin Roitman, "Oil Shocks in a Global Perspective: Are They Really That Bad?", IMF Working Paper, August 2011) mentions that “Using a comprehensive global dataset […] we find that the impact of higher oil prices on oil-importing economies is generally small: a 25 percent increase in oil prices typically causes GDP to fall by about half of one percent or less.” The study elaborates on this by stating that this impact differs from one country to another, depending on the size of oil-imports, as “oil price shocks are not always costly for oil-importing countries: although higher oil prices increase the import bill, there are partly offsetting increases in external receipts [represented in new and additional expenditures borne by both oil-exporting and oil-importing countries]”. In other words, the more oil prices increase, benefiting exporting countries, the more these new revenues are recycled, for example through the growth in demand for new services, labor, and commodity imports. The researchers argue that the series of oil price rallies (in 1983, 1996, 2005, and 2009) have played an important role in recessions in the United States. However, Rasmussen and Roitman state at the same time that significant changes in the U.S. economy in the previous period (the appearance of combined elements, such as improvements in monetary policy, the institution of a labor market more flexible than before and a relatively smaller usage of oil in the U.S. economy) has greatly mitigated the negative effects of oil prices on the U.S. economy. A 10 percent rise in oil prices before 1984, for instance, used to lower the U.S. GDP by about 0.7 percent over two to three years, while this figure started shrinking to no more than 0.25 percent after 1984, owing to these accumulated economic changes. This means that while oil price shocks continue to adversely impact the U.S. economy, the latter has managed, as a result of the changes that transpired following the first shock in the seventies, to overcome these shocks, and subsequently, the impact of oil price shocks has become extremely limited compared to previous periods.

### 1AR---Poverty

#### No poverty DA -- the impacts of pollution on black communities outweigh a decrease in energy efficiency, and renewables are becoming more cost-competitive

**Rosa-Aquino 19:** Paola Rosa-Aquino. “Fight the Power? Cheaper Electricity, Dirtier Air: Black Communities Navigate a Tricky Relationship With Polluters”. March 28th, 2019. Grist. <https://grist.org/article/more-jobs-dirtier-air-black-communities-navigate-a-tricky-relationship-with-their-polluters/>. FD-RW

On a chilly Saturday morning, a large group of mostly black and brown teens and college students streamed into a New York University gymnasium — not to exercise or play basketball but to discuss their communities’ energy challenges. Clutching computer bags and business card holders, extra large sticky pads of paper and marker sets, the teens filed into the makeshift workspaces. Groups of participants huddled around conference tables swapping names and hometowns. Many had traveled across the country to be a part of the first hackathon hosted by the American Association of Blacks in Energy. The strategy session and competition focused specifically on energy issues that concern African-American communities. Whiteboards across the gymnasium denoted topics to be hacked: achieving energy efficiency through shared energy technology, improving low-income community access to energy efficiency programs, energy and transportation-mobilization, etc. The students were joined by a handful of adults — renewable energy experts and fossil fuel execs — to brainstorm ways to “disrupt” the energy industry. Black communities have a lot at stake when it comes to energy efficiency and innovation. On average, low-income neighborhoods and communities of color have lower quality housing stock, [which tends to be more energy inefficient](https://www.citylab.com/environment/2018/02/the-uneven-gains-of-energy-efficiency/552674/), driving up heating and cooling costs. In a [2016 report](http://energyefficiencyforall.org/sites/default/files/Lifting%20the%20High%20Energy%20Burden_0.pdf) by the American Council for an Energy-Efficient Economy, researchers looked at median “energy burden” — defined as the percentage of gross income that a household spends on energy costs — in cities across the country. They found that the fraction of income black households devoted to utility bills was 64 percent higher than that of white households. If household efficiency levels were brought up to median standards, black households’ energy burden would be less than 30 percent higher than white ones — with that remaining burden due to black households bringing in significantly less income on average. Fossil fuel advocates have that high energy burden to argue that African-American communities should favor the continued burning of oil, gas, and coal because, they note, they’re cheaper and more reliable than clean energy alternatives, like solar and wind. Further, black advocacy groups, like the NAACP, have criticized some [local renewable incentives](https://www.latimes.com/nation/la-na-solar-race-20150209-story.html?int=lat_digitaladshouse_bx-modal_acquisition-subscriber_ngux_display-ad-interstitial_bx-bonus-story_______), such as state subsidies for private solar panel installation, for favoring wealthier homeowners, who are disproportionately white. However, the cost of renewables is [becoming more competitive,](https://www.theguardian.com/environment/2019/mar/25/coal-more-expensive-wind-solar-us-energy-study) and there are health costs associated with using traditional energy sources. Fenceline communities — those located closest to oil and natural gas refineries — [are disproportionately African-American](https://www.colorlines.com/articles/report-oil-refineries-increase-health-risks-millions-african-americans). According to a 2018 report by the NAACP and the environmental advocacy nonprofit Clean Air Task Force, nearly 7 million African-Americans live near oil refineries. Further, the report said, industry operations, resulting in the emission of 9 million tons of pollutants annually, are accountable for more than 138,000 asthma attacks per year among school-age children. “The life-threatening burdens placed on communities of color near oil and gas facilities are the result of systemic oppression perpetuated by the traditional energy industry, which exposes communities to health, economic, and social hazards,” the report reads. “These communities have a lot to gain from the transition from the current fossil fuel energy economy to one based on equitable, affordable, and clean energy sources.” The balance between the current economic advantage of fossil fuels compared to their public health effects is at the center of the energy debate in the black community. The complex relationship between African-Americans and the energy industry means black communities have a choice: fight the power and push back on big energy companies (which may be both big polluters and big financial contributors to their communities) or embrace them as partners who can help bring down climbing household energy costs. Despite fossil fuel companies’ significant contributions to global warming — which will disparately impact black communities via phenomena like [the urban heat island effect](https://grist.org/article/heat-check/) — the American Association of Blacks in Energy has gone with the latter strategy. “I think the larger narrative, particularly when we talk about climate, is all of the other things that we also do that contribute to climate change [like driving cars],” said AABE President and CEO Paula Glover, who has worked in regulatory affairs with oil and gas companies.“We’re not gonna solve the entire problem.” The way AABE sees it, a brighter future for the black community starts with more equitable energy policy. “We were founded with the mission to ensure that energy policy, regulatory as well as legislative policy, does not disproportionately negatively impact communities of color,” Glover told Grist. AABE Vice President Tracey Woods says the organization mainly evaluates policies by looking at how they impact consumer utility bills. To that end, Woods says the organization does not promote one type of energy over another. They’re solely about controlling costs to ratepayers. [AABE’s board members](https://www.aabe.org/index.php?component=pages&id=19) and partners represent the entire energy industry, including renewable energy companies, executives from regional utilities (Ameren, Duke Energy, and the Southern Company), oil and gas giants (Chevron and ExxonMobil), and Exelon, the largest nuclear power outfit. “As blacks in energy, our members can be found in all the sectors of the industry,” Woods said. “They’re in oil and gas, and they’re in renewables. We have a pretty comprehensive view.” As a result of that broad membership, tackling global warming isn’t on AABE’s explicit list of priorities. Granted, it does have a [climate change statement](https://www.aabe.org/docs/fck/file/AABE%20Climate%20Change%20Principles.pdf) that lists it as a serious concern. Still, the organization actively promotes the development of oil and natural gas as part of “a balanced energy portfolio approach for the United States, which includes the development all fossil energy reserves in a manner which can create jobs and spur economic development.” That portfolio also includes so-called “[clean coal](https://web.archive.org/web/20170321183351/https:/www.aabe.org/docs/pages/1046/file/AABE%20Fossil%20Fuel%20Principles%20FINAL%2011_21.pdf).” “I think it’s my job to make sure that people have a very realistic perspective of what’s going on, and how we’re going to get to the kinds of outcomes that we’d like to see,” Glover told Grist. She added she also sees as part of her mandate that people better comprehend the contributions that fossil fuel companies — “not fossil fuels, but fossil fuel companies, like Exxon Mobil, Chevron, BP, or Shell” — make to society, whether positive or negative. Even though many black energy professionals acknowledge the harm companies have caused frontline neighborhoods in the past, some still argue it’s too soon to declare energy independence from companies who have so long been a part of the bedrock of these communities. “The systems that are in place with oil [companies] have been solidly implemented into this culture,” said John Crooks, a Brooklyn resident and retired professional in the solar industry. “You can’t just stop that right away.” It’s easy to see why some environmental justice advocates and organizations say black communities and organizations choosing to partner with the fossil fuel industry are basically making a deal with the devil. Several studies have found that fossil fuel point sources, like refineries, disproportionately expose communities of color to public health risks. The NAACP and Clean Air Task Force report found that black Americans are 75 percent more likely than whites to live near an oil or gas refinery. Those neighborhoods have poorer air quality and higher rates of asthma. But while it might seem like the fossil fuel industry is generally bad news for communities of color, the relationship is not that simple. Oil and gas companies can be both a major source of tax dollars as well as a major polluter in many communities of color, meaning many programs and projects in diverse cities are at least partially funded by companies that may be making residents sick. Take for instance the city of Richmond, California, home to one of the largest petroleum refineries on the West Coast. The plant was built in 1902 before the city of Richmond was incorporated three years later. Richmond was initially known for its shipyards, which attracted black workers from the South and Midwest during World War II. After the war ended, the shipyard jobs dried up, but the petrochemical industry continued to grow, eventually becoming the city’s biggest employer. “A Richmond without Chevron would be a very different one,” Richmond Mayor Tom Butt told Grist. The Chevron refinery is [the city’s largest employer, by far](http://www.ci.richmond.ca.us/DocumentCenter/View/8348/COR-Fact-Sheet?bidId=), and its [largest source of tax money](https://richmondconfidential.org/2012/03/28/life-death-and-taxes-a-look-at-chevrons-tax-appeal-in-richmond-and-how-refineries-are-valued/). The company’s direct tax payments make up about [one-third](https://www.climateliabilitynews.org/2018/02/21/chevron-richmond-california-climate-lawsuit/) of Richmond’s $134 million general fund. Chevron also pays tens of millions of dollars to the city and county in charitable donations (in 2011, those amounted to more than $30 million). That’s a lot of money, and the city believes it’s entitled to more. Richmond has often [contested](https://www.climateliabilitynews.org/2018/02/21/chevron-richmond-california-climate-lawsuit/) the amount of tax revenue collected from the company. It’s not just Chevron’s dollars that have poured into Richmond. The oil refinery also pours greenhouse gases and noxious co-pollutants into the air of nearby residents, 75 percent of whom are black or Hispanic, according to the 2010 census. Largely working-class neighboring communities suffer from [asthma rates nearly double the national average, as well as other health impacts](https://medium.com/@mayahrc/big-oil-small-town-the-fight-for-environmental-justice-in-richmond-california-97324244caff). After a [2012 fire](https://grist.org/article/oil-refinery-on-san-francisco-bay-erupts-into-flames/) at the refinery, 15,000 people went to local hospitals complaining of respiratory distress. “I could see the flame from the front porch over 10 blocks away,” Richmond resident Doria Robinson [told Grist](https://grist.org/climate-energy/a-year-after-a-refinery-explosion-richmond-cali-is-fighting-back/) in 2013. “It was absolutely devastating. But it made us actually open our eyes even further to the need to stand up as Richmond residents, on the front line, to Chevron.” Chevron eventually agreed to pay [$2 million](https://www.reuters.com/article/us-refinery-fire-chevron-plea-idUSBRE9740YV20130805) in fines and more than $10 million to affected residents and the local government after pleading no contest to six misdemeanor charges related to the fire. In 2018, Richmond [sued Chevron for negligence](https://www.cpmlegal.com/media/cases/147_RICHMOND%20CHEVRON%20COMPLAINT.pdf), citing the cost of 50 years of economic and public health impacts. “It’s kind of a dance,” Mayor Butt said. “You try to find this sweet spot that uses the city’s regulatory powers as much as they can be used to make sure that Richmond is safe and to make sure that pollutions are reduced to a minimum. On the other hand, [Chevron is] still there and it’s going to be there for a while.” According to grassroots environmental advocates, the financial contributions a company makes — whether those happen to be tax dollars, charitable donations, or reparations — do not absolve it of its role in polluting the community. “Any notion that the fossil fuel companies have ever done anything for the African-American community, other than pollute on them, is just total bullshit,” said Andrés Soto, a community organizer at the California-ba0sed environmental justice group Communities for a Better Environment. “It’s jobs and profits versus health and safety,” he added. When it comes to energy solutions, there’s a lot of debate about what’s best for communities of color in the long term. And as with so many race-related issues in 2019, the debate is fractious. Last month, the House Natural Resources Committee held its [first hearing on climate change](https://grist.org/article/the-house-natural-resource-committees-climate-change-hearing-turned-into-a-heated-conversation-about-race/) in a decade. The witness list included a veritable who’s who of environmental justice advocates, including Elizabeth Yeampierre of UPROSE, a Brooklyn-based grassroots organization, and Rev. Lennox Yearwood Jr. of the nonprofit political activist group Hip Hop Caucus. They spoke to representatives about how climate change spurred by the fossil fuel industry threatens the public health and economic well-being of Americans in general, and communities of color, in particular. But one witness, invited by Republicans, suggested that reducing regulations on the fossil fuel industry could decrease the energy burden for black households. Derrick Hollie is the founder of Reaching America, a group that, like AABE, advocates for affordable energy for communities of color. His organization has been involved in multiple campaigns funded by the oil and gas industries (one of which was [deemed](https://grist.org/article/koch-brothers-preached-the-fossil-fuel-gospel-in-virginia-then-black-churches-fought-back/) “a deliberate strategy to manipulate black Virginians into supporting fossil fuels” by a local Sierra Club representative). Hollie, who is black, argued that climate-friendly policies actually harm low-income and minority communities. “We need access to affordable energy to help heat our homes, power our stoves, and get back and forth to work,” Hollie [said](https://grist.org/article/the-house-natural-resource-committees-climate-change-hearing-turned-into-a-heated-conversation-about-race/). “The African-American community — we don’t have the luxury to pay more for green technologies.” Hollie’s comments did not go without rebuke. “For me, as a minister, **having buried a young girl because of asthma, that mother no longer cares about how much that utility bill would have cost**,” said Rev. Yearwood, who is also black. “We can definitely fight poverty and pollution at the same time.” While in the past, high up-front costs have put some forms of renewable energy, such as rooftop solar panels, out of reach of low-income households, innovations in the field of renewable energy could change the community’s calculus. “Underserved communities cannot be left behind in a clean energy transition,” Derrick Johnson, NAACP President and CEO, said in a 2018 statement about the the organization’s [Solar Equity Initiative to push for equitable solar access policies in at least five states across the U.S.](https://grist.org/briefly/the-naacp-is-bringing-renewable-energy-to-communities-of-color/) “Clean energy is a fundamental civil right which must be available to all.” But as renewable technology becomes cheaper, the line between “oil and gas companies” and “renewable companies” is blurring. As AABE’s Woods is quick to point out, many traditional oil and gas companies are recognizing the benefits of diversifying their energy portfolios. Communities and investors are ratcheting up pressures so that big companies build out their renewable wings. Oil and gas giant Shell, for example, says it plans to spend at least a billion dollars per year on clean energy technologies. (Still, overall, moves toward environmental sustainability are pretty minor: Big Oil spent only about [1.3 percent](https://www.reuters.com/article/us-oil-renewables/big-oil-spent-1-percent-on-green-energy-in-2018-idUSKCN1NH004) of its 2018 budgets on renewable energy investments.) But Woods says it’s all about perspective. “The major oil and gas companies collectively invest more than the federal government in renewables,” Woods said. “We think it’s important to be [at the table] with them, advocating for our communities of color.” Back at the hackathon, AABE’s oil and gas industry connections were on full display: Participants carried tote bags emblazoned with the logo of National Grid, a British company that supplies natural gas to homes in the Northeastern U.S. Fossil fuel reps mingled with teens who grew up near refineries. The day’s keynote speaker, AABE Board Chair Telisa Toliver, who is also a senior level executive at Chevron Pipe Line Company, addressed the crowd and kicked off the event. After six hours of brainstorming, the students came to the stage to present their projects. One group proposed using smart devices to gain insight into energy use. Another group, which focused on energy efficiency, interviewed residents of a nearby New York City Housing Authority community to get a sense of their concerns, which included dissatisfaction with building conditions. A third group, who ended their PowerPoint presentation with an image of the BP logo, proposed smart thermostats as a solution for residents to save a few bucks. Talking to several participants at the hackathon, it was clear that the students weren’t exactly fossil fuel industry proponents. Several of them discussed renewables in excited tones. But above all, these young folks wanted to make sure that the energy industry, as it innovates and renewables expand, does not continue to regard underserved groups as an afterthought. “New technologies are feeding into society’s growth,” said Ruby Pittman, an undergraduate student at New York University. “Those who have access, who crave more access, whose needs can be met by new technologies, that’s great. But we’re wanting to make sure that some communities aren’t left behind.”

### 1AR---Econ TL Defense

#### Inevitable carbon bubble triggers way worse econ collapse and nonuniques the disad.

Casella 18 (Carly Casella is a writer at Science Alert, 6-5-2018 “When the Fossil Fuel Industry Pops, It Will Be Way Bigger Than The 2008 Financial Crisis.” Science Alert, https://www.sciencealert.com/fossil-fuel-industry-pops-way-bigger-than-2008-financial-crisis-renewable-energy) [Premier]

The fossil fuel industry brings in a staggering amount of money to countries all around the world, but that doesn't mean it will last forever. An important new study has predicted that global demand for fossil fuels is going to plummet in the near future, causing a huge "carbon bubble" up to 16 times bigger than the one that caused the 2008 financial crisis. The research reveals that the global transition away from fossil fuels is likely inevitable, regardless of whether major nations adopt climate polices that promote renewable energy. The study flies in the face of world leaders like President Trump, who have promised to revive the struggling coal industry at the expense of renewable energy. "Our analysis suggests that, contrary to investor expectations, the stranding of fossil fuels assets may happen even without new climate policies," said co-author Jorge Viñuales, the chair of Law and Environmental Policy at Cambridge University. "This suggests a carbon bubble is forming and it is likely to burst." The fossil fuel industry is worth so much that it is borderline incomprehensible for the average person to wrap their mind around. Today, there are nearly 1,500 oil and gas firms listed on stock exchanges around the world, and together they are worth a whopping $4.65 trillion. Exxon Mobil alone is worth $425 billion. Using detailed simulations based on historical economic and environmental data, an international team of researchers has illustrated what could happen if this financial rug is pulled out from underneath us. The research reveals that on our current trajectory, the fossil fuel industry will be forced to abandon vast reserves of fossil fuels sometime before 2035. Overall, this would amount to a loss of between $1 trillion and $4 trillion in fossil fuel assets alone - roughly four to six times bigger than the 2008 financial crisis, which triggered the loss of $0.25 trillion. "Individual nations cannot avoid the situation by ignoring the Paris Agreement or burying their heads in coal and tar sands," said Viñuales. "For too long, global climate policy has been seen as a prisoner's dilemma game, where some nations can do nothing and get a 'free ride' on the efforts of others. Our results show this is no longer the case."

### 1AR---Econ Offense

#### 1] Markets are forward looking — an investor will more want to invest in a green tech company than fossil fuels because their strategy is unsustainable – that’s 1AC TRI. If the markets allow green tech to be naturally competitive, there’s more investment into green tech — that overall drives prices down for everyone.

#### 2] Link turn – more investment is possible in a world post-plan and it’s just crowded out by fossil fuels.

Kim 18 Joy Aeree Kim, Dr. Joy A. Kim has been working in the area of economic and environmental policies specially on the issue of climate change, trade and environment, environmental goods and services as well as environmental governance almost 15 years. Before joining UNEP, she worked as an economist/senior policy analyst at the Environment as well as the Trade/Agriculture Directorates of the Organisation for Economic Cooperation and Development (OECD) in Paris; a research associate at the United Nations University Institute of Advanced Studies (UNU-IAS) in Tokyo; Visiting Professor at the Aoyamagakuin University in Tokyo; PhD researcher at the Tyndall Centre for Climate Change Research in the UK; and Assistant researcher at the Korea Institute for International Economic Policy in Seoul. She was also a leadership fellow at Harvard Kennedy School of Government and contributing author of the 4th Global Environmental Outlook of UNEP. She holds a doctoral degree from the University of East Anglia in the UK. Her major publications include 'Matching support with nationally appropriate mitigation actions' (lead-author, OECD/IEA), 'Trade and climate policies in the post-2012 world' (co-author, UNEP), 'Facilitating trade in selected climate change mitigation technologies in the energy supply, building and industry sectors' (co-author, OECD), 'Institutional interplay: biosafety and trade' (co-editor, UNU Press) and 'Envisioning a sustainable development agenda for trade and environment (co-author)'.12-7-2018, "Calling time on fossil fuel subsidies", UN Environment, https://www.unenvironment.org/news-and-stories/story/calling-time-fossil-fuel-subsidies, Accessed on 10-28-2019 // JPark

UN Environment is working with governments to collect internationally coherent data on fossil fuel subsidies that can help advance global efforts to address climate change. Gone are the days when you could fill up your car gas tank with US$20. Yet, despite the steady increases, gas prices are still artificially low, keeping transportation and national production costs relatively contained and internationally competitive. Unfortunately, this situation is deeply unsustainable, particularly if we are to seriously curb our CO2 emissions, slow our impact on climate change and reduce air pollution. Every year, governments spend between US$160 and US$400 billion as fossil fuel subsidies for the production and use of coal, oil and gas. Payments to consumers, companies, tax breaks or other fiscal incentives are some of the ways governments subsidize fossil fuels, moving ever farther away from meeting the goals of the Paris Climate Agreement. “Understanding the size of existing fossil fuel subsidies is an important first step towards achieving reform,” says UN Environment fossil fuel subsidy expert Joy Kim. “You can’t manage what you can’t measure.” In contrast, the total financial support to renewable energy amounts to US$121 billion. UN Environment is responsible for monitoring the progress of phasing out fossil fuel subsidies and has been working with numerous country partners, international organizations and non-governmental organizations to come up with a robust way to measure such subsidies. In September of 2018, an agreement was reached by the Inter-Agency Expert Group on Sustainable Development Goal Indicators (composed of Member States including regional and international agencies as observers) on the first internationally agreed approach to measuring fossil fuel subsidies that UN Environment has developed together with the Organisation for Economic Co-operation and Development (OECD) and the Global Subsidies Initiative and proposed. fossil 2 Coal power plant in Gelsenkirchen, Germany. Photo by Reuters. The momentum to reform fossil fuel subsidies has grown in recent years, as countries discover not only the necessities, but also the benefits of subsidy removal. For example, in June 2018, Argentina and Canada committed to peer reviews of their fossil fuel subsidies under the G20 process. China, Germany, Indonesia, Italy, Mexico and the USA had done this earlier. Sustainable Development Goal 12 (Ensure sustainable consumption and production) also includes a target to rationalize inefficient fossil fuel subsidies that encourage wasteful consumption. The importance of monitoring fossil fuel subsidies is recognized in the framework of the Sustainable Development Goals with a dedicated indicator to assess country progress. In the context of the Sustainable Development Goals, UN Environment is responsible for collecting national data on this indicator from 193 UN member countries. Data collection will start in 2020 and continue until 2030, feeding into the Sustainable Development Goal global database maintained by the UN Statistics Division. “If sufficient guidance and support are provided to countries to facilitate their reporting, this process could improve transparency on fossil fuel subsidies, and provide an impetus for reform by informing decision-making, increasing awareness and building support among stakeholders,” says Kim. fossil 3 A liquified natural gas plant in Bonny, Nigeria. Photo by Akintunde Akinleye. The damage caused by fossil fuel subsidies The burning of fossil fuels is a significant contributor to air pollution, which kills seven million people a year and is linked to “huge” reductions in intelligence. By artificially lowering prices, subsidies drive wasteful energy consumption which increases local air pollution and congestion, while crowding out investment in renewables and energy efficiency. They lock us into a high-carbon energy world. Coal, oil and gas not only produce health-damaging pollutants when they burn: the extraction process also produces significant quantities of carbon dioxide and methane. The sheer size of the subsidies is a significant drain on national budgets, diverting resources from other areas like health and education. The International Monetary Fund estimates that removing fossil fuel subsidies and then taxing fossil fuels correctly (based on the cost borne to society through air pollution, carbon emissions and accidents) could lead to a decline in fossil-fuel related carbon emissions by over 20 per cent globally. Removing the subsidies would also reduce premature air pollution-related deaths by over 50 per cent and raise government revenue by US$2.9 trillion (3.6 per cent of global gross domestic product), it says. (IMF, 2015). Although advocated as a measure to fight poverty, fossil fuel subsidies often do not reach the poorest households and instead tend to benefit wealthier segments of society more. On 27 November UN Environment launched its Emissions Gap report 2018 [hyperlink to report], which underscores the need for further action by all countries to reduce emissions of greenhouse gases.

#### 3] Warming guts long term econ – it destroys global trade

Curtin 11-16-19 (Curtin, Joseph. “Climate Change Is Coming for Global Trade.” Foreign Policy, 16 Nov. 2019, foreignpolicy.com/2019/11/16/climate-change-disrupt-global-container-shipping-trade-policymakers-take-note/. [Joseph Curtin is a senior fellow at the Institute of International and European Affairs in Dublin. He recently completed an Eisenhower Fellowship exploring prospects for EU-U.S. climate cooperation.])//LK [Accessed 11/19/19]

After the cold fall winds swirling around Hurricane Sandy pushed an enormous storm surge toward the New York and New Jersey coastlines several years ago, the ensuing damage left an indelible imprint on the public imagination. Restaurants with ocean views were battered by wild waves, homes were rent asunder, and historic lighthouses were pummeled into piles of rubble. New York City was paralyzed for days, and some 40,000 people were left homeless. The dramatic destruction garnered 24-hour media coverage, but the damage to international trade slipped more quietly under the radar. No TV cameras captured the storm waters as they swelled over the quays surrounding the Port of New York and New Jersey or as they surged through operations centers, knocking computers, power transformers, and cargo control systems off-line. Scant attention was paid to the goods containers strewn like toys around the marine terminals or to the gantry cranes left inoperable by saltwater damage. For a week, container ships laden with cargo floated aimlessly in the calmed harbor while responders scrambled to repair the damage. As concentrations of heat-trapping greenhouse gases accumulate in the atmosphere at a record-breaking pace, changes to the climate system—not least sea level rise and increasingly ferocious extreme weather—will pose a growing threat to international trade. Coastal transport infrastructure, especially ports, is highly vulnerable. But this is a two-way relationship. International trade plays a well-established role in making climate change worse by increasing greenhouse gas emissions, but what Sandy portends is that climate change will also imperil the smooth flow of international trade. Despite their interconnectedness, these issues are mostly considered in silos. The 2015 Paris climate change agreement devotes not one clause to trade. And the sectors underpinning it—aviation and shipping, whose emissions are growing by 3-5 percent annually—are not covered either. Similarly, the 2001 Doha Ministerial Declaration—which set the parameters for the stalled Doha round of trade negotiations—does not mention climate change. As a result, sizable chunks of the global economy have fallen between the environmental protection cracks. Perhaps more important, the rapid growth of international trade also makes striking an effective global climate agreement more difficult. China’s emergence as a trading superpower has given rise to fears of so-called “carbon leakage,” which occurs when costs related to complying with climate policies drive businesses to transfer production overseas in pursuit of laxer rules. If the European Union or United States makes polluters pay for their greenhouse gas emissions, the fear is that the polluters would simply offshore production to China or another emerging economy, yielding no net environmental benefit. But if developed countries don’t act, emerging economies never will. Although studies find little evidence of leakage in practice, its specter has long loomed large. In the United States, it was ostensibly a fear of leakage, among other things, that led the Senate to unanimously rule out ratifying any climate agreement that left economies such as India and China unbound by carbon targets in the run-up to negotiating the Kyoto Protocol in 1997. More recently, President Donald Trump invoked similar concerns when repudiating the Paris agreement, which he has pledged to leave. He argued that the deal “disadvantages the United States to the exclusive benefit of other countries,” citing “lower wages, shuttered factories, and vastly diminished economic production.” Within the EU, the danger of leakage has also been a major concern. Under the EU’s flagship climate policy—its emissions trading scheme—energy-intensive industries receive free carbon credits so that they are protected from competition from abroad.

### 1AR---Impeachment

#### Impeachment inevitable – link gets subsumed by external considerations.

Bade ‘11/21 [Rachael; 11/21/2019; Staff Writer; “‘The picture has been painted’: Hearings unite Democrats behind impeachment”; <https://www.washingtonpost.com/politics/the-picture-has-been-painted-hearings-unite-democrats-behind-impeachment/2019/11/21/1dd752c8-0c75-11ea-8397-a955cd542d00_story.html>] Dhruv

Two weeks of televised hearings have cemented House Democrats’ determination to proceed with the impeachment of President Trump, according to interviews Thursday with more than 20 lawmakers across the party’s ideological spectrum, with most saying they had heard enough evidence to proceed to a vote. The growing resolve among the rank and file came as House Speaker Nancy Pelosi (D-Calif.) said that she had no intention of slowing the impeachment probe to wait for the courts to decide whether senior administration officials who have spurned congressional requests for documents and testimony must comply. House Intelligence Committee Chairman Adam B. Schiff (D-Calif.) delivered a searing condemnation of Trump’s behavior and Republican defenses of him before gaveling the final scheduled hearing to a close Thursday evening. “What we’ve seen here is far more serious than a third-rate burglary of the Democratic headquarters,” Schiff said, comparing Trump with President Richard M. Nixon, who resigned in 1974 after being told by fellow Republicans that his impeachment and removal were inevitable. That Schiff and other Democrats on the three panels actively investigating impeachment favor proceeding comes as little surprise. But the hearings, which culminated in testimony Thursday with former National Security Council official Fiona Hill and diplomat David Holmes, appear to have galvanized other rank-and-file Democrats and put the House on a clear trajectory toward impeachment. “The picture has been painted,” said Rep. Daniel Kildee (D-Mich.). “This is a president who clearly tried to bribe a foreign government to investigate his opponent. I mean, and it’s almost like everyone in the room understands that. But some [Republicans] are arguing that the burden of proof is so high that it can’t be met.” Some Democrats — including those holding some of the most vulnerable seats — said they were waiting to consider all the evidence before coming to a conclusion, but they also declined to identify any major gaps in evidence that they would want to see filled before a vote. Two Democrats voted against an Oct. 31 resolution establishing rules for the impeachment hearings — a vote widely seen as an early test for the viability of impeachment itself — but scores of lawmakers said they had not made a final decision on whether Trump ought to be impeached. A few, such as Rep. Anthony Brindisi (D-N.Y.), said they still wanted to secure testimony from witnesses who have resisted congressional subpoenas, such as acting White House chief of staff Mick Mulvaney, Secretary of State Mike Pompeo and Energy Secretary Rick Perry. All three were implicated Wednesday by Gordon Sondland, the U.S. ambassador to the European Union, as having knowledge of a presidentially directed scheme to withhold a White House meeting and military aid from Ukraine in return for the announcement of investigations politically important to Trump. “It’s always better to err on the side of more information, especially when you talk about a matter as serious as impeaching a president,” Brindisi said. But others, starting with Pelosi, said they were simply unwilling to embark on a potentially lengthy court battle to secure their testimony — even to secure potentially devastating testimony, such as that of former national security adviser John Bolton, who was present for several crucial meetings. “We cannot be at the mercy of the courts,” Pelosi told reporters, calling litigation “a technique on the part of the administration” to obstruct the congressional investigation. “How much more do you need to know? It’s so self-evident.” Rep. Ann Kuster (D-N.H.) said that if the remaining witnesses do not testify voluntarily in the coming weeks, Democrats will “infer culpability” and move forward. “If the White House and the Republicans have it different, bring these people in,” she said. “We shouldn’t have to wait for courts to compel people.” Rep. Matthew Cartwright (D-Pa.), seeking reelection in a district Trump won in 2016, said the narrative emerging from the public hearings “doesn’t look good for the president.” “At this point, it is overwhelmingly incumbent upon the president to come forward with exculpatory information,” he said. “If ever there is a time for him to do it, it is now. I want to hear what the innocent narrative of this story is.” Schiff and other Democrats did not foreclose the possibility that they could call additional witnesses after Thursday’s hearing. But according to multiple Democratic lawmakers and aides familiar with the probe, there are no immediate plans to do so, leaving the House Intelligence Committee — in conjunction with two other panels, Foreign Affairs and Oversight and Reform — to draft a report synthesizing their findings over the next week. That report would be released subject to a vote of the Intelligence Committee and forwarded to the House Judiciary Committee for the probable drafting and consideration of articles of impeachment. That would involve a separate process of public hearings in which Trump’s attorneys could participate. The lawmakers and aides, who spoke on the condition of anonymity to speak frankly, said Pelosi and her deputies have made no final decisions on that process. What the Intelligence Committee hearings have not done is persuade any Republican to publicly break with Trump. That became especially clear late in Thursday’s hearing when Rep. Will Hurd (R-Tex.), a moderate who is retiring after his current term whom many Democrats considered a possible vote for impeachment, announced that he considered Trump’s conduct “inappropriate” but not impeachable. “I have not heard evidence proving the president committed bribery or extortion,” he said, adding that the congressional inquiry lacked critical testimony from figures such as Rudolph W. Giuliani, the president’s personal attorney, whom many witnesses have testified pressed the president’s interests through U.S. officials. Also on Thursday, Rep. Francis Rooney (Fla.), the lone House Republican who has suggested he’s open to voting to impeach Trump, said he preferred that Democrats ask the courts to force executive branch officials such as Mulvaney and Bolton to testify and hand over documents. “Take your time, go through the courts, get those people to testify,” he said. But Democratic leaders have shown no stomach for a significant slowdown, setting a breakneck pace that is exhausting Washington — cramming five blockbuster hearings with nine witnesses into a three-day period this week, for instance. The time frame, aimed at potentially getting impeachment articles to the House floor before Christmas or shortly afterward, is being driven by various political considerations: Party leaders mindful of presidential politics want the focus to return to the upcoming early-state caucuses and primaries. House leaders are mindful of how public attention to special counsel Robert S. ­Mueller III’s lengthy investigation of Russian interference in the 2016 election flagged over the course of two years. And some moderate Democrats want the impeachment proceedings off the table as soon as possible, allowing the House to return to its legislative agenda. One moderate Democrat, who spoke on the condition of anonymity to speak frankly, said the House needed to “tear this Band-Aid off and move on.” Said another, “Let’s power through, get it done, and move back to bread-and-butter issues.”

#### Experts.

Mindock ‘11/18 [Clark; 11/18/2019; Staff Writer Citing Allan Lichtman, a history professor at American University; “Trump impeachment is 'inevitable', says professor who correctly predicted last nine presidential elections”; <https://www.independent.co.uk/news/world/americas/us-politics/is-trump-getting-impeached-why-impeachment-hearings-a9207856.html>] Dhruv

A historian who has successfully predicted every presidential election since 1984 says that he believes [Donald Trump](https://www.independent.co.uk/topic/DonaldTrump)’s [impeachment](https://www.independent.co.uk/topic/impeachment) by the full House of Representatives is now “inevitable”, just days after the first public hearings in those proceedings were held. [Allan Lichtman](https://www.independent.co.uk/topic/allan-lichtman), a history professor at American University, said as much [during an appearance](https://www.msnbc.com/weekends-with-alex-witt/watch/historian-who-predicted-trump-s-election-also-predicted-his-impeachment-73604165926) on [MSNBC](https://www.independent.co.uk/topic/msnbc), where he also warned Democrats against rushing their process too much. Democrats, he reasoned, would not have brought the impeachment process this far if they were not confident that they could bring forward successful articles of impeachment. “Impeachment is now inevitable,” Mr Lichtman said during an appearance on Weekends with Alex Witt. “The Democrats would never have taken it this far — we know how cautious Nancy Pelosi is — without actually voting articles of impeachment in the full House.” He continued: “The only question is the scope and content of those articles.” Mr Lichtman was less certain about what will happen in the 2020 election, but said that the scandal plaguing Mr Trump’s White House is likely to only hurt his chances at re-election. “But I can tell you that Democrats, by finally growing a spine, and moving forward on a pretty clear impeachment… have helped themselves,” he said. “When Donald Trump becomes only the third American president to be impeached by the full House, that scandal key will have flipped against him, and diminished his chances for re-election,” Mr Lichtman said, referring to the prediction system he has developed and used over the past several decades. The predictions came after the first week of public impeachment hearings, which saw testimony from former Ukraine ambassador [Marie Yovanovitch](https://www.independent.co.uk/topic/marie-yovanovitch), State Department official George Kent, and the top US diplomat to Ukraine Bill Taylor. The House will continue its impeachment inquiries this week, with expected appearances from EU ambassador Gordon Sondland, and National Security Council staffer Lt Col Alexander Vindman.

### 1AR---Base

#### 1] Link turn – congress is normal means so Trump just rallies his base against them.

Chen 18 Han Chen (International Climate Advocate, Global Advocacy, International Program, Natural Resources Defense Council). “Can the US Phase Out Fossil Fuel Subsidies?” Our Energy Policy. 25 June 2018. JDN. <https://www.ourenergypolicy.org/can-the-us-phase-out-fossil-fuel-subsidies/>

The first step to eliminate subsidies is to do a full accounting of those that exist. The US completed a subsidy “peer review” in 2016. While the official US report contained gaps, it did include a list of substantial subsidies in need of reform: $1.6 billion in subsidies for expensing of intangible drilling costs, $966 million in unnecessary write-offs for depletion of oil and gas wells, a domestic manufacturing deduction of $1.0 billion, along with many other subsidies. The next step is to eliminate subsidies: which will require action through Congress. It’s time for lawmakers to phase out government support for fossil fuel production, while ensuring a just transition for workers involved in these industries.

#### 2] The base is resilient: Politics is tribal—Trump’s base supports him because he’s on their team---they’ll support whatever policy he supports---our ev cites conclusive studies.

Edsall 17—Thomas B. Edsall, New York Times journalist, 2017 (“Trump Says Jump. His Supporters Ask, How High?,” *New York Times*, September 14th, <https://www.nytimes.com/2017/09/14/opinion/trump-republicans.html>, AIvackovic)

There is more to this phenomenon than evangelical hypocrisy. Many Republican voters, including self-identified strong conservatives, are ready and willing to shift to the left if they’re told that that’s the direction Trump is moving. Michael Barber and Jeremy C. Pope, political scientists at Brigham Young University, reported in their recent paper “Does Party Trump Ideology? Disentangling Party and Ideology in America,” that many Republican voters are: malleable to the point of innocence, and self-reported expressions of ideological fealty are quickly abandoned for policies that — once endorsed by a well-known party leader — run contrary to that expressed ideology. Those most willing to adjust their positions on ten issues ranging from abortion to guns to taxes are firm Republicans, Trump loyalists, self-identified conservatives and low information Republicans. The Barber-Pope study suggests that for many Republicans partisan identification is more a tribal affiliation than an ideological commitment. Many partisans are, in effect, more aligned with the leader of their party than with the principles of the party. (Although Barber and Pope confined their study to Republicans, they note that Democrats may “react in similar ways given the right set of circumstances.”) President Trump’s ability to slide his supporters to the left or right will face a major challenge if he lives up to what Democratic congressional leaders described on Wednesday night as the beginnings of an agreement to prevent the deportation of nearly 800,00 undocumented young immigrants and to strengthen border security without building a wall. Barber and Pope’s paper expands on recent work by David E. Broockman and Daniel M. Butler, “The Causal Effects of Elite Position-Taking on Voter Attitudes,” which was published in the American Journal of Political Science. Broockman and Butler, who are political scientists at the Stanford Graduate School of Business and the University of California-San Diego, found that Voters often adopted the positions legislators took, even when legislators offered little justification. Moreover, voters did not evaluate their legislators more negatively when representatives took positions these voters had previously opposed, again regardless of whether legislators provided justifications. The findings are consistent with theories suggesting voters often defer to politicians’ policy judgments. Along similar lines, Christopher Achen and Larry Bartels, political scientists at Princeton and Vanderbilt, reject traditional views of democratic elections in their new book, “Democracy for Realists: Why Elections Do Not Produce Responsive Government.” Achen and Bartels argue that the “familiar ideal of thoughtful citizens steering the ship of state from the voting booth is fundamentally misguided.” In the conventional view, democracy begins with the voters. Ordinary people have preferences about what their government should do. They choose leaders who will do those things, or they enact their preferences directly in referendums. In either case, what the majority wants becomes government policy — a highly attractive prospect. Achen and Bartels dismiss this “folk theory of democracy” to argue that the more realistic view is that Citizens’ perceptions of parties’ policy stands and their own policy views are significantly colored by their party preferences. Even on purely factual questions with clear right answers, citizens are sometimes willing to believe the opposite if it makes them feel better about their partisanship and vote choices. They conclude “that group and partisan loyalties, not policy preferences or ideologies, are fundamental in democratic politics.” The Barber-Pope study took advantage of Trump’s exceptional propensity during the campaign to take multiple, often contradictory stands on issues. This allowed them to cite two opposing stands Trump had taken on a series of issues in order to test the willingness of Republican voters to follow Trump’s position to the left or right. The authors conducted a survey with YouGov of 1,300 voters broken into five subgroups, each of which was asked 10 questions using a research design that employed “both ‘conservative’ and ‘liberal’ Trump cues.” For example: 1. “Do you support or oppose increasing the minimum wage to over $10 an hour?” 2. “Donald Trump has said that he supports this policy. How about you? Do you support or oppose increasing the minimum wage to over $10 an hour?” 3. “Donald Trump has said that he opposes this policy. How about you? Do you support or oppose increasing the minimum wage to over $10 an hour?” 4. “Congressional Republicans have said that they support this policy. How about you? Do you support or oppose increasing the minimum wage to over $10 an hour?” 5. “Congressional Republicans have said that they oppose this policy. How about you? Do you support or oppose increasing the minimum wage to over $10 an hour?” The same variation was used on nine other contentious policy questions: increasing taxes on the wealthy, abortion, immigration, guns on school property, the Iran nuclear deal, universal health care, background checks for gun purchases, climate change and funding Planned Parenthood. The survey also asked respondents how much they approved of Trump, how they would describe their own ideology on a 5-point scale, and eight questions to rank their political knowledge. Barber and Pope found that people who identified themselves as strong Republicans were among the most malleable voters. When told Trump had adopted a liberal stance, these voters moved decisively to the left; when told Trump had taken a conservative position, they moved sharply to the right, as the accompanying chart shows. Tugging Republicans Left and Right President Trump has proved adept at getting Republicans to go along with his views, even if they clash with party dogma. Here’s what happened in 2016 and the early months of his presidency, according to researchers. Chart, funnel chart

Description automatically generated The same patterns emerged in the case of voters who strongly approve of Trump and among voters who describe themselves as “strong conservatives,” as I mentioned earlier. This last point suggests that instead of calling themselves strong conservatives, these voters are more accurately described as strong partisans. This, in turn, helps explain why most elected Republican officials accepted Trump’s equivocal response to the white supremacist marchers in Charlottesville, Va. last month. Nathaniel Persily, a professor of law and political science at Stanford, described his surprise at the docility of Republican officials in an email: While I and others had written extensively about the partisan tribalism of both elites and the mass public, I guess I would have expected greater defections by Republicans in the wake of Charlottesville. Persily went on to argue a related point: To some extent, I think that each Republican realizes that the electoral and political costs of opposing the president may always exceed the benefits — no matter what the issue. The extraordinary approval ratings Trump gets from his core voters further reinforce the unwillingness of Republican elected officials to defy him. Among Republicans who voted for Trump in the primaries, his approval rating in a Wall Street Journal/NBC News poll earlier this month stood at 98 percent. Among Republicans who did not vote for Trump in the primaries, his approval rating stood at 66 percent. I asked both Barber and Pope of Brigham Young what their thoughts on American politics are now that Trump has been in office eight months. Pope argued in an email that there has been too much emphasis on polarization and not enough on partisanship. While elites — elected officials and party activists — are ideologically polarized, the best the general public “can manage is a kind of tribal partisanship that does not really reflect the content of the elite discussion,” Pope wrote: Citizens pick a team, but they don’t naturally think like the team leadership does. And when Trump tells Republicans to think in a new way, lots of people happily adopt that new position because they were never that committed to the old ideas anyway. They’re just committed to the label. Republican leaders in the House and Senate, in Pope’s view, are struggling to come to terms with a hard truth: that much of the Republican electorate is not really interested in the conservative project as expressed by Paul Ryan or Mitch McConnell or the Freedom Caucus. They are hostile to immigrants and rather nationalist in outlook, but not consistently market-oriented or libertarian in their thinking the way that some Republican elites continue to be. In a separate email, Barber wrote that the commonplace phrase “all politics is identity politics” is a good description “of the state of the Republican Party, and the Democratic Party to a degree.” He noted that a large corporate tax cut “isn’t really an ideological priority for much of the rank and file” of the Republican Party, but “if it means that their side has ‘won’, then they are in favor of it. More broadly, I think it shows us that teamsmanship is much more important than any particular policy agenda.” What can we take away from all of this? First, Trump’s base has given him considerable leeway and his strongest supporters are likely to back him when he violates Republican orthodoxy — as he did recently by agreeing to a debt ceiling strategy proposed by Democratic leaders over the objections of their Republican counterparts. Second, the claims of ideological conservatives that a large segment of the electorate has turned to the right on policy issues is suspect at best. Third, and most significant, if the Barber-Pope, Broockman-Daniels and Achen-Bartels conclusions are right, American politics is less a competition of ideas and more a struggle between two teams.

#### 3] He will prob just go to twitter and say “screw the dems”

#### 4] No Impact- Advisors check unilateral strikes---they’ll step in and stop him---and military ignores the order

#### 5] Reject their political blackmail – it’s like saying don’t end slavery because slave masters would get mad – links back to framing

### 1AR---Oil Prices Top Level

#### 1] No global impact – US is energy independent so shocks take longer

#### 2] Global transition is steady and so will oil price shocks – even if it happened it’s checked by alt actors in the short term.

Krauss and Reed 9-15 Clifford Krauss and Stanley Reed, 9-15-2019, Stanley Reed, a London-based journalist, has been writing for The New York Times on energy, the environment, and the Middle East since 2012. Before that he was London bureau chief for BusinessWeek magazine. Clifford Krauss is a national energy business correspondent based in Houston. He was previously the bureau chief of The New York Times's Buenos Aires and Toronto bureaus, and has reported in recent years from North Africa and the Middle East. In 2016, he shared the Society of Publishers in Asia Award for explanatory reporting. "Oil Prices Spike After Attack on Saudi Facilities but Lasting Disruption Seen Unlikely", No Publication, https://www.nytimes.com/2019/09/15/business/saudi-arabia-oil-energy-prices.html, Accessed on 11-12-2019 // JPark

HOUSTON — Oil prices rose about 10 percent on Monday as investors reacted to a weekend attack on one of Saudi Arabia’s most important oil facilities that could cripple petroleum exports for days or even weeks. But experts say that a severe shock to energy markets and the world economy would be unlikely. The attack on the Abqaiq processing facility and another plant, deep in Saudi territory, displayed the vulnerability of the kingdom to tensions in the Persian Gulf region. The country produces about 10 percent of the world’s oil supplies. The disruption could slash Saudi Arabia’s daily oil exports of 7.4 million barrels by as much as three-quarters, taking roughly 5 percent of global supplies off the market, unless the facility is quickly repaired. President Trump suggested on Sunday that he could release supplies from the Strategic Petroleum Reserve, an attempt to calm oil markets. Brent crude oil futures briefly spiked about 20 percent, or more than $11 a barrel, when trading started on Monday and then eased to an increase of about 10 percent, or just over $6 a barrel. The attack raised the possibility of further disruptions in Saudi Arabia’s oil production if there were additional attacks on its fields and pipelines. The planned initial public offering of the kingdom’s national oil company, Saudi Aramco, could also be hurt if international investors doubt Saudi Arabia’s ability to defend its vital energy infrastructure. A gas station in West Palm Beach, Fla. in August. The average price for a gallon of regular gasoline in the United States was $2.57 on Sunday, 28 cents below a year ago.Credit...Saul Martinez for The New York Times But as luck would have it, the attack came as global oil stockpiles were higher than usual, several producing countries have ample spare capacity and American oil facilities have so far been spared from a damaging hurricane season. Meanwhile, a slowing global economy has moderated energy demand. “We do not expect an immediate disruption on global oil trade, since many nations, including the U.S., have ample crude oil in storage,” said Manish Raj, chief financial officer of Velandera Energy Partners, a Louisiana oil exploration and production company. “The Saudis themselves have enough storage to meet their export obligation for the next 60 days. Therefore, we expect no supply-demand imbalance in the near term.” The main uncertainty is how long will it take for the Saudis to repair the Abqaiq facility, which separates gas from oil from several important oil fields. While the fire was put out quickly, the Saudis may not know the answer for days since the facility is large and has complex equipment that still needs to be tested.

### ---! Turn – Trump

#### Spikes in oil prices threaten Trump’s reelection

Kemp 19 – [John Kemp – writer for Reuters; Reuters; Trump warns Saudi Arabia on oil prices as focus turns to re-election: Kemp; <https://www.reuters.com/article/us-oil-prices-kemp/trump-warns-saudi-arabia-on-oil-prices-as-focus-turns-to-re-election-kemp-idUSKCN1QF03S>; 2/25/2019; Acc. 6/25/2019] KWu

U.S. President Donald Trump has warned OPEC not to tighten the oil market too much and risk another spike in prices that could harm the global economy – and his re-election campaign in 2020. “Oil prices getting too high,” the president warned in a message posted on Twitter on Monday. “OPEC please relax and take it easy. World cannot take a price hike – fragile!” The president has kept up a regular commentary on oil prices over the last year and has pressed Saudi Arabia, de facto leader of the Organization of the Petroleum Exporting Countries, to push them lower. Earlier interventions were triggered when prices climbed into the mid or high $70s per barrel but more recently the president has tweeted when prices were well below $70 (tmsnrt.rs/2EuhjF5). The president’s willingness to tolerate higher prices appears to be diminishing and his tweet-intervention zone has fallen over time (“Oil prices are re-entering the tweet zone”, Reuters, Sept. 13). But the most interesting part of Trump’s tweet was the third sentence, with its implicit recognition that global economic growth has slowed since the middle of 2018. The president’s characterization of the economy as “fragile” shows that the administration is aware of the suddenness and severity of the slowdown since September. Like any first-term president, Trump’s top priority is being re-elected next year. No president wants to be confined to a single term and branded a failure. Every president recognizes the central electoral importance of the economy, so Trump is trying to eliminate all factors that could threaten a recession. The president’s need to minimize recession risks explains his eagerness to conclude a trade agreement with China – even at the risk of undermining his negotiators. The White House cannot afford to impose another round of tariffs on China if the consequence could be a further economic slowdown. As a result, the White House has been preparing in recent weeks to postpone the tariff deadline and soften some of its demands on China for ambitious structural reforms. The other major risks to the expansion come from rising interest rates and strengthening oil prices. The president has already indicated his unhappiness with the Federal Reserve for raising interest rates and the central bank has backed off (“A Fed pivot, born of volatility, missteps and new economic reality”, Reuters, Feb. 22). OPEC (for which read Saudi Arabia) is the other major source of recession risk if rising oil prices cause an already-slowing economy to lose even more momentum. The president is putting the government in Riyadh on notice that it should not cut oil production too much for too long if doing so would risk a further substantial rise in prices. The president could threaten to sign the NOPEC bill (“No Oil Producing and Exporting Cartels Act”) currently before Congress if the administration feels Saudi Arabia is allowing prices to drift too high. The White House’s preoccupation with oil prices, the economy and re-election may make it cautious about toughening sanctions on Iran too much when the current waivers expire at the beginning of May. If it does decide to reduce the number and scope of the sanctions waivers, the administration will almost certainly extract a commitment from Saudi Arabia to make up for any further Iranian barrels removed from the market. Finally, the administration is likely to prove exceptionally sensitive about any spike in diesel prices as a result of new regulations scheduled to be introduced by the International Maritime Organization from the start of 2020. The president wants a strongly growing economy and low to moderate oil prices throughout 2019 and 2020 to maximize his probability of re-election and should be expected to pull every lever to achieve them. OPEC and Saudi Arabia have been put on notice about what they are expected to do to help.

#### Trump win in 2020 collapses the liberal order --- nuclear war

Sullivan 18 - visiting lecturer at Yale Law School. He served in the Barack Obama administration as national security advisor to Vice President Joe Biden and director of policy planning at the State Department, as well as deputy chief of staff to Secretary of State Hillary Clinton. (Jake, “The World After Trump,” *Foreign Affairs*, <https://www.foreignaffairs.com/articles/2018-03-05/world-after-trump>)

The warnings started long before Donald Trump was even a presidential candidate. For at least a decade, a growing chorus of foreign policy experts had been pointing to signs that the international order was coming apart. Authoritarian powers were flouting long-accepted rules. Failed states were radiating threats. Economies were being disrupted by technology and globalization; political systems, by populism. Meanwhile, the gap in power and influence between the United States—the leader and guarantor of the existing order—and the rest of the world was closing. Then came Trump’s election. To those already issuing such warnings, it sounded the death knell of the world as it was. Even many of those who had previously resisted pessimism suddenly came to agree. As they saw it, the U.S.-led order—the post–World War II system of norms, institutions, and partnerships that has helped manage disputes, mobilize action, and govern international conduct—was ending for good. And what came next, they argued, would be either an entirely new order or a period with no real order at all. But the existing order is more resilient than this assessment suggests. There is no doubt that Trump represents a meaningful threat to the health of both American democracy and the international system. And there is a nonnegligible risk that he could drag the country into a constitutional crisis, or the world into a crippling trade war or even an all-out nuclear war. Yet despite these risks, rumors of the international order’s demise have been greatly exaggerated. The system is built to last through significant shifts in global politics and economics and strong enough to survive a term of President Trump. This more optimistic view is offered not as comfort but as a call to action. The present moment demands resolve and affirmative thinking from the foreign policy community about how to sustain and reinforce the international order, not just lamentations about Trump’s destructiveness or resignation about the order’s fate. No one knows for certain how things will turn out. But fatalism will become a self-fulfilling prophecy. The order can endure only if its defenders step up. It may be durable, but it also needs an update to account for new realities and new challenges. Between fatalism and complacency lies urgency. Champions of the order must start working now to protect its key elements, to build a new consensus at home and abroad about needed adjustments, and to set the stage for a better approach, before it’s too late. A RESILIENT ORDER In a world where the major trends seem to spell chaos, it is fair to place the burden of proof on those who claim that the current order can continue. Yet well before Trump, it had already demonstrated its capacity to adapt to changes in the nature and distribution of power. Three basic factors account for such resilience—and demonstrate why the emphasis now should be on protecting and improving the order rather than planning for the aftermath of its demise. First, most of the world remains invested in major aspects of the order and still counts on the United States to operate at its center. The passing of U.S. dominance need not mean the end of U.S. leadership. That is, the United States may not be able to direct outcomes from a position of preeminent economic, political, and military influence, but it can still mobilize cooperation on shared challenges and shape consensus on key rules. In the years ahead, although Washington will not be the only destination for countries seeking capital, resources, or influence, it will remain the most important agenda-setter. Some context is important. The U.S.-led order was built at a unique moment, at the end of World War II. Europe’s and Asia’s erstwhile great powers were reduced to rubble, and a combination of dominance abroad and shared economic prosperity at home allowed the United States to serve as the architect and guarantor of a new order fashioned in its own image. It had not just the material power to shape rules and drive outcomes but also a model many other countries wanted to emulate. It used the opportunity to build an order that benefited itself as well as others, with clear advantages for populations at home and abroad. As the international relations scholar G. John Ikenberry has put it in this magazine, the resulting system was “hard to overturn and easy to join.” The end of the Cold War and the fall of the Soviet Union served to reinforce and extend American preeminence. This precise state of affairs was never going to last forever. Other powers would eventually rise, and the basic bargain would one day need to be revisited. That day has arrived, and the question now is, do other countries want a fundamentally different bargain or simply some adjustments? A comprehensive 2016 rand analysis found that few powers display an appetite for dismantling the international order or transforming it into something unrecognizable. And while Trump’s election has forced countries to contemplate a world without a central role for the United States, many still view the president as an aberration and not a new American normal, especially given that the United States has bounced back before. Even China has concluded that it largely benefits from the order’s continued operation. Around the time of Trump’s inauguration, breathless reports interpreted Chinese President Xi Jinping’s comments on an open international economy and climate change as indicators that China planned to somehow take over for the United States. But what Xi was really signaling was that China does not want near-term radical change in the global system, even as it seeks to gain more influence by taking advantage of the vacuum left by Trump. And to the extent that Beijing has set out to construct its own parallel institutions, particularly when it comes to trade and investment, thus far these institutions largely supplement the existing order rather than threatening to supplant it. Other emerging powers chafe at certain features of the order, and some seek a more prominent place in institutions such as the UN Security Council. Yet rhetorical flourishes aside, they, like China, talk in terms of reform rather than replacement—and their continued participation sends a similar message. For example, leaders of the major emerging powers eagerly accepted U.S. President Barack Obama’s invitation to join the first Nuclear Security Summit, in 2010; less eagerly but still willingly, they joined the global sanctions regime against Iran’s nuclear program. Richard Fontaine and Daniel Kliman of the Center for a New American Security quote a Brazilian official who captured a broader sentiment among emerging powers: “Brazil wants to expand its room in the house, not tear the house down.” And indeed, Brazil has taken on a leading role in defending important aspects of the order, such as the multistakeholder system for Internet governance. Emerging powers’ quest for a greater voice in regional and global institutions is not a repudiation of the order but evidence that they see increasing their participation as preferable to going a different way. FROM DOMINANCE TO LEADERSHIP The second factor accounting for the order’s resilience is that the United States has managed the transition from dominance to leadership more effectively than most appreciate. Over the past decade, U.S. diplomacy has facilitated a shift from formal, legal, top-down institutions to more practical, functional, and regional approaches to managing transnational issues—“coalitions of the willing” (in the real, non-Iraq-war sense of the term). This shift has not only expanded the prospects for shared problem solving; it has also made the rules-based order less rigid, and therefore more lasting. Consider climate change. Formal legal structures, such as the Kyoto Protocol, which failed largely because the United States refused to participate and emerging powers were exempt, have given way to less formal structures, such as the Paris climate accord. Unlike Kyoto, Paris achieved broad-based participation because its substantive commitments are voluntary and states have flexibility in how to meet them. It can survive a temporary U.S. withdrawal because other countries had already factored their targets into their national energy plans and because the United States can meet or exceed its own targets even without the help of Washington (points Brian Deese, a former climate adviser to Obama, has made in this magazine). On nuclear proliferation, formal Nuclear Nonproliferation Treaty review conferences have not advanced the ball on new legal norms. But during the negotiations that led to the Iran nuclear deal, the P5+1 (the five permanent members of the UN Security Council plus Germany) joined together to develop a rules-based plan to address a major global proliferation problem. The resulting agreement, the Joint Comprehensive Plan of Action, involved practical commitments from the negotiating parties but also incorporated key international institutions—the International Atomic Energy Agency and the Security Council—for oversight and enforcement. And although Trump may eventually withdraw from the agreement, the broad participation and buy-in that it achieved, and the fact that it is working as intended, have thus far constrained him from doing so, despite his claim that it is “the worst deal ever.” On trade and economics, although universal rule-making in the World Trade Organization has stalled, “plurilateral” and regional initiatives of various shapes and sizes have proliferated, from the East African Community to Latin America’s Pacific Alliance. The United States is not party to some of these platforms, but it has helped promote them with technical and diplomatic support. Viewed from this perspective, Beijing’s establishment of the Asian Infrastructure Investment Bank is largely in line with the “variable geometry” that the United States has encouraged. (Washington erred in resisting the AIIB rather than working to shape its standards.) And on global health, the World Health Organization has recognized the need for more flexible arrangements to deal with major health crises, including public-private partnerships, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria and Gavi, the Vaccine Alliance. Meanwhile, various emerging regional and subregional arrangements are playing larger roles in local problem solving. One could add other examples to the list, but the point is this: the overall trend toward practicality and flexibility, encouraged by the United States, has generated more resilience in the rules-based order. For one thing, more practical and flexible approaches are better suited to handle the diffuse and complex nature of transnational challenges today. For another, the rest of the world can continue to participate even when the United States pulls back. The new structures are designed to extract greater participation and contributions from a greater number of actors in a greater number of places—even when the most important of those actors temporarily relinquishes its leadership role. There is a concern about whether this trend will water down rules. But the record so far suggests this is not the case. For example, the 11 nations currently pursuing the Trans-Pacific Partnership without U.S. participation might produce a trade agreement with weaker labor or environmental provisions than those in the U.S.-brokered version, which the Trump administration withdrew from last year. But those provisions would still represent an improvement over existing rules, and a new baseline against which future rules would be measured. Nor is this broader trend mutually exclusive with action in the UN system. The rise of informal mechanisms of cooperation has not detracted from basic global standard-setting on issues such as civil aviation. To the contrary, the informal and the formal can be mutually reinforcing. Progress conceived in smaller formats outside the UN system can help catalyze universal action. BINDING TRUMP Finally, although Trump has created a temporary vacuum of global leadership and keeps raising questions about his basic fitness for office, he has thus far been unable to do the level of systemic damage in foreign affairs that he threatened on the campaign trail. He has—again, thus far—been constrained by Congress, by his own national security team, and by reality. Consider the U.S. alliance system, a central feature of the U.S.-led order. Trump continues to deride U.S. allies as free riders. But Washington’s policy toward its alliances in both Europe and Asia has been marked more by continuity than change. Trump’s advisers have helped ensure that, as have outside advocacy and congressional oversight. And European leaders have sought to sustain the alliance, despite their misgivings about Trump, by working around him. Similarly, whatever the administration’s desire to ease pressure on Russia for violations of Ukraine’s territorial integrity—a foundational norm of the rules-based order—Congress overwhelmingly approved new sanctions, tying Trump’s hands. (The administration subsequently surprised most observers by announcing that it would provide lethal assistance to Ukraine, a move pushed by top members of Trump’s national security team.) Perhaps most important, Trump has found that whatever his contempt for the rules-based order, he needs it. Here he follows a line of American politicians who have chafed at perceived limits on U.S. freedom of action but ultimately recognized that the order protects and advances U.S. interests. To counter North Korea, he needs both strong Asian alliances and a working relationship with Beijing (contrary to everything he said during the campaign). To defeat the Islamic State (also known as ISIS), he needs the allies and partners that made up the coalition, built during the Obama administration, that helped eject ISIS from Mosul and Raqqa. Trump has therefore been forced to embrace elements of the order he would rather dismiss. Trump’s own lack of focus has helped. The international relations expert Thomas Wright is correct to warn that “since World War II, the foreign policy of every administration has been defined by the character and opinions of its president,” not anybody else. And Trump’s worst impulses may yet win out, with disastrous consequences. But unlike his predecessors, Trump has displayed relatively little interest in translating his impulses into consistent policy actions. That can potentially allow the system around him, including voices outside government, to play a more powerful constraining role than usual. ORDER BEGINS AT HOME The system’s resilience should not be the end to a comforting story; it should be the starting point of a badly needed effort to reinforce and update the international order and address the real threats to its long-term viability. That must begin with the most serious challenge today: growing disillusionment with some of its core assumptions. This disillusionment has been stoked by forces of nativism and illiberalism, but it is rooted in the lived experience of many who have seen few promised benefits flow to them. The United States built the order on three foundational propositions: that economic openness and integration lead to greater and more widely shared prosperity; that political openness, democratization, and the protection of human rights lead to stronger, more just societies and more effective international cooperation; and that economic and political openness are mutually reinforcing. All three propositions are now contested. As the political scientists Jeff Colgan and Robert Keohane have argued in these pages, the link between globalization and shared prosperity is no longer clear. The current international economic system is “rigged,” in their telling, and a new set of rules is needed to better advance the interests of middle classes around the world. Meanwhile, a growing reaction in the West treats global integration as a threat to national identity and economic vitality. On the merits of the open political model, democracy is now on the defensive—from within, thanks to self-inflicted wounds and the gathering strength of populist political parties, and from without, thanks to what the National Endowment for Democracy calls the “sharp power” of authoritarian states, a mix of strategies to undermine political pluralism and open elections. Russian President Vladimir Putin’s interference in the U.S. presidential election likely helped secure Trump’s victory, and in the years ahead, Russian “active measures” and Chinese influence operations will continue seeking to destabilize democratic systems. And when it comes to the interaction between economic and political reform, the Chinese Communist Party has been trying to prove—including to receptive audiences in developing-world governments—that economic openness is perfectly compatible with a closed political system. Unlike the Soviet Union, which relatively few aspired to emulate, China offers what many see as an attractive alternative. Xi has described his country’s model as a “new option for other countries.” Audiences in Africa and Asia, and even some in Europe, are paying attention. These trends preceded Trump, and they are now being compounded by new threats to democracy, including a wholesale assault on the very idea of truth. But they are not irreversible. The year 1989 did not bring the end of history in one direction; neither did 2016 in the other. The liberal part of the rules-based international order has always been imperfect and will remain so. As Ikenberry has pointed out, the current order is actually a blend of the traditional Westphalian system (founded on state sovereignty) and a more liberal variant that emerged first with British hegemony in the nineteenth century and then deepened under U.S. leadership in the twentieth. This combination has always involved an uneasy balance between sovereignty and noninterference, on the one hand, and universal values and multilateral cooperation, on the other. A shift in emphasis toward the former does not spell the end of the entire order. The liberal part of the rules-based international order has always been imperfect and will remain so. Moreover, the developments of the past two years—Brexit, Trump’s election, the rise of right-wing parties in Europe, foreign interference in democratic politics—have served as a wake-up call. There are new and urgent conversations in Western democracies not just about how to resist pressure from abroad but also about how to address social andeconomic dislocations at home and the distributional consequences of globalization and automation. Whether this brings about a genuine recovery of strength for liberal democracy over time remains to be seen. But there are promising signs. Trump’s excesses have generated energetic efforts to push back against them. In Europe, the EU has proved more cohesive, and its economic foundation stronger, than most anticipated, and although populist movements continue to make some progress, they have also met considerable resistance (as the French far-right candidate Marine Le Pen discovered). Democratic nations have not lost the wherewithal to manage and alleviate the strains of authoritarian populism. If the West can succeed in restoring some of the appeal of the democratic model, the weaknesses and contradictions in the authoritarian model—which, after all, rests on the systematic suppression of basic human freedoms and is usually accompanied by debilitating corruption—will come back into sharper focus. In this regard, the major disconnect between Beijing’s outward projection of confidence and its deep insecurity at home is telling. Along with weaknesses within the West, the order is facing challenges from without, starting with renewed great-power competition. Indeed, the Trump administration’s National Security Strategy explicitly makes competition—in opposition to order—an organizing principle. It taunts previous administrations for seeing great powers as “benign actors and trustworthy partners” and assuming that “competition would give way to peaceful cooperation.” But the Trump team is wrong to frame this as an either-or proposition. As a prescriptive matter, abandoning the postwar order is a strange concession for a status quo power to make, since the order’s existence is a major competitive advantage. Defending it, and mobilizing its assets, is essential for contending with Russia and China. And as a predictive matter, it is by no means inevitable that great-power competition will upend the order in the foreseeable future. To understand why this is the case, it’s necessary to distinguish between the two primary great-power competitors. Russia under Putin does want to undermine U.S. leadership, as well as the cohesion of Washington’s democratic allies. But so far, the Kremlin has proved to be more of a spoiler than an existential threat. Yes, Putin brazenly violated Ukraine’s territorial integrity, but he was met with a common transatlantic response that kept him from pulling Kiev back into Moscow’s orbit, as well as with new NATO forward deployments to resist further Russian aggression. Yes, Putin’s intervention in Syria assisted Syrian President Bashar al-Assad’s butchery on an industrial scale and gave Russia a brokering role there, but that has not translated into a broader role as security manager for the region, and it likely never will. And on the global level, Russia simply does not have the power to decisively shift the course of international trade and investment regimes or scuttle multilateral efforts to deal with such challenges as climate change. That will be increasingly true going forward, given Russia’s fragile economy and unfavorable demographic trends. The United States has to avoid the trap of underestimating Putin, but also the temptation to overestimate him. China is a different story. It has far greater capacity to upend the global order—but will be cautious in attempting to do so in the near term. For all of Xi’s rhetoric, China cannot be expected to replace the United States at the center of a newly constituted order. As the China scholar David Shambaugh has noted, Beijing remains a “partial power.” Its basic global strategy has been to act, to borrow a phrase from the former U.S. official Robert Zoellick, as amended by Hillary Clinton as secretary of state, as a “selective stakeholder,” picking and choosing which responsibilities to take on based on a narrow cost-benefit analysis. This strategy proceeds from the assumption that the United States will remain the burden bearer of last resort. China will clearly seek greater influence in the operation and evolution of the order. Other emerging powers will, too. That will require adjustments by both the United States and emerging powers, but not something fundamentally new. That still leaves the question of whether China’s competitive posture in its region will over time translate into a more fundamental global challenge—especially if Beijing succeeds in building a sphere of influence in East Asia. That China aims to change the balance of power in Asia, reducing the United States’ role and increasing its own, is evident in its military buildup, its activities in the South China Sea, its coercive economic diplomacy, and the expansion of its influence through such efforts as the Belt and Road Initiative. And the Trump administration is helping in this cause, by neglecting Asian security and economic institutions. But the United States and its partners have plenty of cards to play. The demand for an enduring U.S. presence in Asia, from key treaty allies and others resistant to Chinese hegemony, will likely block any aspirations Beijing has for an Asian Monroe Doctrine, or anything close to it. Even in areas where China has made significant strides, such as the South China Sea, the United States and its partners still have the capacity to protect regional prerogatives and global norms such as freedom of navigation and unimpeded lawful commerce. Ultimately, a return to an effective Asia strategy, anchored in Washington’s historical alliances and contemporary partnerships, could sustain the U.S. role in Asia and manage regional competition while promoting global cooperation with Beijing. Finally, the paroxysms of violence across the arc of instability from North Africa to South Asia have led some observers to conclude that disorder in the Middle East could threaten the entire global order. But Middle Eastern instability has been a feature, not a bug, of the system since the fall of the Ottoman Empire after World War I. In just one 30-year stretch—the period from the early 1970s to the first decade of this century—the region saw the Yom Kippur War, the Lebanese civil war, the Iranian Revolution, the dawn of the modern age of terrorism with the siege of Mecca, the Soviet invasion of Afghanistan, the Iran-Iraq War, the first Lebanon war, two Palestinian intifadas, the Persian Gulf War, the war in Iraq, and a Yemeni civil war. Today, it is true that the combination of weak state structures, violent ideologies, and Iranian-Saudi competition has transformed a number of local conflicts into a regional crisis. In addition to the horrific human toll, this has had the spillover effects of sending refugees flowing to Europe and inspiring jihadist attacks across the West. At the same time, the United States is no longer as willing or able to play the external role it played before, for reasons relating to both the supply side (reduced U.S. willingness to invest resources, especially troops) and the demand side (reduced regional enthusiasm for U.S. involvement). Yet the roiling waters of the Middle East have not swamped the whole system. U.S.-led efforts against ISIS have rolled back the biggest threat to the international community, the existence of a terrorist state in the heart of the Middle East. Europe is learning to manage the refugee crisis. And despite Tehran’s advances on several fronts, the basic power politics of the region tilt toward the eventual emergence of an uneasy, sometimes messy balance between Iran and its proxies on one side and a Saudi-led Sunni bloc on the other. Effective statecraft can help manage, contain, and reduce regional instability over time. A WINDOW OF OPPORTUNITY None of this is an argument for complacency. In Washington, checking Trump’s destructive instincts requires constant work, which will only get harder as he looks more often to the global stage to score points. And the internal constraints often come down to a few individuals who could easily be replaced by less responsible voices. Internationally, the difficulties are accelerating, not abating, among them the technology-driven challenge to state supremacy itself. The resilience of the rules-based order offers just a window of opportunity to get things right. It will eventually close. Many of the most crucial steps require that the United States get its own house in order, which would create more fertile ground for consensus building on national security. But there is also a clear task for foreign policy leaders, in both parties: to strengthen and adapt the postwar international order so that it responds to current needs and reflects new realities but still secures a central U.S. role. That will require new ideas and productive advocacy to ensure that globalization delivers more widely shared prosperity. It will require effectively managing strategic competition with Russia and China by protecting U.S. prerogatives without descending into all-consuming rivalry or outright conflict. And it will require convincing governments and citizens around the world that in spite of the current president, a strong majority of Americans remain committed to working closely with other nations to secure shared interests through common action and rules. A temporary American absence is survivable; sustained American absence is not. In the long run, the international order will still need leadership, even in the best-developed areas of international cooperation. Who is going to make sure that countries increase their emissions reductions under the Paris accord when the next round of pledges comes in 2023? Who is going to pull the world powers together to execute a follow-on agreement to the Iran nuclear deal? American leadership is even more critical in emerging areas where the rules have not yet been developed or where previous solutions no longer work. How will updated trade and investment arrangements account for the endurance of state-managed economies, the changing nature of work, and rising income inequality? What should be done to counter trends in state fragility that could lead to even more profound migration flows in the future? What new norms will govern cyberspace and artificial intelligence? The world cannot count on undifferentiated collective action. Nor can it count on China, which has neither the instincts nor the inclination to take on such a role in the foreseeable future. The United States is the only country with the sufficient reach and resolve, and something else as well: a historical willingness to trade short-term benefits for long-term influence. It has been uniquely prepared to accept a leadership role of an international order in which it feels as though the maxim from Thucydides’ famous Melian Dialogue is often inverted: the strong suffer what they must and the weak do what they can. All of this underscores the United States’ window of opportunity. Taking advantage of this window does require getting past the current presidency, which is why Trump must not be handed another term. The difference between one and two terms of Trump might not be 1x versus 2x, but more like 1x versus 10x. For one thing, Obama needed two terms to get to the ideas he campaigned on in 2008, and if the same proves true for Trump, his second term could be cataclysmic. For another, his reelection would confirm that Trumpism is in fact the new normal in the United States, not an aberration, causing other countries to take more decisive steps to rearrange their relationships and commitments. It would be an especially severe blow to the long-term health of U.S. alliances; many of the United States’ friends would more seriously contemplate following through on German Chancellor Angela Merkel’s comment about going their own way. On the other hand, the election of a new president in 2020 would say something quite different—and allow the United States to resume its leadership role. The U.S. foreign policy community should prepare for this world after Trump. It is tempting to conclude that all hope is lost. That conclusion, however, is not only unproductive; it is also wrong. In every dimension—from technology to security, development to diplomacy, economic dynamism to human capital—the United States’ advantages are still significant. The opportunity remains to reconstitute the old consensus on new terms.

### ---Oil Prices Decrease

#### Speculation magnifies the link – lowering demand would set off a price collapse

Bayer 12 (Alexei, Head of KAFAN FX Information Services, New York based economist, July 26, "Pop That Bubble Policies should aim at pushing oil prices down"<http://www.advisorone.com/2012/07/26/pop-that-bubble?page=3>) TR

Demand for oil, then, is softening because the global economy is weakening and consumers are reducing their oil use on a more lasting basis, even as greater supply is coming on line, from projects begun before 2008 and from producers eager to protect their market shares. Oil prices are set by futures markets and therefore fluctuate with traders’ psychology, speculation and liquidity. That means oil prices **tend to** overshoot. Just as they rocketed prior to 2008 and again in early 2012, driven by rising demand as well as various political concerns and fears, so a softening demand could push oileven below itslong-term inflation-adjusted equilibriumprice range of around $20-40 per barrel.

### ---Oil Prices Increase

#### Supply pressures increase the price of oil – empirically verified.

**Groen 13:** [Jan Groen, Kevin McNeil, and Menno Middeldorp. March 25, 2013. Jan Groen is an officer in the New York Fed’s Research and Statistics Group. Kevin McNeil is a trader/analyst in the New York Fed’s Markets Group. Menno Middeldorp is an economist in the Markets Group. “A New Approach for Identifying Demand and Supply Shocks in the Oil Market” Liberty Street Economics]

We can also consider the effect on oil prices from the risk of future supply constraints or the expectation of future economic growth. For example, supply concerns about Iran’s nuclear program probably contributed to higher prices even before the United States and the European Union imposed an oil embargo. Similarly, volatility in the price of oil during the Great Recession was attributed to rapidly changing expectations about demand. Partial least squares (PLS) is a technique we use to construct linear combinations of the variables in our financial market data set—called factors—which have maximum explanatory content for oil-price changes. We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine if they resemble a demand or supply shock. Using data from 1995 onwards, we extract the factors from monthly oil-price changes and seventy-four time series in the categories listed in the table below. The order of the factors reflects how well they fit the data. We want to use a few factors to explain most of the variation in the data. The results from regressing these factors on oil-price changes reveal that the first two factors can explain 65 percent of the variation (R-squared), with the first four explaining 81 percent (see chart below). Additional factors didn’t increase explanatory power notably. The four factors are identified as two demand and two supply shocks, with the identification achieved in three stages. First, we examine the correlations of the factors with our data to see if they match the expected patterns. Second, we check the factors against other measures that are likely related to supply or demand shocks. Third, we compare the factors with an oil-price decomposition constructed by other researchers using a different technique. The table summarizes pair-wise correlations between the factors and the underlying data series. In the case of the first and second factors, the observed direction of the correlations closely matches the earlier described expected pattern for a demand and supply shock (reflected in the table by the light green shading). The third and fourth factors show a less clear match, with either weak or mixed correlations (reflected by the “o” marks) within the categories or correlations inconsistent with the identified shock (reflected by the dark red shading). We check our interpretation by running regressions between the factors and several indicators related to global economic growth, oil-market supply, and global risk perception. Our demand factors are significantly related to the OECD leading indicators for the G-7 countries and China. The second factor—the main supply factor—is significantly related to reported OPEC spare capacity and the Economic Intelligence Unit’s political risk indices for Middle East and Northern African countries (weighted by their oil production). Finally, both supply factors are negatively correlated with VIX S&P 500 option volatility, often called the “fear index,” fitting the notion that a supply shock is bad news for the global economy. We also confirm our interpretation by comparing our decomposition with that in a paper by Juvenal and Petrella (2011). Our demand factors together show a pattern similar to the oil-price history the authors attribute to “global demand” (see left chart below). Furthermore, our supply factors match much of the oil-price changes they identify as arising from “global supply,” “inventory,” or “speculative” forces (see right chart). Our decomposition of the price of oil is shown in the next chart, which represents cumulative changes since January 1995, not the actual level of the price of oil. The estimated changes fit the actual changes well. The decomposition also matches conventional interpretations of conditions in the oil market. The 1990s were generally seen as a period of excess oil supply. The next decade shows a rise in global demand, eventually reaching the limits of supply in 2007. Prices then fell dramatically, as demand declined due to the global contraction during the financial crisis and consequently supply became less constrained. Demand again increased during the global recovery. Supply pressures re-emerged, with both feared and actual supply disruptions around the “Arab Spring,” especially with the shutdown of Libyan production and increased tension regarding Iran’s nuclear program. Since that time, Iran’s oil exports have been embargoed, while Libyan production has returned to near-normal levels; Iraqi production has increased meaningfully, and Saudi Arabia has kept its production elevated, serving to temper the effect of supply constraints on oil prices. In conclusion, our analysis helps identify the 1990s as a period of excess supply in the oil market, and the 2000-09 period as one in which demand factors were dominant. More recently, supply pressures appeared again as major oil-price determinants.

### ---Low Prices Bad

#### Low oil prices cause global conflict.

Politico 16 (1/21, Article interviewing numerous energy and environmental exports. Evidence presented here contains quotes from John McLaughlin, distinguished practitioner-in-residence at Johns Hopkins University at the Paul H. Nitze School of Advanced International Studies, Ian Bremmer, president of the Eurasia Group, and Terry Lynn Karl is professor of Political Science at Stanford University and author of The Paradox of Plenty: Oil Booms and Petrostates, “The Hidden Consequences of the Oil Crash”, <http://www.politico.com/magazine/story/2016/01/oil-crash-hidden-consequences-213550)> TR

Oil prices drive not just economics, but geopolitics. Alliances rise and fall over petroleum. Expensive oil props up governments in Russia and Iran, provides stability in Middle Eastern countries and also offers a revenue stream to extremist groups in Nigeria and Iraq. Domestically, high-priced oil spurs innovation in alternative energy; it has also driven America’s shale boom. For all these reasons and more, the collapsing value of oil will have profound consequences around the world, with the potential to destabilize regimes, remake regions and alter the global economy in lasting and unforeseen ways. So as the global markets process the uncertainty ahead, Politico Magazine asked a panel of leading experts on energy, economics and geopolitics to tell us: As we cheer for cheap gas, what aftershocks should we be bracing for? \*\*\* ‘The oil price drop will be one of the pivotal issues of 2016, and probably beyond’ John McLaughlin is distinguished practitioner-in-residence at Johns Hopkins University at the Paul H. Nitze School of Advanced International Studies The oil price drop will be one of the pivotal issues of 2016, and probably beyond. Oil prices are notoriously hard to predict, but every indication is that they will not go up markedly, and may drop further. Countries (like Saudi Arabia) that were once able to manipulate prices with OPEC agreements have lost that ability in part because counterparts—especially those already in deep trouble (Venezuela), or those coming back online (Iran)—want to chase market share by pumping freely. Moreover, if a major producer looks for supply-cutting allies outside OPEC, they will trigger a catch-22 phenomenon: If prices go up, it will re-energize U.S. shale entrepreneurs, who have cut back investments due to low oil prices, but who are agile enough to reenter the market quickly—pushing production back up and limiting the impact of restraint elsewhere. The political impact is likely to be strongest among countries, especially in the Persian Gulf, that have invested billions in social programs and subsidies to discourage Arab Spring-like protests. And in Russia, which needs oil prices north of $100 per barrel to meet its budget projections, the time-honored response to economic hardship is to mobilize nationalist sentiment with foreign adventures, one of the multiple motives for Putin’s plunge into Syria. \*\*\* ‘What keeps the Middle East’s countries together … when the oil money runs out?’ Ian Bremmer is president of the Eurasia Group Geopolitically, the impact of low oil prices is concentrated in the Middle East, where political structures are brittle and based on oil wealth-supported patronage. Across the region, there are immediate and direct security threats without any social, political or economic reform processes in place to address the challenges these regimes face from the inside. What keeps these countries together—as well as those that rely on them for support—when the oil money runs out? The United States, China and Japan, the world’s three largest economies, benefit mightily from being far away from those tensions. Europe, not so much. \*\*\* It could become ‘the mother of all oil crises’ Gal Luft is co-director of the Institute for the Analysis of Global Security High gas prices dominated the past three presidential elections, and encouraged politicians to address one of America’s most notable vulnerabilities: the dependence on oil as the sole source of energy powering our transportation sector. But with the collapse of oil prices, this dependency has become a non-issue, and America’s commitment to wean itself from petroleum has gone by the wayside. We have been here before: The response to the oil crises of the late 1970s (increased oil production worldwide and enhanced energy efficiency) caused prices to fall in the subsequent decade. The party didn’t last for long. Between 1998 and 2008, oil prices rose seven-fold, triggering the Great Recession. This might happen again if the global economy snaps back from its stagnation. As long as the global transportation sector—cars, trucks, ships, planes—is married to oil, and as long as most of the world’s conventional crude reserves are in the hands of repressive regimes, it’s only a matter of time before prices head back to triple digits. Just like the perfect storm of price-depressing factors that brought us to the current ebb, the current situation in the oil market holds the seeds of what could become the mother of all oil crises. If we veer away from trying to open the transportation sector to fuels made from resources other than oil, the party will end with a bad hangover. \*\*\* ‘Now is the time for presidential candidates to tell us what they intend to do when oil prices go back up’ T. Boone Pickens is chairman and CEO of BP Capital and architect of the Pickens Plan, an energy plan for America I have been through boom-and-bust cycles in the oil and gas industry all my life. Each one has had one thing in common: Because no political leader had the foresight to enact an energy plan when prices were reasonable, when prices went too high or low, there was surprise and distress. The Saudis are risking everything on their misguided attempt to destroy America’s shale oil and gas industry. We have shut down thousands of rigs and shed 200,000 jobs. New investment is non-existent and nations around the world—from the Middle East to Central America, whose economies are wholly dependent on oil exports—are on the brink of economic collapse. It doesn’t matter whether oil bottoms out at $29 or $27 a barrel. What matters is that, for the first time in a half-century, we look over the horizon and plan for the day when supplies begin to thin, when economies begin to recover and when oil prices begin to move back up. Now is the time for presidential candidates to tell us what they intend to do when oil prices go back up, probably very quickly. Waiting until that happens and responding with shock and a demand for congressional hearings is just not enough. It’s always good to have a plan. How about we start with a North American Energy Alliance? \*\*\* The dip ‘may help strengthen the long-term prospects of alternative energy’ Dan Esty is Hillhouse professor at Yale University Many energy market experts see $30 barrels of oil as a threat to clean energy investments, particularly renewable power projects. But this conclusion reflects too narrow a view of the world. Just as today’s low oil price is a function of the forces of supply and demand at a particular moment in time, the market for renewable power has various supply and demand pressures that shape the flow of investment into wind power, solar arrays and other kinds of alternative energy. Thus, while a low oil price raises the bar on what it will take to make a renewable power project cost-effective in the coming years, the December 2015 Paris Agreement on climate change offers a dramatic countervailing signal to clean-energy markets, promising a dramatic increase in the demand for clean energy over coming decades. As a result, investment in renewable power remains robust. In fact, the likely short-term drop in fossil fuel costs may help strengthen the long-term prospects of alternative energy. If the developers of wind, solar and other alternative energy projects are forced to cut costs, their technologies will be more cost-competitive over time. When you hear that cheap oil sounds the death knell for clean energy, don’t bet on it. \*\*\* ‘Good for American consumers and U.S. foreign policy’ John Deutch is an emeritus Institute professor at the Massachusetts Institute of Technology Massively lower oil and gas prices are good for American consumers and U.S. foreign policy. That will be true for as long as the prices last, which will likely be one or two more years, doubtfully for five years, and almost certainly not for a decade. But the low prices have a cost, too, and the stresses they cause are not hidden: Increased consumption of carbon-emitting fossil fuels, lower profits for private oil companies, major challenges for firms seeking to introduce clean-energy technologies and economic difficulties for major resource holders account for just some of the strain. Some countries most affected by the low price of oil—Russia, Saudi Arabia and Venezuela, most notably—may face political instability as a result. It is difficult to predict whether those changes will lead to political shifts to the left or right, but they’re unlikely to affect the flow of oil and gas to world markets. \*\*\* These prices ‘spell the downfall of frail governments’ Terry Lynn Karl is professor of Political Science at Stanford University and author of The Paradox of Plenty: Oil Booms and Petrostates Brace yourself for another stomach-churning ride. While predicting changes in the price of oil is a fool’s errand, at least two volatile scenarios lie ahead, and neither is promising. On the one hand, oil prices are likely to stay unacceptably low through 2016. On the other, today’s bust is likely to lay the basis for a sharp price spike down the road. Today’s oil glut is different from those of the past: It is due to the near-doubling of U.S. production of shale oil since 2009, as well as the response of Saudi Arabia and other petroleum exporters to this unwelcome competition. In the short term, the lifting of sanctions against Iranian oil will not help. While prices in the $20-30 per barrel range were once considered beneficial to the economy and the stock market, this is no longer the case. Low prices have led to painful budget cuts in North Dakota, Texas, Louisiana, New Mexico, Alaska and California; a $300 billion decline in capital investment in future extraction this year alone; the bankruptcies of dozens of energy companies; and the undercutting of incentives to build alternative clean energy. Most immediately, low prices are a catalyst for the rise in global conflict. Cheap oil translates into huge revenue losses and increased poverty, especially for Russia, Brazil and Mexico but also for Canada. In the 10 OPEC countries where oil comprises more than 85 percent of export revenue, the consequences are especially dire. Where regime stability rests on a classic “oil pact” (that is, the provision of economic benefits to key constituencies in exchange for political support or, at least, passivity), low prices create a toxic mix of weak currencies, inflation, growing debt, budget and trade deficits, rising food prices, cuts in essential services and soaring poverty. Such a grim prognosis traditionally spells the downfall of fragile governments—and, sometimes, even regimes that appear stable. In Venezuela, which is already in a constitutional crisis, this year’s projected 10 percent economic contraction will plunge its extremely polarized population into even more intense civil conflict. The already dangerous situation in the Middle East and North Africa will be intensified. Because national boundaries in that region are not resolved and political institutions are crumbling, the grim economic forecast for oil-exporting governments makes them less capable of appeasing their populations or securing their oil facilities and pipelines in the face of vicious insurgencies. The Islamic State, for example, lives off the earnings from oil fields in Syria and Iraq, and similar dynamics fund Boko Haram in Nigeria and al Qaeda affiliates in Central Asia and the Caucasus. Ironically, one likely impact of this oil glut is a future price spike. Despite all the current hype, only a relatively thin margin separates surplus from shortage. Global crude oil production has already dropped substantially, with U.S production falling to 2008 levels. The delayed actions of major producers like Chevron and ExxonMobil, which are holding off planned large-scale oil projects—and, hence, millions of barrels of future supply—has the potential to fuel a surge in prices as early as next year. And widespread conflict in oil regions—exacerbated by low and unstable oil prices—could significantly disrupt supply at almost any time. Oil-related violence underlies almost all of today’s major hotspots, even those conflicts that appear solely ethnic or religious in nature, including the Syrian Civil War and its spillover into Iraq, growing tensions between Iran and Saudi Arabia, and the continued civil unrest in Yemen, Afghanistan, South Sudan, Nigeria, Algeria, Somalia, Libya and the Sahel, Russia and the Ukraine and Venezuela, to name a few. Many of these governments—including, notably, Russia and Saudi Arabia—have every incentive to take aggressive nationalist political action abroad to deflect attention from deteriorating economic conditions at home.

### 1AR---Elections

#### 1] Non uq – Trump has a gaping lead on betting cites.

SBD updated 9-13 (“2020 US Presidential Election Odds Tracker: SBD.” Sports Betting Dime, 13 Sept. 2019, [www.sportsbettingdime.com/politics/us-presidential-election-odds/. [The page is an online information page that continuously updates – when I accessed it, it had been last updated 9-13-19])//LK](http://www.sportsbettingdime.com/politics/us-presidential-election-odds/.%20%5bThe%20page%20is%20an%20online%20information%20page%20that%20continuously%20updates%20–%20when%20I%20accessed%20it,%20it%20had%20been%20last%20updated%209-13-19%5d)//LK) [Accessed 9/19/19]

Despite his many scathing scandals and controversies, Trump somehow remains the overwhelming favorite to win the next US Presidential election in 2020. The Donald’s current average odds of +110 are 990 points better than his next closest competitor. That isn’t just a gap – it’s yawning chasm – and it could get even wider unless something changes soon.¶ Sep. 13, 2019: Not much change at the top. Trump remains at -110 while Democratic frontrunner Elizabeth Warren is still +370 to be the next POTUS.

#### Prefer bets – most predictive

Holden 19 (Holden, Richard. “Vital Signs: for the Best Election Predictions, Look to the Betting Markets, Not the Opinion Polls.” The Conversation, May 17. 2019, theconversation.com/vital-signs-for-the-best-election-predictions-look-to-the-betting-markets-not-the-opinion-polls-117076.)//LK [Accessed 9/17/19]

Polls failed to foresee the Brexit decision, and suggested Hillary Clinton would be elected president of the United States in 2016.¶ There’s good reason to think polls now have a harder time predicting election outcomes than in the past.¶ They rely on a representative sample of voters, since it is a basic fact that certain demographic groups are more likely to vote one way or the other.¶ For instance, if you are polling Australian voters and get a lot of 65-year-old self-funded retirees in your sample, you are going to overweight the Liberal Party vote. Get a lot of 20-year-old university students in your sample and the poll will tell you the Greens are set to become Australia’s largest political party.¶ The trouble is that technology has made it harder to poll.¶ It used to be the case that pretty much everyone had a landline phone and a fairly representative sample of folks would answer when the polling firm called at 6pm.¶ Not any more. The people who are not on the national do-not-call registry and willing to spend 10 minutes at 6pm answering the questions of a stranger about politics are not a representative cross-section of the electorate.¶ Lots of young people only have a mobile phone. Plenty of others are unwilling or unable to spend time answering a polling firm’s questions.¶ What pollsters do in response is weight the answers they do get. They know they’re getting a lot of older folks, for example, so they weight the responses of younger respondents to try to even things out.¶ This creates even more statistical problems because the legimitate margin of error of a poll goes up with this reweighting. Highly reputable pollsters adjust for this and report it, but not all do.¶ In money we trust¶ This is where another piece of internet-enabled magic enters the picture: prediction markets (aka online bookies).¶ Instead of just asking people what they are going to do, one can create a market where people can put their money where their opinions are. Economists like these sort of things because we are generally sceptical that people will just tell you the truth. We are generally confident about results when there’s money at stake.¶ The basic idea is as follows. Think of a “security” that you can buy or sell (it’s actually called an “Arrow Security” after the famous economist Kenneth Arrow). It pays $1 if an event occurs, and nothing if it does not. The event could, for example, be Donald Trump getting re-elected president of the United States in 2020.¶ Because this security is traded on a market, supply and demand will lead to an “equilibrium” price that balances different valuations of the security. At the extreme ends will be those that think it is worth a $1 and those who think it worthless. In between are people considering probabilities, some thinking the price should be higher and others lower.¶ If the security trades at 50 cents the market is saying there is a 50% chance Trump will be re-elected. If you have information that leads you to believe Trump has a higher chance than 50%, you could buy the security and make money in expectation.¶ The key is that if you buy it you help drive up the price. In doing so, your information is incorporated into the market price. Call it “the wisdom of crowds” – or, to really impress people at your next dinner party, “a fully revealing rational expectations equilibrium”.¶ For a more extended discussion of prediction markets and how they have been used in a wide range of contexts see this terrific paper.¶ The markets have spoken¶ What are betting markets saying about the May 18 Australian federal election? They’re saying Labor has a roughly 85% chance of winning, and the Coalition about 15%.¶ Some of the seat-by-seat markets are even more striking. Plenty of commentators think Wentworth, in which independent Kerryn Phelps is pitted against Liberal Dave Sharma, is a toss-up. The betting markets think Sharma has a 90% chance of winning.¶ Odds from a well-known sports-betting website on Friday afternoon, May 17, 2019. The Conversation¶ Now, markets aren’t always efficient and market prices don’t always perfectly reflect or “aggregate” all available information.¶ One particular concern is manipulation. If people use the market prices to make important decisions then unscrupulous actors might be prepared to lose money on the bet to influence the decision.¶ Another consideration is that there might not be much money at stake. Is anyone putting $1 million on the outcome of individual seats such as Capricornia or Corangamite? No. So-called “thin markets” tend not to be very informationally efficient.¶ In fact, when economists started getting all excited about these prediction markets I was pretty sceptical about their efficiency and concerned about their potential to be manipulated.¶ But the data have spoken.¶ It turns out these markets are really pretty good predictors on average. A security that trades at 70 cents pays out about 70% of the time on average. There is what financial economists call “excess volatility”, but if you want the best predictor of an election outcome, look at the markets, not the polls.

#### 2] Impact Turn – Trump’s 2020 loss causes lashout and nuclear conflict

Mindock 6-16 Clark Mindock, 6-16-2019, "'It would ultimately come down to the use of force': What would happen if Trump refused to leave office after 2020 loss?", Independent, https://www.independent.co.uk/news/world/americas/us-politics/trump-impeachment-refuse-leave-office-nixon-cohen-white-house-a8814991.html, Accessed on 9-17-2019 // JPark

Roughly seven hours into his congressional testimony in March, Donald Trump’s former lawyer Michael Cohen delivered a grave warning for the future of American democracy if the president does not get his way in the 2020 election. While many during the Trump presidency have wondered if he might be impeached and removed from office during his first term, Cohen had a different concern. Like a rude house guest with the nuclear codes at his disposal, Cohen worried that the celebrity businessman-turned-president may just refuse to let go of the keys to the White House, even if he is not re-elected. “Given my experience working for Mr Trump, I fear that if he loses the election in 2020 there will never be a peaceful transition of power,” Cohen said. The remarks received about as much reaction from the room as a later Saturday Night Live parody of Cohen’s testimony in which he called Mr Trump racist. Which is to say, basically none. But, it is a sentiment shared by the likes of House speaker Nancy Pelosi, who told The New York Times last week that she is preparing for just that situation. “We have to inoculate against that, we have to be prepared for that,” Ms Pelosi said. While Cohen’s concerns were largely disregarded, it was notable that Cohen should raise the question of what happens if the president of the United States refuses to leave office after losing an election. Could such a thing ever come to pass? Experts interviewed on the possibility for this article said there is no real playbook for the scenario. Like, perhaps, the Trump administration itself, the United States would be in uncharted territory. On previous occasions in the history of the United States, when the presidency was in any way contested, cooler heads have prevailed in the interest of the peaceful transfer of power. Richard Nixon conceded to John F Kennedy in 1960 amid several accusations of vote rigging for the Democrat, for instance. Vice president Al Gore accepted the Supreme Court’s ruling that George Bush had won the 2000 presidential election even though there were significant questions about the integrity of the results in Florida. Paul Quirk, a professor of political science at the University of British Columbia, says he has not given the issue a great deal of thought because it is such an outlier, but that the most likely moment of dispute would come between election day in November and January, when presidents are sworn in. “If Trump decided that the election was illegitimate, and he was going to resist actually leaving office, he would – I don’t know whether he would try to arrest his opponent and stop them from appearing to take over the office, or whether he would just say on January 21, ‘I’m not leaving’,” Mr Quirk says. “At some point, the question would become: whose orders do law enforcement obey? Because it would ultimately become a matter of the use of force in one direction or another.” Support free-thinking journalism and subscribe to Independent Minds The US constitution makes no mention of how a president should be removed if they lose an election and refuse to hand over power to their opponent. So, it is hard to say if anyone would have the appetite to send the FBI, or navy seals, or whatever law enforcement agency, storming into the West Wing to arrest a recently defeated Donald Trump.

#### 3] Trump 2020 key to avoid nuclear war with North Korea

Stephen Collinson 7/1, reporter for CNN Politics covering the White House, and politics across the United States and around the world, 7-1-2019, "Trump's North Korean gambit is already a political win," CNN, <https://www.cnn.com/2019/07/01/politics/donald-trump-kim-jong-un-north-korea-diplomacy-2020-election/index.html>

Donald Trump's walk into North Korea can best be explained through the lens of the 2020 election. If history is to remember one of the most audacious photo ops in American diplomacy as anything more than a stunt, the President must now produce breakthroughs from his friendship with the brutal dictator Kim Jong Un. Yet even if that progress is slow to emerge, Trump can still chalk up a valuable political win that will underscore how his foreign policy is often directed by his electoral priorities. He can use his singular televised moment to bolster his claims to be a statesman and a peacemaker. And it's not just about winning the Nobel Prize that the President believes he deserves for forging an opening with one of the most despotic regimes in modern history. Trump also has a vital political interest in keeping alive the idea that he personally headed off war with North Korea and that historic progress is possible as he runs for reelection. His meeting with Kim is a centerpiece of the "peace and prosperity" platform on which he plans to anchor his bid for a second term and to use to rise above his Democratic rivals. Trump will be praised by conservative media and the reality of US-North Korea relations will be glossed over, all in the service of his 2020 campaign. The political significance of Sunday's eye-popping encounter was revealed in the quick condemnations offered by Democratic presidential candidates seeking to deny him a political win. Massachusetts Sen. Elizabeth Warren tweeted that Trump shouldn't be "squandering American influence on photo ops and exchanging love letters with a ruthless dictator." A spokesman for Democratic front-runner Joe Biden accused Trump of "coddling" dictators at the "expense of American national security." Sen. Kamala Harris tweeted that Trump should take North Korea's nuclear threat and its "crimes against humanity seriously." But politics is often shaped more by perception than reality. And the North Korean summit is an example of how Trump can use the office of the presidency to his own benefit ahead of 2020. He has every incentive to keep on engaging Kim perhaps even with an election year visit to the White House, even if the North Koreans refuse to give up their nuclear program. And Trump, by becoming the first sitting President to step into North Korea, also outdid his predecessors, some of whom simply climbed atop the border wall and peered over the other side into the isolated state. The stunning imagery that unfolded at the demilitarized zone between the rival Koreas -- the world's last Cold War border -- will shortly be making its way into Trump campaign ads. On that score alone, it's mission accomplished. But even the President acknowledges that without a significant follow up, his encounter with Kim will not realize its promise. "This was a very legendary, very historic day," Trump told reporters after meeting Kim. But he added: "It'll be even more historic if something comes out of it." For all his effusive praise of his own initiative and his odd friendship with Kim, Trump cannot point to fundamental changes in North Korean behavior that are at the root of the standoff. Since meeting Trump at their first summit in Singapore last year, Kim has done nothing to live up to Pyongyang's undertaking to "work toward complete denuclearization of the Korean Peninsula." That refusal to budge was behind the failure of the second Trump-Kim summit in Hanoi in February. Though it has suspended nuclear and long-range missile tests, US intelligence and analysts believe that the North is still manufacturing the materials needed to add to its already considerable nuclear arsenal. "It is positive, certainly that after four months of little to no contact between North Korea and the Americans that they are in touch again," said Jean Lee, director of the Center for Korean History and Public Policy at the Wilson Center. "However, will it get North Korea to the place where they are willing to give up elements of their nuclear program, partially or completely to ensure peace in the region?" "I don't know — this is a risky move," Lee said on CNN. Legitimizing a tyrant Critics of Trump's approach argue that he has already ceded huge propaganda concessions to Kim by agreeing to repeated meetings without securing even an inventory of North Korean weapons that will be the first step to a genuine diplomatic process. They believe that Kim is merely exploiting the President's vanity and desperation for personal political successes to win international acceptance. Trump has certainly legitimized a man who presides over a horrific regime that maintains concentration camps, crushes individual freedoms, exists in a cult of personality and sometimes executes his opponents. But no other President in recent years has managed to make irreversible progress toward eliminating North Korea's nuclear program. The New York Times reported on Sunday night that the administration may try to unpick the deadlock with an approach that would amount to freezing North Korea's nuclear program in place. The move would cause huge controversy because it would essentially accept the North as a nuclear power -- a climbdown from the administration's previous position. And Pyongyang's program is much more advanced than Iran's was. It would also expose the Trump White House to accusations of hypocrisy, since the President pulled out of a similar deal with Iran negotiated by the Obama administration. In a cycle of escalation that followed the President's withdrawal, Iran's state-run IRNA news outlet said Monday that Tehran's stockpiles of low enriched uranium now exceeded the 300 kilogram limit set by the deal. There is an argument that Trump's radically different approach is worth a try even if there is no indication yet that Kim is sincere about handing over weapons which are the ultimate guarantee of his regime's capacity to stay in power. Foreign policy traditionalists argue that meetings with Kim should be the last step on the diplomatic process — to formally endorse an agreement, not the first step. As it stands, Kim and Trump agreed to task lower level officials to reopen talks that have yet to progress despite the previous summits. North Koreans are notoriously formidable negotiating partners who typically push for US concessions to get an agreement while balking at or cheating on their own commitments. The President argues that his decision to meet a leader from a state that has been technically in a state of war with the US for nearly 70 years is in itself a breakthrough. "This is, I think, really ... this is a historic moment, the fact that we're meeting," Trump told Kim on Sunday. There was a danger that after the failed Hanoi summit, Washington and Pyongyang could return to open confrontation and that the risk of war would again increase. So there are benefits to a personal connection between Trump and Kim, however distasteful it may appear. But symbolism does not mask the lack of real progress. In fact, the American side still does not have a good fix on whether Kim really is serious in giving up his nuclear weapons — or is simply trawling for concessions from the US. Trump has layered praise on North Korea for the rudimentary steps it has taken so far. They include returning remains of US servicemen killed in the 1950-53 Korean War and the suspension of ballistic missile tests designed to weaponize a nuclear device that could reliably reach the US mainland. The North Koreans had similar steps in earlier diplomatic dances with US Presidents and not ultimately gone on to verifiably halt their nuclear programs. But this time, the political calendar and Trump's approach could give grounds for optimism. Kim, who has presided over a limited form of economic development inside North Korea, is under pressure to deliver improvements in the lives of his people — even if he has no intention of loosening his iron grip on political dissent. So he has an incentive to try to seek economic benefits or aid from the United States and wants punishing economic sanctions lifted — a potential opening for US negotiators. The North Koreans have also proven themselves to be shrewd students of US politics. Kim must realize that his chances of basking in this kind of legitimacy with a US President other than Trump are slim.

#### US-NoKo war goes nuclear and causes collapse of the world order, cyberterror, East Asian instability, and US-China war

Park 15, Director of the Institute for Peace and Unification Studies at Seoul National University, 5/21/2015Myoung-Kyu, “Korean Unification: A New Kind of Peacebuilding Project” <http://hir.harvard.edu/archives/11287>

In modern society, North Korea poses a number of complex risks. North Korea’s development of a nuclear weapons program is a subject of particular concern to the international community. Since 2006, North Korea has publicly conducted nuclear tests amidst suspicion and surveillance—and despite the international community’s attempts to contain the situation. North Korea’s development and testing of nuclear weapons is targeted at undermining principles of nonproliferation, and such jeopardization of the world order established post-World War II is one of the major challenges confronting international politics today. The United States, China, Russia, and Japan, alongside South Korea, launched the Six-Party Talks with North Korea in 2003 in order to address the denuclearization of the country, but the dialogue has been suspended since 2008. Moreover, in 2009 and 2013, North Korea’s de facto government conducted nuclear tests, effectively establishing itself as a nuclear power. In addition to the continuation of missile tests, North Korea’s successful launch of the Kwangmyongsong-3 satellite in 2012 established its status of having achieved substantial abilities in intercontinental ballistic missile (ICBM) technology. After North Korea’s first and second nuclear tests, the United Nations subsequently adopted Resolutions 1718 and 1874. It additionally adopted Resolution 2087 after the 2012 satellite launch, and finally, Resolution 2094 after its third nuclear test, which imposed a variety of sanctions on North Korea. Recently, however, North Korea has drawn the world’s attention in areas other than its nuclear program. On November 24, 2014, the US film studio Sony Pictures Entertainment was hacked in light of its production of the movie The Interview, a caricature of the North Korean dictator Kim Jong-un. President Obama attributed it to the work of North Korean hackers. Following the development of nuclear and missile technology, North Korea has reportedly attained technological capabilities for cyberterrorism to a degree that is once again a cause for concern. Additionally, the North’s harsh and systematic human rights abuses captured the attention of the world. In February 2014, the United Nations Human Rights Council’s adoption of the North Korea Human Rights Resolution (based on a report published by the Commission of Inquiry on Human Rights in the Democratic People’s Republic of Korea) established that the North Korean government should be held responsible for crimes against humanity. The Commission of Inquiry’s report stated that top North Korean leadership would be liable to prosecution by the International Criminal Court, and the Third Committee of the UN General Assembly adopted the resolution on November 18, 2014 by an overwhelming majority. The perils and the urgency of dealing with North Korea have been amplified by the ascendancy of Kim Jong-un to his current position. Any expectations for advancements that Kim Jong-un, the First Chairman of the National Defense Commission who has studied abroad in Switzerland, could have promoted have all but dwindled; instead, a harsh and overbearing image of the young political leader has taken root. In 2013, Kim Jong-un revised the Socialist Constitution of the Democratic People’s Republic of Korea to reinforce the nation’s dual ambitions of nuclearization and economic development. Nuclear power was hailed as the pride of the nation and framed as an important asset for maintaining the systems of the North Korean state. It has been difficult to predict the inner workings of the North Korean government, and the world watched in shock when Kim Jong-un executed Jang Sung-taek, his uncle and a leading figure in government, in December 2013. Therefore, the possibility of the liberalization of North Korea under Kim Jong-un’s rule has ultimately become increasingly slim. The destabilization of North Korea poses a further threat to its border regions, particularly with China. There is a large-scale movement of refugees across the border into China, which has the potential to cause unrest in the East Asian region. North Korea has retained a large number of its conventional weapons, and its commitment to militaristic values and practices also amplifies the potential for military unrest in the region. Furthermore, sudden instability in the state system of Northeast Asia may aggravate hostilities between the United States and China. While North Korea’s problems are compounded by the possibility of greater cooperation between the United States and China, in reality, the tension between the two powers is exacerbated by their dealings with North Korea. China and the United States have consistently adopted opposing stances in the six-party discussions of international sanctions against North Korea and internationalizing human rights issues in North Korea. In particular, while the annual large-scale US-South Korean joint military exercises threaten North Korea, they are more likely to conflict with China’s security interests.

### 1AR---Meat Rider

#### 1] No impact – the rider just adds extra regulations – no quantification of how much that slows the process down or whether it’s sufficient

#### 2] clean meat is bad – small market, contains diseases, horrible for health

**McGowan ’18** (McGowan, Kat. “The ‘Clean Meat’ Industry Has a Dirty Little Secret.” *Medium*, NEO.LIFE, 15 Nov. 2018, medium.com/neodotlife/the-clean-meat-industry-has-a-dirty-little-secret-421d510b8136.) //ZL

For nearly twenty years, the idea of growing edible meat directly from animal cells has enticed animal-welfare advocates, health-conscious foodies, and people disgusted by the way meat is produced today. These days, that idea is attracting investors and entrepreneurs, too. This isn’t your (vegan) father’s Tofurky. More than a dozen companies worldwide are working on slaughter-free meatballs, tenders, or simple ground beef, chicken, fish, or pork made by growing muscle tissue in a cell culture. Big Ag powerhouses like Cargill and Tyson Foods have put money behind it. And at least one company, Just Foods, says it will have a product, likely bird-based, ready for market by the end of the year — although the company says whether it can sell the faux fowl will be up to regulators. Boosters like the nonprofit Good Food Institute, a spinoff of the animal-rights group Mercy for Animals, are heralding a new era of “clean meat.” They say this technology will end the filth, danger, and disease that come with raising and processing animals to eat. It will keep drug residues off our dinner plates and thwart foodborne illness and antibiotic resistance. “Clean meat is the clean energy of food,” Good Food spokesperson Matt Ball says in an email. “Clean meat will be vastly better in many, many ways, including for public health.” But the industry has yet to prove that it can be so clean. Most of these companies are startups in prototype phase, still reliant on unappetizing additives — which they insist won’t be necessary once they graduate to commercial scale. Meanwhile, experts worry that as the volume increases, so will the risk of contamination. The meat makers say these concerns are easy to address, and promise to soon deliver savory goodness far safer than anything from a feedlot. The truth is, there’s a chasm between the current state of clean meat and an industrial-scale food source that lives up to the name — and no one knows yet how to get to the other side. Regulators take notice The dirty side of clean meat took center-stage in late October at a joint hearing of the United States Department of Agriculture and the Food and Drug Administration. While the meeting was convened to discuss labeling — just what to call this new type of foodstuff — the details of production were also picked over by the FDA’s science board, a group of experts in food safety, medicine, epidemiology, drugs, and veterinary medicine. The evidence they reviewed suggests that at this point, the meat-making entrepreneurs haven’t quite yet hit the clean meat threshold. Many companies use antibiotics, hormones, even blood products taken from fetal calves, at least during the first steps of the process, to get initial batches of cells to transition from life inside an animal to life inside a vial or dish. Industry surveys discussed by the board suggest that so far, most production systems also require artificial or animal-based additives to keep the cells growing. Some board members also noted that it’s not yet clear how muscle cells will react when they’re grown in huge bioreactors. Unhappy cells may pump out stress-related compounds that humans may not want to eat. And without perfect sterility — or doses of antimicrobials — those massive vats, warmed and filled with nutritious broth to encourage growth, might get invaded by bacteria and fungi. While the risks of producing conventional meat might diminish, growing muscle in vats may bring new ones. These questions need to be answered with independent studies and cold, hard, public data, said food safety scientist Barbara Kowalcyk of Ohio State University, a member of the FDA’s science board. “I don’t think we actually know enough about what the potential hazards are, and that’s what concerns me,” she said. “Some of the companies are talking about having product this year, and have not sent a single sample out to any independent review,” charged Michael Hanson of Consumers Union. The cultured-meat crowd, who turned out in force for the hearing, countered that the pharmaceutical industry routinely grows cells in culture to make vaccines and biologic medicines. Their methods aren’t new, and they aren’t inherently risky, they said. Inspections will catch any problems before products leave the building, let alone hit store shelves. “These hazards are well understood, and there are well established methods for controlling them,” Eric Schulze of San Francisco-based Memphis Meats said at the hearing.  Besides, the producers pointed out, conventional meat is frequently contaminated with anything from the potentially deadly bacteria E. coli O157:H7 to low doses of antibiotics such as tetracycline, and hundreds of people die every year in the U.S. from illnesses caused by tainted meat and poultry. Manufactured meat offers the potential of greater consistency and tighter control over such risks, they said. “I don’t think you’re going to have a greater risk than you have with, for example, the risk of E. coli in hamburger meat, or the current risk of salmonella in chicken,” said former FDA reviewer and pharmaceutical industry consultant Rebecca Sheets, who has [analyzed](https://www.sciencedirect.com/science/article/pii/S1045105614000748#!) contamination episodes in vaccine production. The problem is that biology is never perfectly clean or perfectly predictable. As Sheets pointed out, while the familiar risks might diminish, there may also be new ones. We just can’t predict them, because nobody has ever grown muscle cells in 25,000-liter vats.

#### 3] aff solves – greentech markets are crucial for developing clean meat – R and D key to make large scale production viable

### 1AR---Natural gas

#### **Plot twist! Natural gas actually sucks—5 warrants**

Roberts 19 David Roberts [Journalist for Vox covering climate change, former journalist for the Chicago Tribune, Reuters, and the Atlantic], 5-30-2019, More natural gas isn’t a "middle ground" — it’s a climate disaster, Vox, Accessed from https://www.vox.com/energy-and-environment/2019/5/30/18643819/climate-change-natural-gas-middle-ground on 11-23-2019, JLee

1) Gas breaks the carbon budget Honestly, this one is enough to rule out gas on its own. It’s simple: Even setting aside methane leakage, there’s too much carbon in the natural gas we’ve already discovered for us to stay within the carbon budget promised in Paris. Never mind finding more — if we burn what we’ve already found, we’ll bust the budget. The world’s nations have agreed to hold the rise in global average temperatures to no more than 2 degrees Celsius, with efforts to hold it to 1.5. (You will recall that the Intergovernmental Panel on Climate Change report that came out last year specifically investigated the difference in impact between 1.5 and 2 degrees. Long story short: The difference is substantial and 2 degrees would be horrific.) Staying within those targets leaves humanity with a limited amount of greenhouse gases it can still release — its carbon budget. The chart below from OCI is eye-opening. On the left is the carbon content of the “developed reserves” of fossil fuels around the world, i.e., “already-operating or under-construction fields and mines.” On the right are the carbon budgets for 1.5 and 2 degrees

, respectively. If we burn the fossil fuels we are already exploiting, we will use up the 2-degree budget. Even if global coal use were eliminated overnight, burning the oil and gas we’re already digging up would blow the 1.5-degree carbon budget. OCI emphasizes the obvious implication: “There is no room for new fossil fuel development — gas included — within the Paris Agreement goals.” If the countries of the world are serious about their shared targets, they must cease new fossil fuel exploration and cancel plans for new wells and mines. The IPCC says the world needs to be half decarbonized by 2030, and fully decarbonized by 2050, to hit the 1.5-degree target. To give developing countries more room, wealthy developed nations like the US should ideally decarbonize faster. To do that, the US will have to phase out all fossil fuel use as fast as it conceivably can. There’s no room for a bridge. Policymakers must begin consciously encouraging and designing energy systems that run entirely on carbon-free resources. 2) Coal-to-gas switching doesn’t cut it Shutting down coal power plants and opening gas plants in their place will generally reduce emissions, depending on a variety of variables (again including methane emissions). Coal-to-gas switching is responsible for a big chunk of the emission reductions in the US electricity sector over the past few years. But one thing is certain: Coal-to-gas switching doesn’t reduce emissions to zero. And zero-as-soon-as-possible is the goal. In its New Energy Outlook for 2018, Bloomberg New Energy Finance (BNEF) ran a scenario in which global coal use was phased out by 2035 and the market was otherwise left to work. It found that gas would fill about 70 percent of the void. That is incommensurate with Paris targets. Even with a global coal phaseout, we’ll blow through the 2-degree target, much less the 1.5-degree target, unless gas is phased out as well. Fossil fuel industries respond by pointing to the potential for “negative emissions,” but all such technologies are speculative at scale and face potentially insurmountable challenges. Allowing gas infrastructure to continue being built on the hope that negative emissions will pan out is madness. 3) Bulk renewables can displace both coal and gas In most markets, bulk renewables — utility-scale wind and solar power plants — are the cheapest form of power as measured by the “levelized cost of energy” (LCOE, which seeks to take all costs into account). This was confirmed last year by the financial advisory firm Lazard, which publishes annual LCOE estimates. BNEF also does yearly LCOE analysis and has found the same thing: The relentless decline of solar and wind costs has made these technologies the cheapest sources of new bulk electricity in all major economies, except Japan. This includes China and India, where not long ago coal dominated capacity additions, as well as the U.S., where the shale gas revolution has made gas cheap and abundant. Renewables are already driving down prices in wholesale markets and causing existing natural gas plants to be run at much lower utilization rates than they were designed (and financed) for. And renewables are only getting cheaper, while cheap natural gas can’t last forever. Of course, LCOE is a limited measure. What matters for variable renewables is not their average cost but their value at particular times and locations. Wind and solar do, after all, come and go with the weather. Which brings us to ... 4) Gas isn’t needed for grid reliability Renewable energy skeptics like to claim that natural gas power plants are required on the grid to balance out variable renewable energy, which comes and goes with the wind and sun. OCI responds with three arguments. First, most natural gas plants being built these days are combined cycle gas turbine (CCGT) plants, which produce the cheapest power. “In the United States alone, around 24 gigawatts (GW) of CCGT capacity was commissioned in 2017 and 2018, and more than 14 GW was under construction at the beginning of 2019,” writes OCI. “There is more than 425 GW of CCGT capacity in operation globally.” But CCGT plants are not the plants that can ramp up and down quickly to balance renewables. They are big and relatively slow, meant to run at high utilization rates and provide bulk power. In other words, they compete with, rather than complement, renewables. Second, the faster natural gas plants — gas reciprocating engines (GRE) and open cycle gas turbines (OCGT), or “peakers,” named for their function of spinning up during peaks of energy demand — are increasingly being beat out by batteries, which respond even quicker. Wind and solar plants coupled with battery storage — which can compete directly with peakers — are getting cheaper. OCI cites a BNEF report showing that they “are already able to compete with new coal or gas plants on an LCOE basis in Germany, the United Kingdom, China, Australia, and the United States.” For now, most utility-scale battery storage is in the four-hour range. Those battery installations are expected to get cheaper than natural gas peakers in the early 2020s. But they still have somewhat limited application. However, OCI notes, “a study by Wood Mackenzie in 2018 found that six- and eight-hour battery storage systems, which are beginning to enter commercial operation today, can address 74 percent and 90 percent of peaking demand, respectively.” Once batteries get more sophisticated and cheaper, there won’t be much left for natural gas peakers to do. (For a longer look at how natural gas is getting displaced, see my article here.) Third, OCI argues that the key to stable, reliable grids is not any individual technology but the design of power markets and power systems. Today, in dozens of sometimes subtle and technical ways, they are designed around large, centralized power plants and one-way power flows. To keep grids reliable during the energy transition, policymakers need to redesign markets to encourage diverse portfolios of energy technologies, from distributed generation to storage and demand response. (The report contains some policy suggestions.) OCI doesn’t address the thorny question of whether getting to 100 percent clean electricity requires some form of dispatchable power (power that can be turned on and off), including nuclear and possibly natural gas or biomass with carbon capture and storage. (See here and here for more on that debate.) Regardless, it’s been fairly well demonstrated that we know how to get to 80 percent renewables — if there’s a modest role for gas in getting to 100, it certainly won’t look anything like the modern gas industry. 5) New natural gas infrastructure locks in carbon When big, capital-intensive assets get built, they tend to stick around. There are more than 400 natural gas plants in the US that were built in or before 1970. (Even older than me!) Utilities are currently incentivized to build precisely those big, capital-intensive assets. And once they are built, it doesn’t take much to keep them running. “Once capital has been sunk,” OCI writes, “operators can keep running a plant as long as it can sell power for more than the marginal cost of producing it — even if it incurs a loss on the invested capital.” That means even cheaper renewables won’t necessarily drive fossil fuel plants to retirement. Yet dozens of new natural gas pipelines, power plants, and export terminals are in some stage of planning. The US is on a natural gas building binge. Every bit of that gas infrastructure being built today must be retired before it is paid off, “stranded,” if the US is to have any hope of hitting its Paris targets. The more we build in coming years, the more we will have to abandon later. It probably won’t be big utility investors who get stuck with that bill.

#### Fracking keeps us dependent on fossil fuels and undermines the transition to renewables

Irfan 19 Umair Irfan [MS, Columbia University Graduate School of Journalism, Journalist writing for Vox covering climate change], 9-12-2019, The best case for and against a fracking ban, Vox, Accessed from https://www.vox.com/energy-and-environment/2019/9/12/20857196/fracking-ban-case-democrats-2020-president on 11-23-2019, JLee

Both the oil and natural gas produced from fracking have their downsides. Natural gas is mainly used for power generation (it’s now the largest source of electricity in the US) while oil is mostly used for transportation, like cars, shipping, and aviation. So while low natural gas prices have helped knock dirty coal off the market, low oil prices driven in part by fracking have encouraged more travel. In fact, transportation is now the largest source of greenhouse gases in the US. And after years of decline, US emissions in 2018 rose by 3.4 percent. Low oil prices have undermined the business case for cleaner transportation alternatives, like electric cars and fuel cell-powered buses. Instead, the United States has experienced a growing appetite for larger, thirstier cars and more air travel. Meanwhile, low natural gas prices have had some collateral damage for nuclear power, the largest source of clean electricity in the US. Some of the nuclear power plants that have announced early retirements are likely to see their capacity replaced by natural gas. So while replacing coal with natural gas often leads to a reduction in emissions, replacing nuclear leads to an increase. Natural gas itself can also become a climate problem. Methane, the dominant component of natural gas, produces less carbon dioxide than coal when burned. But if methane leaks, which it often does in some quantity during normal gas extraction operations, it becomes a potent greenhouse gas. Over 100 years, a quantity of methane traps more than 25 times the amount of heat compared to a similar amount of carbon dioxide. Of course, methane is the product, so the gas industry has an incentive to limit leaks. But leaks are difficult to track, and they could easily overwhelm the gains from replacing coal. Robert Howarth, a researcher studying shale gas at Cornell University, recently reported that US shale gas production plays an outsized role in global methane emissions. He estimated that over the past 10 years, more than half of the global increase in methane emissions came from fracking in the US. “Natural gas production in the United States is leaking somewhere in the neighborhood of 3.5 percent of the gas we produce into the atmosphere which is, you know a relatively small amount of gas if you think about it. Most of it is getting to market,” Howarth said. “But that 3.5 percent is enough to do severe damage to the climate.” This is a higher leakage estimate than what the EPA and the industry calculate, but with the Trump administration’s ongoing rollbacks on Obama-era regulations on monitoring and restricting fugitive emissions of methane, the problem is poised to worsen. And then there’s the technique of fracking itself. It requires a massive volume of water. Wells can release toxic chemicals like benzene into the air. Fracking sites can experience explosions and fires. They can contaminate drinking water. More than 17 million people in the US live within a mile of an active fracking well and research shows that fracking can lead to low birth weight in infants born in that radius. Many of these environmental risks, on balance, are less than those associated with mining and burning coal. However, the sudden surge in fracking means that many people are being confronted with its impacts for the first time, making it a more vivid political concern. That’s in contrast to coal hazards, which are mostly grandfathered into the public consciousness. Another factor is that the business case for fracking is starting to weaken as more drillers declare bankruptcy. The Rocky Mountain Institute estimates that clean energy is already competitive with new natural gas power plants, and by 2035, it will be cheaper to build new wind, solar, and storage projects than to continue running 90 percent of existing gas power plants. And when it comes to limiting climate change, a key factor is time. Methane leaked from gas wells can stay in the atmosphere for a decade. Carbon dioxide from burning it can linger for a century. So it is imperative to ramp down greenhouse gas emissions as quickly as possible. Yet every new natural gas power plant represents a decades-long commitment to continue using the fuel. That means gas plants will have to install carbon capture systems, which would add to their operating costs and worsen the business case further, or some poor investor is going to be left holding the bag. “Not only is natural gas dangerous and destructive, it’s increasingly unnecessary,” said Michael Brune, executive director of the Sierra Club. “We do think there should be a national ban on fracking.”

#### Fracking is terrible for people who live near fracking sites—a litany of health concerns

Stone 17 Judy Stone [MD, Infectious Diseases from the West Virginia University School of Medicine and Board Certified from the ABIM, Servered on IDSA’s Clinical Affairs Committee], 02-23-2017, Fracking Is Dangerous To Your Health, Forbes, Accessed from https://www.forbes.com/sites/judystone/2017/02/23/fracking-is-dangerous-to-your-health-heres-why/#4ce0d055945f on 11-23-2019, JLee

This post looks in greater depth at the health problems linked to fracking. These are not hypothetical concerns—there are now more than 700 studies looking at risks—and more than 80% of the health studies document risks or actual harms. It’s also important to note that these risks are likely to be seriously underestimated, because the environmental agencies have been downplaying the risks to the public. A new in-depth exposé from investigative journalists at Public Herald looks in-depth at the Pennsylvania Department of Environmental Protection’s (DEP) misconduct and negligence, as the DEP studiously ignored citizens’ complaints, sometimes not even testing water samples. Earlier studies from ProPublica and others showed similar EPA failures in the western U.S. Respiratory problems: Cough, shortness of breath and wheezing are the most common complaints of residents living near fracked wells. Toxic gases like benzene are released from the rock by fracking. Similarly, a toxic waste brew of water and chemicals is often stored in open pits, releasing volatile organic compounds into the air. These noxious chemicals and particulates are also released by the diesel powered pumps used to inject the water. An epidemiological study of more than 400,000 patients of Pennsylvania’s Geisinger clinic, done with Johns Hopkins School of Public Health, found a significant association between fracking and increases in mild, moderate and severe cases of asthma (odds ratios 4.4 to 1.5). Hopkins’ Dr. Brian Schwartz cautions that residents should be aware of this hazard as “some ‘pristine’ rural areas are converted to heavily trafficked industrial areas.” Problems during pregnancy: Fracking chemicals are harmful to pregnant women and their developing babies. West Virginia researchers found endocrine-disrupting chemicals in surface waters near wastewater disposal sites; these types of chemicals can hurt the developing fetus even when present at very low concentrations. Another Hopkins/Geisinger study looked at records of almost 11,000 women with newborns who lived near fracking sites and found a 40% increased chance of having a premature baby and a 30% risk of having the pregnancy be classified as “high-risk,” though they controlled for socioeconomic status and other risk factors. Contributing factors likely include air and water pollution, stress from the noise and traffic (1,000 tankers/well on average). Premature babies accounted for 35% of infant deaths in 2010. In addition to the personal toll on the families, preemies are very expensive for society—prematurity is a major cause of neurologic disabilities in kids, and their cost of care was more the $26 billion in 2005 alone, or $51,600 per preemie. Cost to employers during the infant’s first year of life averaged $46,004—more than tenfold higher than for a full-term delivery. [Note that if the Affordable Care Act is repealed, women may once again be denied health insurance for pregnancies and a premature baby will likely never be granted health insurance. According to the March of Dimes, Medicaid expansion of health insurance to low-income citizens helped the percentage of babies born as preemies drop to a low level of 11.4% in 2013.] Noise, stress and sleep deprivation Other studies have found that the noise from the drilling itself, the gas compressors, other heavy equipment and the truck traffic is high enough to disturb sleep, cause stress and increase high blood pressure. Longer-term exposure to noise pollution contributes to endocrine abnormalities and diabetes, heart disease, stress and depression, and has been linked to learning difficulties in children. Sleep deprivation has pervasive public health consequences, from causing accidents to chronic diseases. Another epidemiologic study from University of Pennsylvania and Columbia University compared the hospitalization rates between a county with active fracking and a neighboring county without. This study found that fracking well density was significantly associated with higher inpatient hospitalization for cardiac or neurologic problems. There was also an association between skin conditions, cancer and urologic problems and the proximity of homes to active wells. Spills and accidents With disturbing frequency, new spills or accidents are reported at the same time as industry tries to reassure that fracking brings safe and clean energy. Tell that to the residents of Dimock, Pa., who have had their drinking water destroyed, or those in many other communities. A newly released study found 6,648 spills in just four states over the past 10 years. Once again, the EPA had reported a far lower number—457 in eight states over a six-year period. Why the huge difference? Because the EPA chose to only look at the actual fracturing stage, rather than the whole life cycle of the gas and oil production. The DeSmogBlog notes that just this month, the day after U.S. Army Corps of Engineers gave the owners of the Dakota Access Pipeline (DAPL) the final permit it needed to build across Lake Oahe (threatening the Standing Rock Sioux tribe’s land and water), a pipeline of a DAPL co-owner exploded near New Orleans, killing one and injuring others. Aging pipelines pose special risks as they deteriorate. An ExxonMobil pipeline built in 1947 spilled 134,000 gallons of gas in Arkansas. You can see the location and magnitude of the spills at this handy interactive from the National Center for Ecological Analysis and Synthesis (NCEAS) Science for Nature and People Partnership (SNAPP). Another disturbing data viz shows the type of spill and whether water was impacted. But new fracking has additional risks, as the conventional pipes often used are unable to withstand the high pressure of the fracking mixture being injected. In fact, new wells were not safer, and 6% of unconventional (fracked) wells drilled since 2000 showed problems, with even the Pa. DEP (shown by Public Herald to not be thorough in investigating citizens' complaints, nor entirely forthcoming) confirming more than 100 contaminated drinking water wells.

#### Fracking leads to bad air quality—building wells, installing valves, flaring, and storing fracturing fluid are all harmful.

GAO 12 United States Government Accountability Office, “Information on Shale Resources, Development, and Environmental and Public Health Risks.” September 2012. Report to Congressional Requests. Accessed 22 November 2019 from https://www.gao.gov/assets/650/647791.pdf. JLee.

According to a number of studies and publications we reviewed, shale oil and gas development pose risks to air quality. These risks are generally the result of engine exhaust from increased truck traffic, emissions from diesel-powered pumps used to power equipment, intentional flaring or venting of gas for operational reasons, and unintentional emissions of pollutants from faulty equipment or impoundments. Construction of the well pad, access road, and other drilling facilities requires substantial truck traffic, which degrades air quality. According to a 2008 National Park Service report, an average well, with multistage fracturing, can require 320 to 1,365 truck loads to transport the water, chemicals, sand, and other equipment—including heavy machinery like bulldozers and graders—needed for drilling and fracturing. The increased traffic creates a risk to air quality as engine exhaust that contains air pollutants such as nitrogen oxides and particulate matter that affect public health and the environment are released into the atmosphere.38 Air quality may also be degraded as fleets of trucks traveling on newly graded or unpaved roads increase the amount of dust released into the air—which can contribute to the formation of regional haze.39 In addition to the dust, silica sand (see fig. 11)—commonly used as proppant in the hydraulic fracturing process—may pose a risk to human health, if not properly handled. According to a federal researcher from the Department of Health and Human Services, uncontained sand particles and dust pose threats to workers at hydraulic fracturing well sites. The official stated that particles from the sand, if not properly contained by dust control mechanisms, can lodge in the lungs and potentially cause silicosis. Use of diesel engines to supply power to drilling sites also degrades air quality. Shale oil and gas drilling rigs require substantial power to drill and case wellbores to the depths of shale formations. This power is typically provided by transportable diesel engines, which generate exhaust from the burning of diesel fuel. After the wellbore is drilled to the target formation, additional power is needed to operate the pumps that move large quantities of water, sand, or chemicals into the target formation at high pressure to hydraulically fracture the shale—generating additional exhaust. In addition, other equipment used during operations—including pneumatic valves and dehydrators—contribute to air emissions. For example, natural gas powers switches that turn valves on and off in the production system. Each time a valve turns on or off, it “bleeds” a small amount of gas into the air. Some of these pneumatic valves vent gas continuously. A dehydrator circulates the chemical glycol to absorb moisture in the gas but also absorbs small volumes of gas. The absorbed gas vents to the atmosphere when the water vapor is released from the glycol.41 Releases of natural gas during the development process also degrade air quality. As part of the process to develop shale oil and gas resources, operators flare or vent natural gas for a number of operational reasons, including lowering the pressure to ensure safety or when operators purge water or hydrocarbon liquids that collect in wellbores to maintain proper well function. Flaring emits carbon dioxide, and venting releases methane and volatile organic compounds. Venting and flaring are often a necessary part of the development process but contribute to greenhouse gas emissions.42 According to EPA analysis, natural gas well completions involving hydraulic fracturing vent approximately 230 times more natural gas and volatile organic compounds than natural gas well completions that do not involve hydraulic fracturing.43 As we reported in July 2004, in addition to the operational reasons for flaring and venting, in areas where the primary purpose of drilling is to produce oil, operators flare or vent associated natural gas because no local market exists for the gas and transporting to a market may not be economically feasible.44 41 For example, according to EIA, in 2011, approximately 30 percent of North Dakota’s natural gas production from the Bakken Shale was flared by operators due to insufficient natural gas gathering pipelines, processing plants, and transporting pipelines. The percentage of flared gas in North Dakota is considerably higher than the national average; EIA reported that, in 2009, less than 1 percent of natural gas produced in the United States was vented or flared. Storing fracturing fluid and produced water in impoundments may also pose a risk to air quality as evaporation of the fluids have the potential to release contaminants into the atmosphere. According to the New York Department of Environmental Conservation’s 2011 Supplemental Generic Environmental Impact Statement, analysis of air emission rates of some of the compounds used in the fracturing fluids in the Marcellus Shale reveals the potential for emissions of hazardous air pollutants, in particular methanol, from the fluids stored in impoundments. As with conventional oil and gas development, emissions can also occur as faulty equipment or accidents, such as leaks or blowouts, release concentrations of methane and other gases into the atmosphere. For example, corrosion in pipelines or improperly tightened valves or seals can be sources of emissions. In addition, according to EPA officials, storage vessels for crude oil, condensate, or produced water are significant sources of methane, volatile organic compounds and hazardous air pollutant emissions. A number of studies we reviewed evaluated air quality at shale gas development sites.

#### Practices integral to fracking lead to habitat degradation, worsens biodiversity loss

GAO 12 United States Government Accountability Office, “Information on Shale Resources, Development, and Environmental and Public Health Risks.” September 2012. Report to Congressional Requests. Accessed 22 November 2019 from https://www.gao.gov/assets/650/647791.pdf. JLee.

According to studies and publications we reviewed, development of oil and gas, whether conventional or shale oil and gas, poses a risk to habitat from construction activities. Specifically, clearing land of vegetation and leveling the site to allow access to the resource, as well as construction of roads, pipelines, storage tanks, and other infrastructure needed to extract and transport the resource can fragment habitats.75 In August 2003, we reported that oil and gas infrastructure on federal wildlife refuges can reduce the quality of habitat by fragmenting it.76 In addition, spills of oil, gas, or other toxic chemicals have harmed wildlife and habitat. Oil and gas can injure or kill wildlife by destroying the insulating capacity of feathers and fur, depleting oxygen available in water, or exposing wildlife to toxic substances. Long-term effects of oil and gas contamination on wildlife are difficult to determine, but studies suggest that effects of exposure include reduced fertility, kidney and liver damage, immune suppression, and cancer. In August 2003, we reported that even small spills may contaminate soil and sediments if they occur frequently. Fragmentation increases disturbances from human activities, provides pathways for predators, and helps spread nonnative plant species. 77 Further, noise and the presence of new infrastructure associated with shale gas development may also affect wildlife. A study by the Houston Advanced Research Center and the Nature Conservancy investigated the effects of noise associated with gas development on the Attwater’s Prairie Chicken—an endangered species. The study explored how surface disruptions, particularly construction of a rig and noise from diesel generators would affect the animal’s movement and habitat.78. The results of the study found that the chickens were not adversely affected by the diesel engine generator’s noise but that the presence of the rig caused the animals to temporarily disperse and avoid the area. A number of studies we reviewed identified risks to habitat and wildlife as a result of shale oil and gas activities.

#### Fracking leads to earthquakes in areas without the necessary infrastructure to respond to them

Gibbens 17 [Sarah Gibbens is a writer for National Geographic. She graduated from the UT San Antonio as the editor-in-chief for her university newspaper and has been recognized by the National Association of Hispanic Journalists]. “How Humans Are Causing Deadly Eathquakes.” 2 October 2017. National Geographic. Accessed 22 November 2019 from https://www.nationalgeographic.com/news/2017/10/human-induced-earthquakes-fracking-mining-video-spd/#close. JLee.

The effects of human-induced earthquakes may be similar to those created by nature, but are often seen in regions with little or no previous seismic activity. Most natural earthquakes happen along fault lines, which are commonly (but not exclusively) found where tectonic plates converge. But earthquakes triggered by human activity can occur far from the edges of tectonic plates. According to the report's data, found on a publicly accessible database, mining accounted for the highest number of human-induced earthquakes worldwide (many earthquakes clustered around 271 sites). The removal of material from the earth can cause instability, leading to sudden collapses that trigger earthquakes. Multiple earthquakes at 167 sites—and by far the deadliest ones—were triggered by what the report calls water reservoir impoundment, or dam building. (See the power of dams and dam removal.) In 2008, an estimated 80,000 people died or went missing following a 7.9 earthquake in China's Sichuan province. Scientists believe it was triggered by the weight of 320 million tons of water that had been collected in the Zipingpu Reservoir—over a well-known fault line. In the U.S., the conversation around human-induced earthquakes has largely centered around fracking for oil and natural gas, given the rapid spread of the technology in many states. According to the U.S. Geological Survey, fracking can induce seismic activity, both directly and from disposing of wastewater used in the process—the byproduct of water, sand, and chemicals used to hydraulically fracture hydrocarbons from rock. That high-pressure wastewater can crack rocks and lubricate faults. In the study, the authors found 29 project sites where earthquakes were induced by fracking itself, 36 sites where quakes were induced by post-fracking wastewater disposal, and 12 sites with temblors induced by unspecific oil and gas wastewater disposal. (Learn more about fracking.) In the case of Oklahoma, which has experienced heavy fracking activity, hundreds of small earthquakes have been observed annually in a region that was previously more geologically quiet. Earthquake triggers were also identified from nuclear explosions in 22 locations and two construction sites. "All anthropogenic projects influence forces acting in the Earth’s crust," said Miles Wilson, a University of Durham geophysicist who collected the study's data. "For example, by adding or removing mass, so we shouldn’t be surprised that the Earth responds to these changes and that in some cases earthquakes are the response." Why are they growing? Wilson's compiled records of human-induced earthquakes date back a century and a half. The website allows visitors to search quakes by date or region or drill down into data like magnitude, location, and cause. Users can also submit additional cases they believe should be added to the database. The database includes 108 sites that have experienced human-induced earthquakes over the past decade, ranging in magnitude from relatively small events to as strong as 5.8. The majority of those quakes were in the U.S. and Canada and were caused by disposal of fracking waste into the ground. "In the long term," Wilson said, "we may start to see more cases of induced seismicity across the world as we increase the number and scale of anthropogenic projects that influence the Earth." Mining, too, is expected to increase in scale. Today's mines are bigger than ever and reach miles underground. All this activity could lead to more instability in the Earth, and more or larger earthquakes, Wilson warns. Sometimes, "anthropogenic activity is the final straw that releases built-up stress," said the geophysicist.

### 1AR---Poverty

#### 1] Non unique and Turn- Fossil fuels *structurally* lock in massive poverty- only decentralized renewable solve

CPPG 19

(Clean Power Professionals Group, <https://www.energycentral.com/c/cp/how-renewables-could-end-energy-poverty>, 5-20)

Enbidge informs us that the International Energy Agency on Energy Access defines energy poverty as lacking access to electricity and clean cooking areas because of a lack of modern energy and it is estimated that over a billion people worldwide suffer from this problem. Energy poverty might be a direct result of the situation in developing countries regarding the establishment and maintenance of a reliable electrical grid. Renewables provide an excellent alternative for developing nations. As The Environmental Protection Agency mentions, centralized power generation tends to be the most economical and efficient system for providers to get the most value out of their money. However, the biggest problems with centralized generation come from their impact on the environment. Natural generation methods tend to impact the environment a lot less and could help developing countries meet their goals regarding pollution more effectively. The Failure of Centralized Electricity Distribution While it is more efficient to produce electricity from a centralized source, the fact remains that this system is less-than-perfect for developing countries that have a vast area to cover. As the volume of infrastructure required goes up, the amount of customers necessary to recoup that cost also needs to grow. However, in places like sub-Saharan Africa, there isn't the amount of population density essential to interest centralized providers into offering their services out in rural districts. The other obvious alternative is the development of a distributed grid, which has the added power of giving people back control over their electricity generation and distribution. Micro-Grids and the Growth of Independent Electricity There has been a push towards the implementation of smart micro-grids in some parts of the world to meet energy demand and push back the wave of energy poverty around the globe. However, these systems are finding it hard to get a foothold in some areas. As Energy Post notes, a micro-grid company aiming to deliver affordable electricity to Indian villages that had no electricity supply was met with massive resistance, deploying only ten units despite pitching 176 communities on the project. It was found that most villages didn't see micro-grids as 'real power' and instead decided to stick with governmental promises for centralized distribution. In many cases, these political promises never materialize, but villages still put their hope in their elected officials. Why Renewables Are Better for Developing Countries JOI Scientific notes that renewables and natural energy generation provide essential advantages to compete against traditional fossil fuel generation, including cost reduction, policy innovation, investment, and deployment. Developing nations that invest in this type of energy have the potential for growing their energy sector massively and can quickly obtain aid from the World Bank or other developing nations to fund their growth and development. The issues that these countries usually have is changing over from a fossil fuel based energy generation system to one that utilizes natural energy generation in the form of solar or wind power. The transition is a slow process, too gradual for some investors to consider. The cost of smaller grid systems might be perfect for addressing this shortcoming. Micro-Grids in Practical Application Smaller developing countries can benefit significantly from the implementation of micro-generation systems to distribute energy over a small geographic area. The limitations of alternative energy sources to provide vast amounts of energy for urban areas wouldn't be a factor in these villages because of the scaled down size of the distribution. The costs for implementation can be similarly scaled down. Eventually, once a sustainable and reliable electricity distribution is developed, the village can consider linking their grid to the national network or even helping to supply neighboring communities with each town providing the cost. In such a way, these isolated settlements help each other grow with the energy they harness.

#### 2] New renewable tech associated with wind, hydoeletric etc are sustainable and increased investment is there – prefer on recency, their card is from 2016

Elismoor 18

(James Ellsmoor, a Forbes 30U30 entrepreneur and founder of the Virtual Island Summit, 12-30-18, "6 Renewable Energy Trends To Watch In 2019," Forbes, <https://www.forbes.com/sites/jamesellsmoor/2018/12/30/6-renewable-energy-trends-to-watch-in-2019/#1db24a164a1f>

1. Energy Storage Energy storage plays an important role in balancing power supply and demand, and is key to tackling the intermittency issues of renewable energy. Pairing a storage system with a renewable energy source ensures a smooth and steady power supply, even when weather conditions are not optimal for energy generation. Batteries are the most common storage devices used in renewable energy systems and their use is increasing on both the residential and grid-wide scale. Energy storage technologies are expected to continue to improve, making their use more viable and affordable. It is projected that storage will represent a core component of all new energy technologies moving into the future, as both utility-scale and domestic energy storage solutions become more price competitive, eroding the advantages of traditional energy sources. On the Caribbean island of Barbados, old electric car batteries are being reused to provide grid energy storage and extend their useful lifespan. Today In: Leadership 2. Microgrids and AI Microgrids are local energy grids that can operate either autonomously or while connected to a larger traditional grid. They provide energy independence, efficiency and protection during emergencies. Using the machine learning capabilities of Artificial Intelligence (AI) with microgrid controllers allows for continuous adaptation and improvement of operation. PROMOTED Deployment of microgrids is becoming significantly quicker, with new software allowing for designs to be completed in a single day. San Diego tech company XENDEE is rolling out an advanced toolkit for microgrid design in partnership with the WorleyParsons Group to make available turnkey solutions in up to a 90% less time and cost than conventional methods. From California to the Pacific Islands, microgrids are taking center-stage. Palau is a Pacific island nation and the 13th smallest country in the world, but has committed to building what would be the world’s largest microgrid - 35MW of solar panels paired with 45 megawatt-hours of energy storage. This effort is part of the nation’s goal to transition to 70 percent renewable energy by 2050, recognizing that islands are on the front lines of experiencing the effects of climate change and stand as ground zero for the global energy transition. 3. Energy Blockchain And IoT Originally developed to record cryptocurrency transactions, blockchain technology is being adapted for use in the energy market. Blockchain is an incorruptible digital ledger that conducts and records transactions through a peer-to-peer network. The lack of centralization in blockchain leaves it as ideal for eliminating the middlemen of electricity suppliers. It reduces energy inequality and inefficiency and empowers consumers to buy and sell energy from other consumers directly. Pairing the distributed ledger technology of blockchain with the everyday devices that we use to receive and convey information, now commonly referred to as the Internet of Things (IoT), stands to have a profound impact on energy systems. With the correct applications, devices can autonomously buy and sell energy at the optimal times, optimize energy system settings in a real-time context and monitor and analyze performance of energy-consuming devices. These technologies are beginning to be used for groundbreaking projects, such as the Brooklyn Microgrid. The project involves a community-powered microgrid whose owners buy and sell power to each other via blockchain technology. The success of projects like this ensure that they will be implemented on a wider scale. 4. Grid Parity And Falling Costs Grid parity occurs when an alternative energy can generate power at a cost and performance level equal to or less than electricity generated from conventional methods. Solar and wind have reached parity in both price and performance in many regions, and new technologies continue to hone their competitive edge. The traditional model of large, top-down and centrally distributed energy production is being replaced by modular, consumer-driven and evenly distributed power generation. Once thought to be difficult to integrate into the grid, renewables are now serving to strengthen grid reliability and resilience. The utilization of blockchain, AI and other automation technologies make renewables self-optimizing, increasing their efficiency. Solar and wind are already more efficient and cost-effective than conventional sources, and evolving technologies will continue to improve their price and performance. Combining the economic benefits with a low environmental impact, we can expect to see renewables move from being an acceptable energy source to a preferred one. Islands like Barbados are heavily investing in electric vehicles. Islands like Barbados are heavily investing in electric vehicles. MEGAPOWER LTD. 5. Big Commitments An increasing number of corporations, cities and countries are embracing emissions reduction targets and climate action plans to meet the goal of limiting the rise in global temperature. To date, over 100 cities worldwide report that at least 70 percent of their energy production is from renewables, and more than 40 are currently operating on 100 percent renewable electricity. Hundreds more have pledged to work towards the goal of energy generation that is 100 percent based on renewables. Recognizing their impact on climate change, 158 companies have also committed to transitioning to 100 percent renewables. Many of these corporations and municipalities were inspired to make these commitments after the 2015 Paris Agreement. With the new information provided by the IPCC’s 2018 report, we can expect to see an increase in bold commitments to switch from fossil fuels to renewable energy sources. 6. Energy Access Advances In Developing Countries When talking about exciting new innovations in energy technology, it can be easy to forget that a significant percentage of the world’s population remains without access to energy at all. A billion people live without electricity and hundreds of millions have unreliable or prohibitively expensive energy sources. Achieving universal access to energy is a critical component of addressing global development challenges. The changes that are occurring in the energy market offer a solution to the problem of energy access. Community-based microgrids could represent the most cost-effective way of delivering affordable and reliable power to those currently living without it. Clean, modular and renewable energy systems are ideal for many of the communities that have been unable to benefit from conventional centralized forms of energy generation and delivery. While politics often stand in the way of progress, new energy technologies and commitments from international groups like the World Bank and SEforALL are laying a foundation for providing energy access to developing countries. With their ever-improving cost and performance metrics, we can expect to see renewables increasingly deployed to provide power to communities and regions that have long been left in the dark.

### 1AR---REMs

#### 1] Rare Earth Minerals aren’t rare – the DA’s price rises just make it profitable for production to shift to other stable sources which corrects the price rises.

Vincent 18 (Vincent, James. “China Can't Control the Market in Rare Earth Elements Because They Aren't All That Rare.” The Verge, The Verge, 17 Apr. 2018, [www.theverge.com/2018/4/17/17246444/rare-earth-metals-discovery-japan-china-monopoly.)//LK](http://www.theverge.com/2018/4/17/17246444/rare-earth-metals-discovery-japan-china-monopoly.)//LK) [Accessed 10/28/19]

If you need to know one thing about rare earth metals, it’s that they’re crucial to modern technology, helping power everything from MRI machines and satellites to headphones and nuclear reactors. If you need to know two things, it’s that despite their name, they’re not at all rare. This second fact is important when putting recent headlines about these 17 oddly named elements in proper context. Last week, many publications covered the news that a Japanese team of scientists had found a huge trove of rare earth elements off the coast of the country’s Minamitori Island. Some 16 million tons were estimated to be lurking in the deep-sea mud, enough to meet global demand on a “semi-infinite basis,” said the researchers. This news was presented as having great geopolitical significance. China currently produces more than 90 percent of the world’s supply of rare earth materials (the exact figure tends to fluctuate year-by-year), and in the event of a conflict, said reports, it could jack up prices for the West and its allies, or even shut them out altogether. In this eventuality, the Minamitori hoard would be a lifeline. “It is important to secure our own source of resources, given how China controls the prices,” Professor Yutaro Takaya Waseda, who led the Japanese research team, told The Wall Street Journal. But experts say this narrative is wrong. Despite appearances, the Minamitori find is not as significant as headlines have implied. And although China seems to wield great power over this critical global supply chain, the truth is that the country can’t just bring the West to its knees by limiting exports of rare earth elements. We know this pretty conclusively because it tried this in 2010, and it didn’t work out. In both cases, the overlooked factor is just how difficult it is to produce rare earth elements, compared to how easy it is to find them. An aerial view of Minamitori Island taken in 1987. The rare earth ores were discovered in the seabed near the island. Image: Wikimedia Commons The name “rare earth” is a historical misnomer, stemming from the fact that when they first discovered they were difficult to extract from surrounding matter. The USGS (United States Geological Survey) describes rare earth elements as “moderately abundant,” meaning that they’re not as common as elements like oxygen, silicon, aluminum, and iron (which together make up 90 percent of the Earth’s crust), but still well dispersed around the planet. The rare earth element cerium, for example, is the 25th most abundant on Earth, making it about as common as copper. But unlike copper and similarly well-known elements, such as gold and silver, rare earths don’t clump together in single-element lumps. Instead, because of their similar chemical composition (15 of the 17 rare earth elements occupy consecutive places on the periodic table), they bond freely with one another in minerals and clays. As the academic David S. Abraham explains in his book on the topic, The Elements of Power, this makes for a grueling extraction process. To create rare earths from the ore that contains them the extracted material has to be dissolved in solutions of acids, over and over again, then filtered, and dissolved once more. “The goal is not so much to remove rare earths from the mix as to remove everything else,” writes Abraham. Rare earth ore goes through these steps hundreds and hundreds of times, and for each new mining location, the concentration of the acids used has to be recalculated in order to target the specific impurities in the soil. To top it off, the whole process produces any number of nasty chemical byproducts and is radioactive to boot. "Processing rare earths involves a lot of time, acid, and radioactivity" The whole process is “expensive, difficult, and dangerous,” says former rare earth trader and freelance journalist Tim Worstall. He tells The Verge that because of this, the West has been more or less happy to cede production of rare earths to China. From the 1960s to the 1980s, the US did actually supply the world with these elements; all extracted from a single mine in California named Mountain Pass. But in the ‘90s, China entered the market and drove down prices, making Mountain Pass unprofitable and leading to its closure in 2002. Worstall says there are many reasons production moved overseas. Some of these are familiar: cheap labor costs and a willingness to overlook environmental damage, for example. But there’s also the fact that rare earth production in China is often a byproduct of other mining operations. “The biggest plant there is actually an iron ore mine which extracts rare earths on the side,” says Worstall. This means that, unlike the Mountain Pass mine, producers aren’t reliant on a single product. “If you are trying to only produce rare earths, then you’re subject to the swings and roundabouts of the market.” Global production of rare earth oxides from 1950 to 2000. Image: USGS All this looks like it gives China immense power over the market, but the truth is the world is benefiting at China’s expense. Proof of this came in 2010 when China did actually start limiting rare earth exports because of a dispute with Japan. This threat to the supply chain caused prices to rise, and so investment flowed into new and old rare earth mining projects. Meanwhile, consumers of rare earths like Hitachi and Mitsubishi altered their products to use less of each substance. In other words, when China tried to take advantage of its monopoly and limit supply, the rest of the world picked up the slack. As a think tank report on the fallout from the 2010 incident put it: “Even with such apparently favorable circumstances, market power and political leverage proved fleeting and difficult [for China] to exploit.” Markets responded and “the problem rapidly faded.” (Money even flowed back into Mountain Pass for a while, although the company in charge, Molycorp, collapsed in 2015 when rare earth prices fell back to 2010 levels.) "The Minamitori find just isn’t as significant as it first appears" So what does all this mean for last week’s news? Well, mostly that it’s not as important as it might first appear. There are plenty of other sources for these elements, and ways to circumvent China’s control of the global supply. Worstall, writing for The Continental Telegraph, points out that last week’s find is nearly identical to one announced by some of the same Japanese scientists in 2011, and he tells The Verge that although the sea bed is most likely home to many rare earth elements, there’s still the challenge of processing the stuff and actually getting it out of the sea and into a usable form. In a paper describing the Minamitori find published in Nature Scientific Reports, the Japanese suggest a hydrocycle could use centrifugal forces to quickly separate out a lot of the unnecessary materials in the sea mud. But this method is unproven. “Nobody has ever done it before, and no-one has proved it can work at an industrial scale,” says Professor Frances Wall of the Exeter University’s Camborne School of Mines. Wall tells The Verge that the Japanese team are doing “some nice work,” but says a huge amount of research has yet to be done before the seabed becomes a reliable source of these important elements. “There have been literally hundreds of exploration projects [that have found rare earth metals] and they’ve not been able to go forward through production because they can’t prove they’ll make any money,” says Wall . Worstall sums up the situation by saying “in mining, there are just two things: dirt and ore. Your back garden contains dirt, because it would cost more to extract the rare earths from it then you would make selling them on. The moment it costs less to extract those rare earths, that dirt becomes ore. But what have the Japanese have found? At the moment, it’s still dirt.”

#### 2] The Chinese “monopoly” is fake and if they raise prices they’ll just lose it

Worstall 13 (Worstall, Tim. “Big Surprise! Rare Earths Aren't Rare.” Forbes, Forbes Magazine, 22 July 2013, [www.forbes.com/sites/timworstall/2013/07/22/big-surprise-rare-earths-arent-rare/#5bb269c975bd.)//LK](http://www.forbes.com/sites/timworstall/2013/07/22/big-surprise-rare-earths-arent-rare/#5bb269c975bd.)//LK) [Accessed 10/28/19]

I find myself terribly confused by this piece about rare earth metals and minerals. I'm confused because this is something I actually know about and given that I've been telling everyone who would listen about it for years I thought all of this was generally well known. The basic "news" point being made here is that rare earths just aren't that rare. And that many old mines might have some amount of them in the junk left over from mining for other metals. Well, D'Oh! Today In: Tech The USGS and Department of Energy are on a nationwide scramble for deposits of the elements that make magnets lighter, bring balanced hues to fluorescent lighting and color to the touch screens of smartphones in order to break the Chinese stranglehold on those supplies. They were surprised to find that the critical elements could be in plain sight in piles of rubble otherwise considered eyesores and toxic waste. One era's junk could turn out to be this era's treasure. "Those were almost never analyzed for anything other than what they were mining for," Meinert said. "If they turn out to be valuable that is a win-win on several fronts — getting us off our dependence on China and having a resource we didn't know about." That the USGS is surprised about this is what really concerns me. For everyone in the mining industry knows that the first place you go looking for a mineral is in the wastes from someone else's earlier attempts at mining. For the obvious reason that they've already dug a hole in the ground and left a few million tonnes of rubble lying around the place. Much easier to check that than digging a new hole and moving a few million tonnes yourself. PROMOTED Insights - Teradata BrandVoice | Paid Program Enlisting Analytics To Level The Hiring Landscape Forbes Insights Can A Fitness Tracker Save Your Life? ServiceNow BrandVoice | Paid Program Business Goes Mobile The second worry is that again, everyone knows that rare earths just aren't rare. As I pointed out back in 2010: But the non-rarity of the rare earths themselves means that China's position isn't sustainable. That California mine, for instance, could potentially supply 20 percent of world demand, currently around 130,000 tons a year. Another facility, Lynas Corp.'s Mount Weld in Australia, has the capacity to produce a similar amount. In fact, there are enough rare earths in the millions of tons of sands we already process for titanium dioxide (used to make white paint) to fill the gap, while we throw away 30,000 tons a year or so in the wastes of the aluminum industry. There's that much or more in what we don't bother to collect from the mining of phosphates for fertilizers, and no one has even bothered to measure how much there is in the waste from burning coal. If rare earths are so precious, why isn't the United States working harder to collect them? The main reason is that, for these last 25 years, China has been supplying all we could eat at prices we were more than happy to pay. If Beijing wants to raise its prices and start using supplies as geopolitical bargaining chips, so what? The rest of the world will simply roll up its sleeves and ramp up production, and the monopoly will be broken. There's simply not a shortage of available rare earths. All there is is a shortage of plants to process them: we know perfectly well where we can get the raw material from we've just got to spend the money on processing it. From the AP again: Unlike metals higher up on the table such as silver and gold, there's no good agent for dissolving elements so closely linked in atomic structure without destroying the target. It makes mining for them tedious and expensive. Err, no. We really do not destroy elements by trying to separate them. We're not dealing with nuclear processes here. It's simple enough to separate the rare earths. It's just boring, that's all. Multiple iterations of boiling them in strong acids (up to 1,000 iterations to get some of them). But back to my basic concern here. Rare earths really are not rare. There's plenty of the raw material around, we could easily supply the world with current demand just by cleaning up other waste streams. What worries me is that we seem to have the experts in the field, the USGS, telling the public things which are at variance with this truth. This just isn't a good idea.

## 1AR---Counterplans

### General

#### 1] Counterplan doesn’t solve case –

#### 2] Perm do both –

#### 3] Perm do both in all non mutually exclusive instances –

### Agent CP Not Competitive

#### This debate is about moral obligations because the resolution says “ought” -- Agent counter-plans are not morally relevant – Multiple actors can have the same obligation, so proving that [an alternative agent] should act doesn’t disprove that [the aff actor] has the same obligation OR establish a legit opp. cost

### Textual Competition First

#### Perm do the counterplan—it’s not textually competitive because it adds words to the plan which means the aff could be part of a larger bill—textuality is most objective and avoids arbitrary interpretations of functional competition

#### Use textual competition – it justifies perm do the CP.

1] Stable advocacy: Text is the only thing we’re able to verify and have before and during round – prevents shiftiness.

2] Predictability – it allows you to PIC out of the infinite normal means details or assumptions – text solves infinite regress by limiting it to the words in the plantext.

3] Real-world education – policymakers look at the text of bills.

4] It collapses – function is determined by text.

***[Fairness and Education Voters]***

### Warming Advantage CP

#### 1] Conceded 1AC Roberts 18 – Supply side approach key

**Roberts 18** [David, writes about energy and climate change.] "It’s time to think seriously about cutting off the supply of fossil fuels," Vox, https://www.vox.com/energy-and-environment/2018/4/3/17187606/fossil-fuel-supply 4-3-2018 RE

\*citing a paper by Fergus Green of the London School of Economics and Richard Denniss of the Australia Institute\*

As Green and Denniss say over and over, no one is arguing that RSS policies are better than demand-side policies, or a substitute for them. The exact economic and political effects of any set of policies will always depend on context-dependent factors; different portfolios will be appropriate for different times and places. But RSS policies are an excellent complement to demand-side policies, with economic and political strengths that help fill in the gaps. They are simple, transparent, easy for the public to grasp, and unmistakable signs of good faith in international climate negotiations. It’s easy enough to understand why the political establishments of most countries are leery of RSS policies, given the ubiquitous influence of the fossil fuel industry. But it’s time for climate analysts and wonks to get past the sneering attitude they’ve traditionally had toward such policies and the activists who support them. Yes, at this point, everyone gets it: An economy-wide, steadily rising, fuel- and technology-agnostic price on carbon is the optimal policy. But we don’t live in an optimal world, so yacking on about it isn’t much help. We live in this world, where a variety of political constraints means that no such policy has passed or seems likely to pass anytime soon. In this world, limited (thus suboptimal) demand-side policies need supplementing. In this world, it makes sense to draw on all four quadrants — to use the portfolio approach taken for granted in so many other areas of policy. Climate change is a big problem. We can’t afford to leave any tools in the toolbox.

#### 2] Be skeptical – most of this is pseudoscience – if it was actually good people would’ve bought it already/gov would have implemented already

#### 3] Can’t solve the aff – only we incentivze production of renewables

#### 3] Can’t solve the aff – 1AC Roberts 17 proves fossil fuel production will increase more -- 17 billion barrels over decades

### 1AR---Word Pics Top

#### They lock in oppressive power structures within language and prevent the possibility of reclamation which is more oppressive.

Young 11 on Butler (Kelly M. Young, Wayne State University, IMPOSSIBLE CONVICTIONS: CONVICTIONS AND INTENTIONALITY IN PERFORMANCE AND SWITCH-SIDE DEBATE, cites Judith Butler, Contemporary Argumentation & Debate, 2011) MN

* Gap between what is meant (citational history) and what is said – because discourse has radical potential, repetition allows to transform that citational history

In her ruminations about the nature of injurious speech and the problems associated with censorship, Butler (1997) builds on Austin’s and Derrida’s works to argue that a structural gap between intention and sincerity and an utterance is necessary in order for language to have agency. Like Derrida, Butler (1997) contends that language and speech acts are always plagued with excess. As she further explains, the speech act is “always to some extent unknowing about what it performs, that it always says something that it does not intend” (Butler, 1997, p. 10). Even in the situation where a predetermined topic is up for discussion – like a resolution for debate – Butler (1997) would contend that meaning remains unsettled because the words in the topic and the arguments made for either side of the topic do not have stable meaning. For instance, thousands of debates each year occur under a shared national debate resolution, yet each debate is significantly different than the other, even when they deal with similar sub-sets of the resolution. The very fact that there is no consensus on what a debate resolution precisely means at the end of a debate season and debates are performed so differently under one topic throughout a season demonstrates the play and excess of speech acts. This structural inability to master or control our performances and speech acts for Butler (1997) does not mark the failure of communication; instead, it serves as its radical potential. For example, without a gap between intention and beliefs and utterance, discourse is unrecoverable and fixed. However, if a gap does exist, contested and once harmful words like “queer” can be re-appropriated and given new meaning within different contexts by different speakers. This does not mean that the discourse is acceptable uncritically; rather, the new use of the terms demonstrate the exclusive nature of the rhetoric and produces a democratic contestation over formerly racist or misogynist discourse that extend the range of the term. For instance, the activist group Queer Nation re-appropriates the term “queer” in order to contest the exclusive nature of labels such as “gay,” “lesbian,” or “homosexual.” In doing so, the group seeks to highlight the homophobic fear of what is “queer” by turning the term against itself, as the group’s motto, “We’re here. We’re Queer. Get used to it!” signifies (Brontsema, 2012). Another example of re-appropriation can be seen as a result of the recent decision by Arizona’s Tucson Unified School District to ban certain books from the district’s Mexican-American Studies program. The action caused several activists to form the Librotraficante Caravan, an underground and traveling library featuring the work of writers who were banned by the district. The group’s name – book trafficker – and tactics reclaim a number of negative stereotypes surrounding immigration, like the underground smuggling/trafficking of goods (Steiner, 2012). Through this re-appropriation over time, these terms lose their harmful effect and can be used in new and powerful ways through iteration (Butler, 1993, 1997). Due to this break between belief, intent, and rhetoric, the force and power of discourse cannot be located in a single speech act. As Butler (1997) explains in the context of hate speech, “racist speech works through the invocation of convention; it circulates, and though it requires a subject for its speaking, it neither begins nor ends with the subject who speaks or with the specific name that is used” (p. 34). In other words, the illocutionary force of a speech act comes from the prior conventions and citational history that both precedes and conditions the use of particular discourse. While an individual can be liable for what is said at a perlocutionary level, reprimanding and rejecting the speech act does little to curb the force and power of the discourse at an illocutionary level of uptake. Indeed, such attempts actually lock into place injurious speech, “preserving their power to injure, and arresting the possibility of a reworking that might shift their context and purpose” (Butler, 1997, p. 38). Instead of preserving this injurious history, efforts to reclaim or re-signify discourse require laying claim to a term or utterance and using it against its “constitutive historicity” (Butler, 1993, p. 227). Yet, to Butler (1993), re-signification or the queering of language through performance is not simply a question of will or conviction. Rather, performance requires both the enactment of the utterance and the transference of binding power onto that utterance. The authority of the act is not determined by an external judge or the intent and convictions of the speaker; instead, it is located in the citational history of the discourse (Butler, 1993).

#### At worst, it takes out and justifies the perm on the CP – continued reworking and citation of language is better than policing.

### ---AT Ableism

#### Turn – The introduction of their critique of ableist language is a voting issue—calling me out for using an *unintentionally offensive term* might make them feel better for embarrassing us, but it doesn’t do anything to address ableist oppression. Rejecting their “call out” strategy is crucial to constructive activism—vote against them to facilitate productive dialogue about ableist language.

Kinzel 11Lesley Kinzel, blogger and social justice writer, has written for *Newsweek* and *Marie Claire*, was named one of the Feminist Press’s “40 Feminists Under 40,” 2011 (“On our difficult language, and the calling-out of,” *Two Whole Cakes*—a blog about body politics, social justice activism, and pop-cultural criticism from a feminist perspective, March 30th, Available Online at http://blog.twowholecakes.com/2011/03/on-our-difficult-language-and-the-calling-out-of-same/, Accessed 03-02-2012)

We throw “that’s ableist” or “that’s racist” or “that’s fatphobic” around, I suspect, in the hope that such heavy judgement-bearing words will shock and embarrass the speaker out of using the offending language. And sometimes, it can work, at least in the short term, when we are merely thinking of our own self-preservation. But beyond that instant, this is not constructive activism. Using surprise, guilt, or humiliation as negative reinforcement to change behavior does nothing to instruct the person in question on why their behavior is causing problems; they stop simply because they don’t want to get in trouble. While the power shift this approach employs may feel awfully satisfying to those of us who have labored under some degree of oppression for much our lives—we get to dictate the terms of engagement, for once—merely shifting the power from one hand to another does nothing to change the destructive use of said power against us.¶ This practice of shaming people into behaving a certain way or using certain language does not truly address the underlying inclination; it does not unpack the thinking that allowed that speaker to feel entitled to say those things in the first place. Fear can be an effective motivator, but it’s not often a productive one, if our goal is broad and lasting cultural change. It is, after all, fear that motivates folks of all sizes to diet, that keeps queer folks in the closet, that makes women afraid to walk alone at night, that compels people of color to keep their heads down even in the face of overt discrimination and just get by. It is fear and shame that locks the systems that marginalize us in place, and as Audre Lorde has explained, in one of the most brilliant pieces of writing on social justice ever put to paper, there is little we can do while still holding on to the master’s tools.¶ Those of us who stand outside the circle of this society’s definition of acceptable women; those of us who have been forged in the crucibles of difference — those of us who are poor, who are lesbians, who are Black, who are older — know that survival is not an academic skill. It is learning how to stand alone, unpopular and sometimes reviled, and how to make common cause with those others identified as outside the structures in order to define and seek a world in which we can all flourish. It is learning how to take our differences and make them strengths. For the master’s tools will never dismantle the master’s house. They may allow us temporarily to beat him at his own game, but they will never enable us to bring about genuine change. And this fact is only threatening to those women who still define the master’s house as their only source of support.¶ Ideally, people should stop using certain language because they have developed an understanding of why that language is oppressive, and how their use of it contributes to inequality and marginalization, and not because they are afraid or ashamed of confusing social repercussions they do not understand. What we need is a commitment to giving people clear explanations—be they angry, or impassioned, or blunt—of why their words or behavior are problematic, or upsetting, or damaging. We need to resist relying on comfortable jargon to call people out, and to ditch the erroneous presumption that making someone feel stupid will encourage them to read more about a subject. It doesn’t work. Fear and shame don’t help people to understand how the language we use and the actions we undertake, even in our own small individual spheres, all conspire to create a social environment that oppresses us. Fear breeds resentment and, sometimes, hatred. These are not things we need more of. These are the things that put us here in the first place.¶

#### Turn—changing language doesn’t subvert ableism—their critique of language choices prevents genuine contestation of ableist oppression.

Perpetually Myself 11 Perpetually Myself—a blog by an anonymous author self-described as “a historian, cat lover, autistic woman, Yankee fan, neurodiversity advocate, feminist, Harry Potter fan, Hunger Games fan, fantasy/science fiction reader, and general supporter of social justice,” 2011 (“It’s not enough to call out ableist language,” Perpetually Myself—a blog, May 2nd, Available Online at http://allies-person.tumblr.com/post/5141183778/its-not-enough-to-call-out-ableist-language, Accessed 03-02-2012)

Language is important, but more important still are the underlying assumptions which shape our society. Assumptions about who is valuable and who isn’t, about what the proper way to behave is, about what counts as “contributing” to to society/the economy/whatever…the list goes on and on. Widespread use of “crazy” and “lame” (etc.) are but symptoms of the larger problem—society is full of ableist assumptions, some of which are very obvious and some of which may be more subtle—but ableist nonetheless. The elimination of ableist words is but a small part of what needs to be done, and it frustrates and disappointments me that so much “social justice” work has stopped at language—which is in many ways the easiest part.¶ Take stigma against people with intellectual disabilities. I am glad that it’s no longer acceptable to use the r-word in many circles, and that other words are making some headway. (I struggle with ”idiot” and “crazy” and a lot of others myself in everyday speech.) But I don’t think this has actually done all that much to promote[ed] the equality and worth of people with intellectual disabilities. There is still the assumption that it is better to be “intelligent” (whatever that means), that mental illness (however you define that) is something to be pitied, and that, in short, it’s better to be non-disabled than not. The end result is a very shallow sort of “social justice” discourse that keeps all of the underlying problematic assumptions in place while giving lip service to equality. It’s very troubling.¶ Truly examining one’s ableism does not mean renaming the tags on your blog so that “lame” and “crazy” no longer appear. It is not being the fifth person on a thread to self-righteously proclaim that “idiot” is ableist, and then simply stopping at that. That is superficial, and oftentimes little more than a way for neurotypical and/or able-bodied people to publicly demonstrate their Good Ally status and pat themselves on the back. Examining one’s ableism means constantly questioning and re-formulating basic assumptions which are oftentimes so deeply ingrained that it’s hard even to see them, let alone disavow them. Take the assumption that “intelligence” is valuable, for instance. It’s so ingrained in our society, so hard to root out—I’ll not pretend to be perfect on this score—and yet doing so is vital if we are to create a world in which people with intellectual disabilities are equals—not simply people-seen-as-lesser whom are condescended to.¶

### 1AR---AT Geoengineering

**No geoengineering silver bullets – no one process could prevent climate change.**

Dale **JAMIESON** Environmental Studies @ NYU **’13** “Some whats, whys and worries of geoengineering” *Climatic Change* 121 (3) p.

4.1 Silver bullets Even under optimistic assumptions and a capacious notion of what counts as geoengineering, there are no “silver bullets” (to use another metaphor) for addressing the problem of climate change. Deploying particular technologies could help to address some problems associated with GHG emissions while neglecting or exacerbating others. Sulfate aerosol injection, the approach discussed by Crutzen (2006), has received a great deal of attention. It would involve injecting sulfate aerosols into the stratosphere where they would scatter sunlight back into space. Even if this approach were successful in reducing mean surface temperatures, it would likely produce substantial regional variations in temperature, precipitation, and the intensity of the hydrological cycle, even perhaps disrupting the Indian monsoon (Robock et al. 2008; Brovkin et al. 2009; Bala et al. 2008). The 1991 eruption of Mount Pinatubo, which many consider a “natural experiment” in sulfate aerosol geoengineering, produced a substantial decrease in precipitation over land and even brought drought to some parts of the tropics (Trenberth and Dai 2007). In any case sulfate injection would do nothing to address problems such as ocean acidification. Managing solar radiation through sulfate aerosol injection would post an enormous societal challenge since the particles would have to be replenished frequently, perhaps on an annual basis (Bengtsson 2006). If we were to embark on an SRM program while continuing to increase the atmospheric concentration of carbon dioxide, we would risk catastrophic climate change if we were to lose the capacity or will to manage solar radiation anytime during the next millennium or beyond. There are few precedents in human history of such successful millennium-scale management (perhaps the Great Wall of China, which was functional from the 5th century BCE through the 16th century CE, is one). CDR strategies avoid some of these risks but, depending on the rate of removal, could have unpredictable climate effects (Preston 2012). Moreover, it would be difficult and expensive to create the infrastructure for a program that would be on a scale large enough to affect global climate and successfully sequester carbon for centuries or millennia. Doing this successfully would be equivalent to running the global fossil fuel industry in reverse. Extracting, transferring, and sequestering carbon on the scale that would be required would pose many challenges, including threats to local ecosystems (Gardiner 2011).

**You should be skeptical of ALL geoengineering solvency claims – huge industry pressure for more funding.**

Dale **JAMIESON** Environmental Studies @ NYU **’13** “Some whats, whys and worries of geoengineering” *Climatic Change* 121 (3) p. 527-537

4.6 The risks of research Most geoengineering advocates say that what they want is not deployment, but a dedicated research program. The program would start small, but could gear up to the scale of the Manhattan Project. They claim that there is a bright line between research and deployment. Bright lines, however, have a way of fading, particularly when it comes to dedicated research programs. In 1983, President Reagan created the Strategic Defense Initiative, a program devoted to developing technologies that would protect the American homeland from nuclear attack. Despite large costs and widespread opposition from many of the nation’s leading scientists, Reagan’s initiative has survived in some form for three decades, focusing on different technologies and wrapping itself in different purposes. It led to the U.S. withdrawal from the Anti-Ballistic Missile Treaty in 2002, increased international tensions on numerous occasions, and siphoned money away from valuable uses toward technological fantasies**.** Large research initiatives can be tougher to kill than vampires: they feed fortunes, careers, and reputations. As with the Strategic Defense Initiative, a dedicated geoengineering research program risks creating a self-amplifying cycle of interest groups and lobbies, building momentum toward eventual deployment as a way of justifying the research. A dedicated geoengineering research program is especially dangerous in the current unstable policy environment in which there is a large amount of good will backed by large sums of money, in a context in which there is little regulation. The voluntary carbon offset market has been valued at more than $700 million (Peters-Stanley et al. 2011). Successful attempts to appeal to this market could eventually lead to being part of a regulated offset market potentially worth billions. It is not too difficult to imagine that something like the medical/pharmaceutical complex could emerge in which research, deployment, marketing, and government policy are closely linked and mutually reinforcing. Given the large potential sums at stake, it is not surprising that the push for a dedicated government-supported research program is so strong and comes from so many different directions.

### 1AR---Pricing/Cap and Trade

#### The counterplan fails – can’t solve the aff and creates complacency – only perm do both solves.

Ball '18 (Jeffrey Ball; JEFFREY BALL is Scholar in Residence at Stanford University’s Steyer-Taylor Center for Energy Policy and Finance and a Lecturer at Stanford Law School., ; 8-1-2018; "Why Carbon Pricing Isn’t Working"; https://www.foreignaffairs.com/articles/world/2018-06-14/why-carbon-pricing-isnt-working, Foreign Affairs, accessed 11-20-2019; JPark)

* Double bind – either price is enough to be meaningful and it links to the net benefit or it can’t solve the aff.

In practice, however, there’s a problem with the idea of slashing carbon emissions by putting a price on them: it isn’t doing much about climate change. **More governments than ever** are imposing prices on carbon, even as U.S. President Donald Trump backpedals on efforts to combat global warming, yet **more carbon than ever** is wafting up into the air. Last year, the world’s energy-related greenhouse gas output, which had been flat for three years, rose to an all-time high. Absent effective new policies, the International Energy Agency has projected, energy-related greenhouse gas emissions will continue rising through at least 2040. If governments proved willing to impose carbon prices that were sufficiently high and affected a broad enough swath of the economy, those prices could make a real environmental difference. But political concerns have kept governments from doing so, resulting in carbon prices that are too low and too narrowly applied to meaningfully curb emissions. The existing carbon-pricing schemes tend to squeeze only **certain sectors of the economy**, leaving others essentially **free to pollute**. And even in those sectors in which carbon pricing might have a significant effect, policymakers have lacked the spine to impose a high enough price. The result is that a policy prescription widely billed as a panacea is acting as a narcotic. It’s giving politicians and the public the **warm feeling that** **they’re fighting** climate change even as the problem continues to grow. Sometime this century, global temperatures are all but certain to cross what scientists warn is a perilous threshold: two degrees Celsius above their preindustrial levels. The two-degree line, a notion introduced in 1975 by the economist William Nordhaus, is less an environmental cliff than a political rallying cry. But beyond it, a range of problems will grow worse, including extreme weather events, coastal flooding, and, in tropical and temperate regions, a reduction in the yields of crucial crops such as wheat and rice. So the world needs solutions that do more than merely chip away at the problem. What’s required are more **targeted moves**—ones that are politically difficult but possible and environmentally effective. These **include** phasing out coal as a fuel for electricity, except where coal is paired with technology to capture its carbon emissions; keeping nuclear power plants up and running; slashing **fossil fuel subsidies**; raising gasoline taxes; reducing the cost of renewable power; and toughening energyefficiency requirements. Carbon pricing need not be abandoned. It can, at least at the margins and in concert with these more direct carbon-cutting policies, help channel money into cleaner energy options. But there is **little evidence** Jeffrey Ball 136 foreign affairs for what has become an article of faith in the climate fight: **that** carbon **pricing should be** society’s **main tool** to keep the planet cool. PERMISSION TO POLLUTE The roots of the notion of curbing pollution by pricing it go back nearly a century. In 1920, the British economist Arthur Pigou developed the concept of an economic “externality”: a benefit or cost that is not priced into a given activity but can be, through what would come to be called a Pigouvian tax. Nearly 50 years later, in the late 1960s, two economists working separately—Thomas Crocker and John Dales—proposed a different sort of pricing mechanism to limit emissions: a combination of government-mandated caps and tradable emission allowances, a one-two punch that would come to be known as “cap and trade.” Under a cap-and-trade system, a government imposes a limit on the amount of carbon that the economy, or specified sectors of it, may emit. It apportions responsibility for curbing emissions in line with that cap to individual players, such as companies. At the same time, it creates a tradable currency called **a carbon permit**; each permit allows its bearer to emit one metric ton of carbon dioxide. In some cap-and-trade systems, the original permits are given away for free, whereas in others, they are sold—creating revenue for governments. If a polluter’s expected emissions exceed the cap, it must either curb its emissions—say, by installing more efficient manufacturing equipment or shifting to cleaner energy sources—or buy more permits on the market. A polluter whose emissions are trending below its cap can sell its excess permits on the market. In some systems, the market alone sets the price; in others, the government imposes a floor and a ceiling on the permit price. The basic idea behind a cap-and-trade system is twofold. First, by forcing polluters to pay for the carbon they emit, the system incentivizes them to invest in lower-carbon solutions, thus directing more private capital—and, in turn, more research and innovation—toward clean technology. Second, by spreading the burden for cutting carbon across an entire sector—or, ideally, across an entire economy—the system helps each regulated player find the lowest-cost way to reduce its carbon output. The first major use of emission trading was in the United States, to fight local air pollution. The federal government used it to phase Why Carbon Pricing Isn’t Working July/August 2018 137 out leaded gasoline starting in the 1980s and to combat acid rain, an effect of power plant emissions, starting in the early 1990s. Both campaigns succeeded, but limiting pollution from tailpipes and smokestacks in a single city or region is **infinitely easier** than slashing emissions of invisible carbon dioxide around the planet. Carbon pricing started in the 1990s in Scandinavia and expanded in the following decade throughout Europe. More recently, it has taken hold in California, the Northeast of the United States, much of Canada, and many other places. Today, according to the World Bank, 42 countries and 25 subnational jurisdictions—together representing about half of global gdp and a quarter of global greenhouse gas emissions— have imposed or are pursuing a price on carbon, through either a cap-and-trade system or a carbon tax. But because many jurisdictions have imposed carbon prices just in certain sectors of their economies, carbon pricing covers only about **15 percent of global emissions**, the World Bank has calculated. That portion should grow to between 20 and 25 percent once China, the world’s largest carbon emitter, implements a nationwide carbon-pricing program, as it has promised to do. Yet even that share would fall far short of the 50 percent of global emissions that a World Bank panel has said needs to be covered by carbon pricing within a decade in order to meet the global carbon-reduction goals set forth in the Paris climate accord. STRINGER / REUTERS Bad atmospherics: smokestacks in Jilin, China, February 2013 Jeffrey Ball 138 foreign affairs Why does carbon pricing squeeze certain sectors more than others? The answer is that it works well for industries that use a lot of fossil energy, that have technologies available to them to reduce that energy use, and that can’t easily relocate to places where energy is cheaper. In other words, it works well in the power and heating sector, which produces about 25 percent of global emissions. That industry is dominated by localized utilities that can curb their carbon emissions in a number of ways: by switching to more efficient equipment for burning fossil fuels, by shifting from higher-carbon fossil fuels such as coal to lower-carbon ones such as natural gas, by increasing their use of renewable energy, by capturing the carbon dioxide they produce and sequestering it, or by incentivizing their customers to waste less electricity. Carbon pricing tends not to work well for curbing emissions from buildings, which generate about six percent of global emissions. Builders rarely occupy the buildings they build, which means they don’t pay the energy bills and thus have little incentive to foot the capital cost of more efficient buildings. Nor does carbon pricing work well to curb emissions from transportation, which account for about 14 percent of the global total. Studies show that drivers are usually **unresponsive to** modest increases in gasoline and diesel taxes. And although they do respond to big hikes, taxes that high tend to be political nonstarters. No wonder, then, that carbon-pricing regimes tend not to tamp down emissions from buildings and vehicles. Just as the breadth of a carbon-pricing system matters, so does the price it puts on each metric ton of carbon dioxide. In 2017, a group of leading economists known as the High-Level Commission on Carbon Prices concluded that carbon prices would have to be between $40 and $80 per metric ton by 2020, and between $50 and $100 by 2030, to achieve the emission cuts called for in the Paris climate accord. (Even in the unlikely event that the 195 nations that have agreed under the accord to voluntarily constrain their carbon outputs met their promises, that wouldn’t stop global temperatures from surpassing the two-degree threshold.) But of the global emissions now subject to a carbon price, just one percent are priced at or above the commission’s $40 floor of ecological relevance. Three-quarters are priced below $10. The upshot: more Carbon pricing covers only about 15 percent of global emissions. Why Carbon Pricing Isn’t Working July/August 2018 139 than two years after the ostensible watershed moment of Paris, a mere **0.15 percent** of global greenhouse gas emissions are subject to a carbon price that economists deem high **enough** to make much of an environmental **difference**. Four countries have priced carbon at or above that $40 floor, according to the World Bank: Finland, Liechtenstein, Sweden, and Switzerland. These are rich nations with a deep-seated culture of environmental protection. They also have, by global standards, comparatively low-carbon electricity systems, thanks in large part to plentiful hydropower and, in the cases of Finland, Sweden, and Switzerland, a great deal of nuclear power, too. All told, they couldn’t be more different from the sorts of places—China, India, Africa, and the rest of the developing world—that most matter in the fight against climate change. The same is true of most of the U.S. states, including California, Maine, New York, and Vermont, that have chosen to price at least some of their carbon either on their own or through a regional capand-trade program for power plant emissions. Compared with other U.S. states, these tend to have ample solar power, wind power, or hydropower, and they are less reliant on high-carbon coal. It’s not just governments that are joining the carbon-pricing stampede. More than 1,400 companies globally, including some of the world’s largest multinationals, are voluntarily integrating carbon prices into their investment decisions, according to cdp, a nonprofit that gathers environmental data from companies and governments. When, say, an oil company decides whether to drill in a certain field or a bank decides whether to loan to a certain project, it first tries to calculate what would happen to its profits if the government imposed a particular carbon price. In theory, doing this should lead companies to favor less carbon-intensive investments. Here, too, however, the reality is underwhelming. To decarbonize the energy system enough to meet even the limited goals set in Paris, annual global investment in low-carbon technologies would have to rise by about $700 billion by 2030, according to the World Bank. The bank also estimates that an international carbon market could incentivize about one-third of that—about $220 billion annually. That figure in itself is telling: even under the rosiest of circumstances, carbon pricing will produce only a fraction of the emission cuts needed to put the world onto a sufficiently low-carbon path. Jeffrey Ball 140 foreign affairs THE PRICE IS WRONG How a strategy so widely seen as so promising has failed to live up to its ideal is a tale of good intentions thwarted by economic and political realities. Europe’s experience is instructive. Launched in 2005, the eu’s emission-trading system was designed to cover electricity generators and energy-intensive industries such as cement and steel manufacturing. But from the beginning, the companies the system covered got plentiful free permits. That was a compromise eu officials made to mollify opposition from industry. It meant that only those companies that experienced unexpected rises in emissions had to pay much for the right to pollute. When the 2008 global financial crisis struck, European economic activity declined, and so did emissions. Companies found themselves with more free permits than they needed, and European carbon prices tanked, from more than 25 euros per metric ton in 2008 to less than five euros in 2013. In recent years, the eu has toughened the system somewhat; among other things, it has required more companies to buy more of their permits, and it has broadened the system to cover airline flights within the eu. But the permits remain **so cheap** that the program is **not** prodding emission reductions **in line** with the longterm carbon-reduction goals that it has set. Between 2015 and 2016, eu emissions fell by 0.7 percent across the bloc—enough to keep the eu on track to meet its goal of cutting emissions to 20 percent below 1990 levels by 2020, but not enough, officials have admitted, to meet the eu’s more ambitious commitment of reducing them to 80 percent below 1990 levels by 2050. And in 2017, emissions covered by the eu’s carbon-pricing system actually rose, for the first time in seven years, the result of stronger than expected industrial output. Last year, recognizing significant flaws in its carbon-pricing system, the eu agreed to redesign it. The new version, set to take effect in 2021, seeks to tighten emission limits, reduce handouts of free permits, and pull excess permits off the market if their price falls below a certain level. But the reforms are probably too little, too late. The price of permits has risen markedly this year, from about eight euros in January to about 14 euros in mid-May. Nevertheless, some analysts have predicted that their price will average only about 18 euros per metric ton in 2020, about half the price that the World Bank says will be necessary to make a real dent in carbon emissions. In a November 2017 report, the Mercator Research Institute on Global Why Carbon Pricing Isn’t Working July/August 2018 141 Commons and Climate Change, a Berlin-based organization, cited persistently low permit prices when it warned that the eu’s carbonpricing system is “in a crisis.” California, the world’s sixth-largest economy, has had similar problems. Although it produces only about one percent of global greenhouse gas emissions, it has long been a bellwether for environmental policy, imposing regulations that are later adopted across the country and around the world. The state launched its cap-and-trade system for carbon in 2012, part of a broader plan to cut its emissions to 1990 levels by 2020—a goal less ambitious than the eu’s but more ambitious than the U.S. federal government’s. California is all but sure to meet that target. But even though emissions from power generation covered by its cap-and-trade system fell in 2016, those related to transportation— the state’s biggest source of carbon emissions—rose that year. What’s more, as an analysis released last year by Near Zero, a nonprofit research group in California, concluded, the decline in power plant emissions owes little to carbon pricing. Instead, it is largely the product of an increased use of hydropower (a result of higher rainfall) and a greater production of wind and solar power (a result of state renewable energy mandates). As of mid-May, California’s carbon price was around $15 per metric ton. It was that low because factors other than the carbon market led power producers to curb their emissions, leaving companies with extra permits that they had gotten from the state for free.

### 1AR---Innovate

#### 1] Perm do both

#### 2] Rapid innovation cements global warming – lowers fossil fuel costs, which raises carbon emissions, worsening positive feedback loops – only the perm solves by stopping companies from backlash.

Winter 12 (Ralph A. Winter is a Professor of Strategy and Business at the Sauder School of Business, University of British Columbia. He is the President of the Canadian Economics Association and the President of the Canadian Law and Economics Association. He is an associate editor for the RAND Journal of Economics. H is the author of “The Economics of Supply Chain Contracting,” “Organizational Form and Quality of Output,” and “Exclusionary Contracts.” “Innovation and the Dynamics of Global Warming,” 2/7/12, https://are.berkeley.edu/documents/seminar/WinterPaper.pdf)//tb

The innovation and development of clean energy sources such as wind and solar energy are emerging as a key strategy in the battle against global warming. The strategy rests on a seemingly obvious proposition: innovation lowers the cost of clean energy, leading to substitution away from fossil fuels, which lowers carbon emissions and mitigates the problem of global warming. The proposition, unfortunately, is false. Innovation in clean energy can set global temperatures on a permanently higher path. The subsidy of innovation, as a naked policy instrument unsupported by carbon pricing, is not merely suboptimal policy. Subsidizing innovation can make global warming worse. To develop the economic relationship between clean-energy innovation and climate change, I start with a paradox familiar to environmental economists. Fossil fuels are an exhaustible resource. Suppose that tomorrow a clean, inexhaustible energy substitute were universally available at a cost equivalent to 60 dollars per barrel of oil. The owner of any conventional fuel deposit with low extraction costs would prefer to sell at 59.99 or less rather than share the energy market with the substitute. Oil from these deposits will therefore be sold before clean energy captures any market share and at lower prices as a result of the innovation. The effect of the innovation in clean energy is that fuel will be exhausted - and carbon emitted – more intensively and at an earlier date. This paradox is that carbon emissions are initially higher as a result of clean energy innovation. 1 As set out in the literature, however, the theory predicts that in the long run clean energy innovation helps in the battle against global warming. Innovation in clean energy has two effects on carbon emissions. First, as in the example above, carbon is released earlier into the atmosphere as a result of innovation. In existing models, this early release of carbon into the atmosphere is neutral or beneficial in terms of the long run temperature trend as the atmospheric carbon is reabsorbed into the earth’s surface at a steady rate. The environment, represented by a single state variable, is able to improve over time. The second effect of innovation is that fossil fuel deposits with high extraction cost (above 60 dollars in our example) will be left in the ground rather than extracted. Less carbon is emitted into the atmosphere – a clear benefit of clean-energy innovation. The net effect is that the paradox disappears in the long run. The prediction is that innovation eventually works as intended. 2 This prediction is too optimistic. The theory offered here represents carbon in the biosphere via two state variables, carbon in the atmosphere and carbon on the earth’s surface. This allows us to include a fundamental feature of carbon cycle dynamics: positive feedback effects. As greater atmospheric carbon raises the global temperature, reactive ice-yields melt and methane gas is released from melting permafrost (to take just two examples), resulting in a higher *rate* of flow of carbon to the atmosphere. The effect is that an initial increase in carbon emissions that raises global temperature will increase the rate at which carbon escapes from the earth’s surface and accumulates in the atmosphere. Innovation combined with the sufficiently strong feedback effects then yields higher temperature paths not just in the short run but permanently. The acceleration of carbon emissions (the first effect of innovation) may overwhelm even in the long run the benefit of reduced total carbon emissions (the second effect). Because of positive feedbacks, even a small innovation may lead the temperature path to a discretely higher steady- state temperature. Global warming is a long run problem and it is the long run consequences of global warming policies that are critical for policy. The theory here argues against clean energy innovation subsidies as a naked policy instrument. As a component of a portfolio of policies, however, clean-energy innovation subsidies are of value because the other main policy instrument, carbon pricing, eliminates the “dark side” of innovation. To render innovation of value, carbon prices must be reactive to innovation successes – and reactive in a non-obvious way. When a new innovation gives clean energy producers an advantage over conventional energy, a reactive carbon price policy is often one that magnifies this advantage, by raising the tax on fossil fuel use. Fossil fuel producers are hit with a double whammy. Carbon pricing is thus an important complementary instrument to clean energy innovation, being necessary even to ensure that the net impact of innovation is positive. This complementarity is not well understood among policymakers. With carbon taxes seemingly impossible to implement given U.S. politics, clean-energy research and development is becoming the focus across a range of the political spectrum. 3 Support for the policy trend presupposes that carbon pricing and clean energy subsidies are substitutes in the battle against global warming. This is natural assumption, given that these are two instruments available to solve the same problem, but the assumption is misguided. Carbon pricing is even more essential when clean energy innovation is successful than when it is not. This paper contributes to a growing literature on global warming and an earlier literature on exhaustible resource economics. The clean energy paradox, or green paradox, in terms of the impact of innovation described is developed in Strand (2007) and very clearly in Hoel (2008) as discussed in footnote 1. Acemoglu et al (2011) develop a dynamic model integrating the economy with climate change in which the driver of policy design is endogenous technical change. These authors assume a constant rate of environmental regeneration. This assumption would allow the environment to recover completely from any past damages if the rate of emissions could be reduced sufficiently. It is never too late to recover. The built-in optimism about the long run in Acemoglu et al (2011) and in Hoel (2008) disappears once the positive-feedback mechanisms of the carbon cycle are recognized. Positive feedback mechanisms require that the environment be represented by multiple state variables, as in the climate science literature, not a single state variable as in Acemoglu et al and Hoel. 4 I allow uncertainty in the innovation process in my model to capture an important distinction between the ex-ante effect on global warming of the threat of innovation and the ex post effect of successful innovation. In doing so, I draw on the economic literature on the theory of pricing in an exhaustible resource market subject to innovation in a backstop technology (Heal 1976, Gallini, Lewis and Ware 1983, Dasgupta and Stiglitz 1981) as well as the literature on exhaustible resource pricing with heterogeneous extraction costs or reserve-dependent costs (see Devarajan and Fisher 1981). The possibility of perverse effects of clean-energy innovation and the complementarity of innovation and carbon pricing are not fully appreciated in the climate policy literature. The most prominent model integrating economics and climate dynamics is the Dynamic Integrated Model of Climate and the Economy (the DICE model) (Nordhaus, 2008) and its extension to a regionally disaggregated model (Nordhaus 2010 and 2011). The latest version of the DICE model includes a backstop clean-energy technology, but assumes (1) a current Hotelling rent of $0.07 per ton of carbon for fossil fuels (Nordhaus, 2007, p.31), which implies a Hotelling rent of only $0.01 per barrel of crude oil; 5 and (2) an extraction cost of zero (Nordhaus 2008, p.43). The effects analyzed here, in contrast, rely entirely on a large Hotelling rent. The DICE assumptions (1) and (2) are at odds with the observed price of 80-100 dollars per barrel. 6 The interaction of innovation and carbon pricing policy is outside the focus of the DICE model. 7 The Stern review of global warming policy (Stern, 2006) notes that the price reaction of the fossil fuel market may dampen the effects of policy of clean energy subsidies, but does not recognize the possibility of a negative net impact of innovation. Stern is solidly of the conventional view that the net effect of innovation in clean energy must be positive. Stern surveys the important positive feedback mechanisms in carbon models but does not connect feedback mechanisms to the reaction of fossil fuel prices to innovation, which is the analytical focus of this paper. Section 2 of this paper offers an economic model of innovation and the dynamics of global warming. Section 3 moves from positive economic theory to normative analysis, and from the consequences of existing global warming policy to optimal policy in a first-best world. I analyze an optimal carbon tax in the model with exogenous innovation. The first-best optimum can be implemented in a competitive market with a carbon tax, a tax that will increase in the event of early success in innovation. Optimal carbon pricing does allow clean-energy innovation to have an unambiguously positive impact on social welfare. Even in the first-best optimum, however, successful innovation leads to a worsening of global warming. The concluding section offers a critical discussion of the policy literature in light of the theory developed here.

### 1AR---EOR

#### 1] EOR is unregulated and causes massive pollution.

Geraci 17 Matthew Geraci, 8-2-2017, Matt Geraci received his BA in East Asian Studies with a concentration in China from Bucknell University. He earned his MA in International Economics and International Relations from the Johns Hopkins University School of Advanced International Studies. He spent his first year of graduate study living in China at the Hopkins-Nanjing Center, where the majority of his coursework was conducted in Mandarin Chinese. He attended Middlebury College’s Summer Language School to enhance his Chinese proficiency. Matt’s research specializes in the nexus between energy, natural resources, and environmental issues. Matt has an extensive background working for non-profits in the Washington, D.C. area. During his internships at Clean Water Action and Oceana, his research was utilized to explore the economic and environmental impacts of the oil and gas industry on drinking water resources and the U.S. Outer Continental Shelf. His previous work at the Center for International Private Enterprise as a Program Coordinator focused on international trade facilitation. His most recent publication is “The Environmental Risks and Oversight of Enhanced Oil Recovery in the United States.” Matt enjoys rock climbing, backpacking, and other outdoor pursuits in his free time."The Environmental Risks and Oversight of Enhanced Oil Recovery in the United States", Clean Water Action, https://www.cleanwateraction.org/publications/EOR-risks, Accessed on 11-15-2019 // JPark

Enhanced oil recovery (EOR) involves the injection of fluids and/or gases underground to improve the flow of oil and gas to the surface. There are over 145,000 active and idle Class II EOR injection wells, more than half of which are in California and Texas. It is the most common oil recovery practice in the United States, accounting for an estimated 60% of total U.S. crude oil production. This report provides an overview of the major technologies, environmental impacts, and regulatory schemes associated with enhanced oil recovery and provides recommendations for improving the protection of underground sources of drinking water. Despite its prevalence, EOR technologies and the dangers they pose to the environment are largely unknown to the public. EOR presents real threats to drinking water, yet oversight of these practices has lagged. The regulations on EOR activities are decades old and fall short of providing sufficient safeguards for groundwater. State and federal regulators tasked with implementing these outdated rules lack the proper funding and staffing levels for adequate oversight, and significant data and monitoring gaps impede their ability to detect problems. The lack of even a uniform definition of EOR and related technologies means that data is often unreliable and incomplete. The U.S. Environmental Protection Agency regulates EOR under the Safe Drinking Water Act (SDWA) Underground Injection Control (UIC) Program. Established in 1980, the UIC program is a necessary part of oil and gas regulation in the United States. EOR activities are regulated under the UIC Class II Program because they involve the injection of fluids into the subsurface to increase oil production. The UIC program plays a critical role in protecting drinking water resources, yet receives little public attention and outside scrutiny. However, digging beneath the surface reveals numerous regulatory problems with both federal and state UIC programs. Furthermore, a general lack of reporting of incidents may mask the severity of the UIC program’s underlying issues. Other hydrocarbon recovery activities, such as hydraulic fracturing and offshore drilling, have received far more media and public attention. Enhanced oil recovery, on the other hand, has enjoyed relative anonymity, which has in part resulted in no substantial review of its regulatory oversight since the 1980s. EPA’s oversight of state UIC programs is underfunded and understaffed. EPA does not collect comprehensive and comparable data on EOR on a national level. The agency is unable to adequately conduct sufficient oversight of EOR. Federal regulations that set the minimum standards for injection wells have not been updated in decades and fail to provide adequate safeguards. Data collection and management at the state level is neither satisfactory nor uniform, inhibiting proper oversight. Additionally, states prepare little information about EOR for a public audience, and state regulatory websites vary in both content and quality. State regulatory agencies are often not equipped with sufficient staffing or budgetary resources to cope with daily responsibilities that have been increasing since UIC’s inception. Much like the federal minimum standards, state UIC regulations, in many cases, are out of date and inadequate.

#### 2] EOR slows transition to renewables, saves the fossil fuel industry, and causes warming

Poggio 19 (Poggio, Marco. “Carbon Capture: Will It Save the Climate, or the Fossil Fuel Industry?” Climate Liability News, 13 Mar. 2019, [www.climateliabilitynews.org/2019/03/13/carbon-capture-fossil-fuels-ciel-report/](http://www.climateliabilitynews.org/2019/03/13/carbon-capture-fossil-fuels-ciel-report/). [Marco Poggio is an independent journalist who writes for Climate Liability News, New York Daily News, and Climate Law News.])//LK [Accessed 11/19/19]

Climate scientists have for decades researched ways to extract carbon dioxide from the atmosphere as a way to slow climate change, but while their work has progressed from a handful of fringe theories to promising technologies, they remain controversial. That’s partly because they have drawn an unlikely backer: the fossil fuel industry. Since at least the 1980s, researchers have devised and tested technologies aimed at capturing CO2 from the air—a field broadly referred to as carbon dioxide removal or negative emissions technologies. Governments and private investors have begun to hail those technologies as a viable path toward slowing global warming and a report by the Intergovernmental Panel on Climate Change (IPCC) mentions them as necessary to meet the terms of the Paris Climate Agreement. They have drawn significant investment from oil, gas and coal companies looking for ways to continue developing fossil fuels as the world moves toward cleaner energy. But some scientists and policy makers are alarmed that a reliance on these technologies will continue our dependence on fossil fuels and will impede the transition to renewable energy sources. A recently published study by the Center for International Environmental Law warned that some technologies, in particular carbon capture, utilization, and storage (CCUS) technologies, could slow the transition to renewables. “CCUS is valuable to the fossil fuel industry in three key ways: it expands oil production, provides a lifeline to a declining coal industry, and further entrenches the overall fossil fuel economy,” the report says. “Incentivizing CCUS through policy and relying on it in planning will likely slow the transition away from fossil fuel investments and undermine broader efforts to mitigate climate change.” The debate comes with few black-and-white solutions. Touting technology and innovation has become a talking point in dealing with climate change by Republicans who feel they can no longer run from the issue altogether, but climate activists argue it is little more than their latest cover for pushing climate action indefinitely into the future. And none of the technologies are close to being developed at a scale large enough to have a true impact on global warming, a process that would have to be coordinated among many countries on a vast global scale. At the same time, many climate scientists argue negative emissions technologies are absolutely necessary to fend off the worst impacts of global warming. For the fossil fuel industry, which sees the cost of renewables falling rapidly, negative emissions technologies provide a scenario in which fossil fuels—in particular coal, by far the largest contributor to the world’s CO2 emissions—can survive the transition to cleaner energy. An Array of Ideas Negative emissions technologies differ widely in terms of techniques and results. Some involve natural ways to extract CO2 from the air, such as planting more trees, restoring wetlands or modifying the soil to make it absorb more CO2. Others require elaborate feats of engineering. Carbon dioxide can be captured from the smokestacks of power plants, refineries, iron, steel, or cement plants; or it can be extracted directly from the air, where it’s more rarefied, by way of giant fans, with a process called direct air capture. Some negative emissions technologies have failed to produce tangible results and others have produced little more than skyrocketing costs: one high-profile carbon capture and storage project in Kemper, Miss., was supposed to be the vanguard of clean coal technology but ended up costing $7.5 billion and the technology was scrapped altogether in favor of burning natural gas. Other technologies, like direct air capture—which works to separate carbon dioxide from the air and then store it—are on the rise, thanks to innovations that are making it less expensive and more appealing to investors. Harvard engineer David Keith has estimated the direct air capture system he devised could cut the cost of CO2 extraction from $1,000 per metric ton to a range between $94 and $232 per metric ton. His company, Carbon Engineering, received investments from billionaire Bill Gates, oil magnate Murray Edwards, and more recently, oil giants Chevron and Occidental. Captured CO2 with negative emissions technologies is either stored in deep underground geological formations in the case of carbon capture and storage, or used for production of chemical fuels, biofuels and heating system fluids. The vast majority of captured CO2, however, is currently used to extract oil. In a process called enhanced oil recovery, compressed CO2 is injected into depleted oil reservoirs, causing oil to expand and flow more easily to surface. The role of CO2 in oil extraction is what makes many critics think carbon capture and storage won’t help with climate change. Steven Feit, a lawyer and one of the authors of the Center for International Environmental Law report, said the unbreakable relationship between fuel combustion and CO2 removal helps sustain a vicious circle where fuel is burned, CO2 is produced, then captured, then used to produce more fuel. “We’re talking about a system that would be making fossil fuels harder to transition away from, while also making it easier for old companies to make more oil. There’s a kind of perverse relationship between all these moving parts,” Feit told Climate Liability News. Feit said he believes the majority of researchers and engineers studying negative emissions technologies are well-intentioned, but their solutions will not avoid the need for drastic CO2 emissions cuts and the boosting of solar and wind energy. “What is required to effectively deal with climate change is a transition from the kinds of systems we have to ones which are sustainable and low or zero carbon,” he said. A Well-Funded Effort The U.S. government has long supported negative emissions technologies projects, with the Department of Energy having funded research since at least 1997. Last month, Secretary Rick Perry awarded $24 million in funds to eight companies for research and development of CCUS technologies. The funds, which will come from the Office of Fossil Energy, will add to the $28.9 million in research fund awarded during fiscal year 2018. “By 2040 the world will still rely on fossil fuels for 77 percent of its energy use. Our goal is to produce them in a cleaner way,” Perry said in a statement. The federal government also provides tax credits to fossil fuel companies that incorporate CO2 capture and storage systems in their operations. All major oil companies have invested in negative emissions technologies. Currently, there are 23 large-scale CCUS projects around the world that are either operating or under construction. In its “2019 Energy and Carbon Summary,” ExxonMobil reported investments of more than $9 billion in the development of lower-emission energy solutions that include carbon capture and storage. The company boasts having 30-year expertise in storing captured CO2 underground “in a safe and secure fashion.” In its “Sky Scenario,” Shell projected the deployment of 10,000 large-scale carbon capture and storage (CCS) facilities by 2070, in a world with net-zero CO2 emissions. Chevron has invested more than $75 million in CCS research and development over the past decade. The company is also part of the CO2 Capture Project, an industry group of four major companies, which include BP, that have joined resources into CCS research. Those investments, while they may sound large, are tiny compared to the overall research and development budgets of the oil companies. Exxon, for one, plans to invest $200 billion in the next seven years on traditional oil and gas projects around the world. It’s All About Scale While engineers, scientists, governments and industry all look for the magic bullet of some kind of carbon capture and storage, the reality is none of today’s existing technologies are feasible on any kind of realistic scale. And even if they were, not all climate engineers are convinced that transforming captured CO2 into products would be viable on a large enough scale to make a difference. Massachusett Institute of Technology engineer Howard Herzog believes the best way to deal with carbon dioxide is to store it underground. He also thinks direct air capture technology is not cost effective, is too complicated and has the potential of removing only 1 or 2 percent of global emissions. “I’ve been very critical of direct air capture in my writings. I think the people who are promoting it are under-realistic. I just think it’s too expensive. Let me just say: I don’t believe the cost numbers that they’ve put out,” he said. Herzog, who discloses that he receives funding from Exxon to research CCS technologies, said they won’t solve the issue of climate change. “Carbon dioxide removal and negative emissions can be an important part of climate change policy. It doesn’t replace current efforts or lack of current efforts,” he said. “The best way to take CO2 out of the atmosphere is not put it there in the first place.” A spokesperson from Climeworks, a Europe-based direct air capture company, said in an email that even with tight climate regulations in place, negative emissions technology are still needed to offset the CO2 currently in the atmosphere. “We have already passed the point of an either/or-decision. To reach the Paris agreements, all means of promoting renewable energies and emission reductions have to be deployed together,” the email said. The Center for International Environmental Law report points out Climerwork’s partnership with car maker Audi in creating fuels made with captured CO2 that can be used alongside regular fuel as an example of a lingering influence fossil fuels still have on markets, and a sign of the industry opposition to change. The report also highlights the role of government funding and private investments in negative emissions technologies in helping the fossil fuel industry build new infrastructure. A new network of of pipelines will have to be built in order to transport the CO2 from the capture facilities to appropriate geological formations underground where it will be stored for hundreds of years. Those storages will have to be monitored to ensure the carbon dioxide doesn’t find its way up to the surface. The massive amount of work that will be required to maintain a system highly reliant on negative emissions technologies will be dangerous step backwards, the report says. “We need to transition away from reliance on fossil fuels. Anything that moves us toward greater reliance will not be a solution,” the report says. Herzog disagreed with the main claim in the Center for International Environmental Law report—that negative emissions are helping the fossil fuel industry. “Fossil fuel is 85 percent of our energy economy. There’s good and bad. With climate change, the point is to keep CO2 out of the atmosphere. So if you can use fossil fuels without putting CO2 into the atmosphere, what’s wrong?” he said. Herzog said the public has preconceived ideas about climate change. “On the right, they deny climate change, because they don’t want to deal with it. On the left, they want to use climate change as reason we just do renewables. ‘We don’t need nuclear, we don’t need CCS, we’ve just got renewables’ That’s not right, either. Renewables can’t do it all. It’s going to be very hard to get to net zero emissions, and you really need every technology you can to help you.” Sven Teske, a German engineering and researcher at the University of Technology, Sydney, said renewables have the potentials to replace fossil fuels sooner than most people think. For over 20 years, Teske researched the market potential of solar and wind technologies, and came up with scenarios where renewables are able to sustain the world’s power demand. “Those will be by far the dominating technologies in the next decade or two,” he said. “CCS is much more expensive than renewables, because renewables are already cheaper than coal, and if you had new equipment then it’s even more expensive. And also, you have all the structural cost to get the CO2 underground and keep it there.” Teske said he understand the fossil fuel industry is feeling cornered by the advancing of ever cheaper renewable power technology. However, he said, fossil fuel companies have the capital to experiment a pivot to renewables. As an example, he mentioned Shell, which invested in offshore wind power, including a recently built wind turbine project off the coast of Norway. Teske believes the negative emissions technology has been surpassed and the right direction is now in renewables. “This industry is moving in this direction,” he said. “CCS has been discussed over the last 20 years. At the end of the day, close to nothing has been delivered, while renewables now are the main part of newly built power plants. It is actually already happening.”

#### 3] Overreliance on EOR leads to water shortage – the PIC causes an unheard of shift that makes water pollution extreme and leads to drought

Kart 11 (Kart, Jeff. “Popular Oil Recovery Method Comes Under Fire for Heavy Water Use.” Inside Climate News, Midwest Energy News, 2 June 2011, insideclimatenews.org/news/20110531/popular-oil-recovery-method-comes-under-fire-heavy-water-use. [Jeff Kart focuses on interesting, innovative and revolutionary U.S. stories about green startups and nongovernmental organizations as a Forbes contributor. He’s an environmental communications consultant. That means he spent 20 years in print newspapers until the bottom fell out around 2010. He’s been in the virtual world since then as a blogger, writer, editor and social media manager. He authors a weekly public radio show on the environment in Bay City, Michigan, where he goes by the moniker Mr. Great Lakes. He received a bachelor's in journalism from Michigan State University, a master's in environmental studies from University of Illinois at Springfield and has completed numerous fellowships and been a featured speaker on environmental reporting and social media at a number of conferences.])//LK [Accessed 11/19/19]

A common method of extracting oil by injecting large amounts of water into old wells is coming under scrutiny by Michigan environmental groups. The technique, known as water flooding, has been around for decades. But like many non-conventional means of oil recovery, it is becoming more economically viable as prices rise, and there is little information on exactly how much water is being traded for the oil that's produced. Energy extraction is placing increasing pressure on the nation's water supply, according to a new report by the nonprofit World Policy Institute. The report, "The Water-Energy Nexus," explains how traditional and alternative energy technologies are consuming a rising amount of water per unit of energy. While agriculture is responsible for 80 percent of water consumption in the United States, energy production consumes most of the remaining 20 percent. "The competition between water and energy needs represents a critical business, security and environmental issue, but it has not yet received the attention that it deserves," Diana Glassman, one of the report's authors, said in a statement. A Michigan Example Near Bay City, Michigan, Terry Miller heads up an environmental group called the Lone Tree Council, and also holds the elected position of Monitor Township trustee. In the township, the Muskegon Development Co. is proposing a project to recover additional oil by flooding old wells with up to 42,000 gallons of water per day. The water usage would last for up to eight years, according to state records, for a total of more than 122 million gallons over the life of the project. Muskegon Development has asked local officials to pay to extend a water line 2,300 feet for the work, to take place in what's known as the Kawkawlin Field. The request has been tabled by township trustees, according to Miller, because it would cost the township an estimated $245,000. The company proposed that the township would recoup the money through the sale of water back to Muskegon Development. The water would come from Lake Huron, via the Bay County Department of Water and Sewer. However, engineers for the township estimate it would take up to 9.5 years — longer than the projected life of the project — for the township to recoup its investment at the company's estimated rate of water usage. Representatives from Muskegon Development did not respond to requests for comment. Like Glassman, Miller believes the impact of water use for energy extraction has fallen under the radar of government leaders and the general public. He sees secondary recovery as a practice that has bypassed laws like the international Great Lakes Compact, meant to protect the basin from large water withdrawals. While the water amounts for the Kawkawlin project may seem large, they're relatively small by industrial standards, and don't meet the thresholds for extra regulations under the Compact, according to Hal Fitch, assistant supervisor of wells for the Michigan Office of Geological Survey. Larry Organek, an engineer for the Michigan Office of Geological Survey, said the state Department of Environmental Quality isn't keeping records of how much water is being used in total for the more than 50 secondary recovery projects currently in operation in the state. Miller says that lack of oversight is exactly the problem. "How many of these projects are going on, and how much nickel and diming of our water resources is occurring without anybody's knowledge for the most part?" Miller said. The Michigan Environmental Council, an umbrella group of more than 70 organizations in the state, shares Miller's concerns about secondary recovery. "The industry is pursuing riskier options like this because the easiest oil reserves have already been extracted," said energy program director David Gard. "In a sense, we are getting more desperate to keep our gas tanks full. This means pressure to expand production from older wells will only intensify. We need to make sure this doesn't happen at the cost of damaging our most precious natural resources." Oil Recovery, by the Numbers U.S. oil production relies heavily on secondary recovery via water flooding, according to a 2009 report by Argonne National Laboratory. The technique requires an average of 8 gallons of water for every gallon of crude oil that's recovered, although the amount needed can vary based on the geology and characteristics of individual wells. In 2005, domestic onshore recovery operations in the U.S. required an estimated 1.2 billion gallons of injection water to produce 146 million gallons of conventional crude oil, according to the Argonne report. By comparison, U.S. agriculture uses about 100 billion gallons in a typical year. The "Water-Energy Nexus" report, which was conducted by the World Policy Institute and EBG Capital, found that emerging oil and alternative fuel sources consume much more water than conventional oil. For instance, petroleum from the Canadian oil sands extracted via surface mining techniques can consume 20 times more water than conventional oil drilling, and irrigated soy- and corn-based biofuels can require thousands of times more water than gasoline. In addition, natural gas produced by hydraulic fracturing, or "fracking," consumes seven times more water than conventional gas extraction, but roughly the same amount of water as conventional oil drilling. Michigan regulators recently approved rules that will require fracking operations to report the amount of water they recover from wells. Big Potential with Water Flooding According to an order granted by Fitch for the Muskegon Development work, there are 85 producing wells where the Kawkawlin project would take place, and more than 84,000 barrels of oil left to be recovered using water injection. "When you drill up a field, you might get 30 percent of the oil out of the reserve," Fitch said, "so 70 percent is left behind. If you undertake secondary recovery, you can recover maybe another 20 to 25 percent." Secondary recovery using water has been going on in other parts of the Kawkawlin Field for about 15 years, according to Organek. The water line extension would allow for the third phase of the project. Michigan regulators say the practice of secondary recovery using water has been growing in the state, or is at least becoming more economical, in the wake of $4 a gallon gas prices and crude oil prices above $100 a barrel. "As the price of oil increases, these projects become more likely," Organek said. "They are capital intensive in the beginning, but as with a lot of other projects, as the price of oil moves up, they become more economical." A state order filed for the project says Muskegon Development expects to generate a profit of around $16 per barrel during the first eight years. That's based on spending $4.8 million for initial capital costs and about $11 million on operations during the eight-year period. Most secondary recovery projects in Michigan are using water for oil recovery, Organek said. A half dozen others use captured carbon dioxide, such as a project near Gaylord that's part of the Midwest Regional Carbon Sequestration Partnership. Organek said he's not aware of any environmental or safety violations related to past secondary recovery in the Kawkawlin Field. State and federal permits for such projects require periodic testing and inspections to prevent problems like leakage to groundwater. Not for Drinking Anymore A major concern about secondary recovery projects is that none of the water is available again for drinking. State and federal permits for the Michigan project, for instance, don't require the water to be treated once it becomes contaminated with crude oil. Fitch acknowledges that water used for secondary recovery is "lost to the hydrologic cycle."

#### Add a water insecurity spills over impact if you want

### 1AR---Phaseout

#### 1. Perm do the counterplan – eliminate can mean a drastic change/reduction and is vague.

Wisconsin Employment Relations Commission Arbitrator 11

page9image3570031248(Arbitration LOCAL 2492 - MARATHON COUNTY ADMINISTRATIVE, TECHNICAL AND PROFESSIONAL EMPLOYEES UNION, AFSCME, AFL-CIO WISCONSIN COUNCIL 40 AND MARATHON COUNTY Case 334 No. 70449 MA-14966)

“The trigger for layoff is not by a complete elimination of the position.” Article 6(B) contains no reference to the layoff triggering mechanism being related to the elimination of a position. “It simply states ‘whose position is being eliminated.”’ This language is not clear and when a contract term is ambiguous the law favors an interpretation which would avoid a harsh, absurd or nonsensical result. The Union argues that, in the face of this ambiguous language, the Arbitrator should interpret the term “eliminated” to mean “that when a position is so drastically changed from full-time to part-time status that it connotes an elimination of that position within the meaning of the contract.” The fact that the parties negotiated a meet and confer provision in the CBA (Article 6(B) - Reduction in Work Hours). Because of this, it is apparent that the parties were aware of the lack of clarity of the word “eliminated” and negotiated the meet and confer language to cover the event of a reduction in an employee’s work hours.

#### 2. Can’t solve warming – 2020 Riyadh is coming up – that’s the next pivotal G20 summit and Koop says G20 action is key.

#### 3. Can’t solve leadership – now is key – that’s Luber.

### 1AR---Supertrees

#### 1] Biod solvency deficit – supertrees would crowd out organisms and habitats that occupy those areas – 1AC Plumer proves a brink for bioD now

#### 2] Conceded 1AC Roberts – proves supply side solutions are good

#### 3] Perm do both – can’t solve the aff – doesn’t incentivize production of renewables

#### 4] Be skeptical – if this worked it would’ve been integrated and bought already

### 1AR---Trees

#### Planting trees wrecks biodiversity and cannot effectively sequester carbon.

Morss 11-18 Alex Morss, 11-18-2019, Freelance ecologist, journalist & educator. Wildlife, environment & science communication. "Opinion: Planting trees to tackle climate change might feel nice, but it could be doing more harm than good", Independent, https://www.independent.co.uk/voices/planting-trees-climate-crisis-environment-a9207086.html, Accessed on 11-19-2019 // JPark

We face an epidemic of the wrong sort of tree hugging. With climate crisis awareness now at its peak almost every big party politician, land owner and charity seems to be racing to embrace tree planting to capture carbon. Are we seeing ecological salvation all packaged up in those therapeutically earthy smelling root balls? Not if the effort is misguided. In the wise words of the late, great author Oliver Rackham, in 1986: “**Tree planting** is not synonymous with conservation; it is an admission that conservation has failed.” He likened a modern wooded landscape to a library in which thousands of ancient books are destroyed each year by people who cannot read them and do not appreciate their value, then the shelves are simply restocked with “bad paperback novels and pamphlets containing meaningless jumbles of letters.” Rackham understood that one of the biggest threats to what remains of our dilapidated wildlife heritage, aside from habitat loss, is the **introduction of alien species and** diseases through soil and transplanted **tree stock**, and through a loss of genetic diversity in favour of monocultures of unnaturally grown nursery trees. Add to that, the enlarged **water and carbon footprints of growing and transporting**, the plastic pots, tree guards and ties, ongoing watering, possibly **peat usage**, lower resilience, lack of regional, wild or native provenance, and suddenly those neat rows of dream trees – all the same age and genetic stock – might feel closer to a manufactured Disneyland forest than a wild wood. Yet politicians never tire of being photographed planting trees. It is the easy, celebrated crowd-pleaser, loved by schools, charities and funders, even though it is often a poor surrogate for a more environmentally sound tree choice that would help tackle climate change and the ecological crisis. In October, Extinction Rebellion symbolically gifted a tree to every eager politician in parliament. Now we have the Tories and the Lib Dems locking spades in a manifesto duel: the blues are promising 30 million new trees, so the yellows have pledged to double it. Labour says it will take advice from scientists. Those millions are still only one per cent of the committee on climate change’s advice on how many trees Britain needs to plant to meet our climate change limiting commitment, and yet still **there is no promise on how ecologically valuable or carbon-useful** the trees will be. The Woodland Trust is calling on one million people to plant a tree or donate to have one planted, on November 30, for Tree Charter Day, with events across the UK. Amid the race, we risk losing sight of the other crisis: tackling the ecological emergency and halting the sixth mass extinction, which require massive habitat protection measures: **not just any old trees**, but **ecologically** and **climate-resilient**, relevant ones. The trees should be selected to fulfil all their important purposes beyond merely storing carbon. Therefore it is vital that we do not plant the **wrong sorts of trees** in the **wrong ways**. As funding across local authorities and conservation charities has evaporated amid a decade of austerity, I have witnessed local nature reserves and wildlife sites committing eco-vandalism by planting up precious grass wildlife sites as new woodlands. This seems driven by a **feel-good factor**, easy access to funding for tree planting and pressure because of a lack of resources to continue with hay cuts or grazing needed to preserve the site as species-rich grassy ecosystems. Watch more Every Christmas Australians pray the bushfires will spare their house While we only have 2 per cent of ancient woodland cover left in Britain, we also only have 1 per cent of species rich meadows, and they need saving too. Both habitats harbour rich diversities of declining wildlife. Meanwhile scientists are **widely disagreeing on how much CO2** each tree will sequester, as well as how many and which are needed to partially photosynthesis our way out of our climatic mess and how much land would be needed to reduce CO2 levels in the atmosphere back down to safe pre-industrial levels. There remains uncertainty on whether there is even enough suitable land and whose land it should be. Forest researchers recently found that globally were monoculture plantations of fast growing trees, usually intended for harvest, holding little carbon, ecologically poor and even decreasing biodiversity. Meanwhile mass **tree planting in grasslands and savannahs threatens unique biodiversity**, not just in the UK but elsewhere too. And afforestation for offsetting is plagued by complaints of fraud and colonialism. On 4 November, the UK government launched a new £50m Woodland Carbon Guarantee scheme, with payments to farmers and landowners to plant more trees to help tackle climate change.

### 1AR---Courts

#### Eliminating subsidies requires congressional action – solvency deficits – only Congress can change financial law and account for all that exist.

Chen 18 Han Chen (International Climate Advocate, Global Advocacy, International Program, Natural Resources Defense Council). “Can the US Phase Out Fossil Fuel Subsidies?” Our Energy Policy. 25 June 2018. JDN. <https://www.ourenergypolicy.org/can-the-us-phase-out-fossil-fuel-subsidies/>

The first step to eliminate subsidies is to do a full accounting of those that exist. The US completed a subsidy “peer review” in 2016. While the official US report contained gaps, it did include a list of substantial subsidies in need of reform: $1.6 billion in subsidies for expensing of intangible drilling costs, $966 million in unnecessary write-offs for depletion of oil and gas wells, a domestic manufacturing deduction of $1.0 billion, along with many other subsidies. The next step is to eliminate subsidies: which will require action through Congress. It’s time for lawmakers to phase out government support for fossil fuel production, while ensuring a just transition for workers involved in these industries.

### 1AR---CCS

#### 1] doesn’t solve the case – doesn’t spur greentech

#### CDR is decades away, expensive, and inadequate- perm is key to solve

**Shepherd, 15** (John, Professorial Research Fellow in Earth System Science at University of Southampton., “CLIMATE CHANGE: WHY CAN’T WE JUST REMOVE CO2 FROM THE AIR?”, 8/9/15, http://www.newsweek.com/climate-change-why-cant-we-just-remove-co2-air-361084)

If we have put too much CO2 into the air, wouldn’t it make sense to find ways to remove it again? Well, yes: It would. But sadly it isn’t likely to be easy or cheap and, according to new research, it isn’t an adequate “solution” to the problems of climate change. The possible “carbon removal” techniques are very diverse. They include growing trees on land or algae in the sea and capturing and burying some of the carbon they have taken from the atmosphere. There are also engineered solutions that “scrub” CO2 directly from the air, using chemical absorbents, and then recover, purify, compress and liquefy it, so that it can be buried deep underground. That sounds difficult and expensive, and at the moment, it is. Both the U.K. Royal Society and the U.S. National Research Council point out that doing it on a large enough scale to make a real difference would be hard. Nevertheless, a joint communiqué from U.K. learned societies recently argued that to limit global warming to 2℃ we are likely to need CO2 removal (CDR) rates in the latter part of this century that will exceed emissions at that time (“net negative emissions”). That will only be possible if we can deploy CDR technologies. A new paper in Nature Communications shows just how big the required rates of removal actually are. Even under the IPCC’s most optimistic scenario of future CO2 emission levels (RCP2.6), in order to keep temperature rises below 2℃ we would have to remove from the atmosphere at least a few billion tons of carbon per year and maybe 10 billion or more—depending on how well conventional mitigation goes. We currently emit around eight billion tonnes of carbon per year, so the scale of the enterprise is massive: it’s comparable to the present global scale of mining and burning fossil fuels. Carbon removal could potentially help to reduce problems such as ocean acidification. So a second paper in Nature Climate Change is also discouraging because it shows that even massive and sustained carbon removal at rates of five billion tonnes a year or more would not be enough to restore anything like pre-industrial conditions in the oceans, if mitigation efforts were to be relaxed. Don’t give up Does all this mean that carbon removal is a blind alley, and that further research is a waste of time (and money)? Well, no. But it is nothing like a magic bullet: This latest research should serve to prevent any unrealistic expectations that we could find a “solution” to climate change, or that carbon removal is any sort of alternative to reducing emissions. Maintaining and increasing our efforts to reduce emissions is still the crucial top priority. But if we can develop removal methods that are safe and affordable, and that can be scaled up to remove a few billion tonnes per year, that would be useful even now, as it could augment those efforts to reduce CO2 emissions (which is not proving to be easy either). In the longer term, once we have eliminated all the “easily” fixed sources of CO2 emissions, by generating more electricity from renewable sources and capturing carbon from power plants, we shall still be left with several intractable sources, including aviation and agriculture, that are exceedingly hard to abate. It is then that we shall really need CO2 removal, to take from the air what cannot easily be prevented from reaching it. And beyond that, should we eventually decide that the level of CO2 in the air at which we have stabilized is too high for comfort, and should be reduced, carbon removal will be the only way to achieve that. Massive scientific challenge The low-tech biologically based removal methods are all going to be limited in their scale, not least by potential side-effects in the oceans and conflicts over alternative uses for any land required. However several groups are working on promising methods for direct (physical and/or chemical) capture from the air, trying to reduce the energy, water and materials demands—and of course the costs—to acceptable levels. In the longer term someone may find a suitable catalyst to accelerate the natural geochemical weathering processes that already remove CO2 from the air (but much too slowly to cope with man-made emissions). That would solve the CO2 disposal problem too, especially if we can avoid mining billions of tons of minerals to use as absorbent. But it’s likely to take several decades to get from the lab to industrial-scale deployment—and none of these technologies will be deployed in practice until we have established a price on carbon emissions that makes them commercially worthwhile. Carbon removal is not a magic bullet, but it is still a vitally important technology that we shall almost certainly need eventually. We should be researching it steadily and seriously, because it is going to take time and a lot of effort to develop methods that are safe and affordable and can be deployed on a massive scale. So we should continue to research removal, not as a possible quick fix, but as a vital tool for the end game. It’s a massive scientific and engineering challenge that really needs the sort of concerted effort that was devoted to going to the moon or building the Large Hadron Collider. And in my opinion it would be far more worthwhile.

#### 2] CCS bad

**Court ’18** (Court, Simon Holmes à. “It'd Be Wonderful If the Claims Made about Carbon Capture Were True | Simon Holmes à Court.” *The Guardian*, Guardian News and Media, 16 Feb. 2018, [www.theguardian.com/commentisfree/2018/feb/16/itd-be-wonderful-if-the-claims-made-about-carbon-capture-were-true](http://www.theguardian.com/commentisfree/2018/feb/16/itd-be-wonderful-if-the-claims-made-about-carbon-capture-were-true).) //ZL

Petra Nova and Boundary Dam were built as demonstration projects, funded in an era when optimism for CCS was high and renewables costs were two-to-three times dearer than now. The owners of both projects have declined to invest further in the technology, having learnt the hard way that CCS doubles a coal power station’s capital and operating costs and is an outrageously expensive way to cut carbon pollution. They’re not alone – [data](https://www.globalccsinstitute.com/projects/large-scale-ccs-projects) from the Australian headquartered Global CCS Institute shows there’s not a single large-scale CCS project under construction anywhere. Over recent weeks we’ve seen the Minerals Council of Australia, the federal government and the International [Energy](https://www.theguardian.com/environment/energy) Agency each make an effort to put CCS back on the agenda. The MCA’s motivation is the easiest to understand. CCS provides a fig leaf useful for the “clean coal” campaign the MCA has been running, [much to the chagrin of its largest funder BHP](https://www.theguardian.com/business/2017/sep/19/bhp-agrees-to-rethink-its-links-to-minerals-council-of-australia), in a desperate attempt to arrest coal’s flagging social license. The only way CCS on coal will ever be built at scale is with a carbon price so high it’d kill the rest of the coal sector. Despite a tweet from the MCA on Thursday that it supported a “market based approach to low-emissions technology”, the MCA has form – it would use its dying breath to undermine any real or de facto carbon price. The MCA’s support for CCS rings hollow. The rest of the coal industry doesn’t believe in CCS either. In 2006 the sector proudly announced [Coal21](http://www.minerals.org.au/resources/coal21/about_coal21), a commitment to invest $1bn over a decade on low emissions technologies. Ten years on, the industry has come through with less than a third of the promised funding. The only new spending in recent years from a fund designed to “support the pre-commercial demonstration of low emissions coal technologies” has been a series of pro-coal propaganda, including the “[Coal – It’s an amazing thing](https://youtu.be/IKp8W1jBuHw)” TV ads. The federal government’s support is partly just an echo of the MCA’s talking points – a depressingly common pattern. Beyond that, the Coalition clearly believes that their pro-coal, anti-renewables position is a valuable point of political difference. Despite the talk, the government is not gung-ho on CCS. Tony Abbott’s 2014 budget ripped $460m out of the CCS Flagships program, and the once ambitious project launched by Kevin Rudd has been on starvation rations since. As for the IEA, their actual comments in support of CCS were pretty weak – executive director Fatih Birol did little more than endorse Frydenberg’s stalled plan from last May to lift the ban on the Clean Energy Finance Corporation (CEFC) providing loans to CCS projects. But while the coal-boosters sully the brand, it should be remembered that CCS is not “bad” per se. CCS is a basket of technologies, some of which are likely to be important in the future as we work to decarbonise a range of industries with stubborn emissions, such as steelmaking and cement production. It’s inconceivable that a CCS plus coal project could pass the CEFC’s rigorous investment criteria. As such it probably doesn’t matter whether or not the CCS prohibition is removed from the CEFC legislation. It’s just politics. A total of [13 power stations have closed](https://www.quora.com/How-many-Australian-coal-fired-power-stations-have-been-shut-down-since-2012) in Australia over the past five years, keeping tens of millions of tonnes of carbon dioxide and other pollutants out of our atmosphere. As [AGL demonstrated this week](http://www.smh.com.au/business/the-economy/agl-to-spend-nearly-1bn-on-wind-farms-20180212-p4z02m.html), the economics are such that hard-nosed power companies are choosing renewables over coal every time. One way to reduce coal’s impact is to capture, compress and bury its emissions – but it’s much simpler, cheaper and safer to simply leave the coal in the ground.

#### 3] CCS fails – too costly so links to the disads, and physically can’t sequester enough

Hsu 11 – Professor of Law at University of British Columbia – previously Associate Prof at George Washington School of Law, Senior Attorney & Economist for the Environmental Law Institute [Shi-Ling Hsu, The Case for a Carbon Tax: Getting Past our Hang-ups to Effective Climate Policy, Island Press] Page – 56-58

By contrast, governmental agencies and legislatures have a poor record when it comes to identifying and fostering the development of certain types of processes, or ideas that supposedly improve social welfare. Certain "public goods" such as policing and national defense are obviously government functions, but when some endeavor contains mixed public and private benefits, it becomes tricky to determine the proper extent of government involvement. Ba- sic research, such as that undertaken or funded by research agencies such as the National Science Foundation, still rate high enough in public benefits to warrant governmental intrusion. But trouble often starts when is more applied, seemingly more practical, and serendipitously injuring to the benefit of some private firm like General Motors. Government resolving to "tackle" a problem usually means spending money, and comes up when a governmental actor thinks it sees a great idea. Subsidizing great ideas always sounds good, except when, as is often the case, it turns out not to have been such a great idea after all. The common mistake is in failing to recognize the other side of the ledger. When governmental officials see a great idea, they often fail to see the downside; when they see something bad, they of- ten fail to see the upside. Fortunately, when somebody in government sees something bad—like the pollution byproducts of a product— markets are present to place a countervailing value on the upside—the value of the product itself. The same cannot be said when government gets behind a great idea; there are rarely markets that signal the existence and severity of the downsides of a supposedly great idea. Both the United States and Canada appear headed down this treacherous path again. Another impending and potentially misguided government initiative is the subsidization of "carbon capture and storage" technology. "Carbon capture" refers to the capture of carbon dioxide emitted as a result of any combustion process, while "storage" refers to the permanent containment of the carbon dioxide, so that it does not enter the atmosphere and contribute to climate change. Car- bon dioxide would typically be injected into underground "pore spaces" where it would be stored for, it is hoped, eternity. While the carbon capture and storage concept may be applied to all industrial combustion processes (and even for some non-combustion carbon- emitting processes), most of the discussion and technological development has been for coal-fired power plants. The technology seems attractive, salvaging trillions of dollars of capital worldwide wrapped up in fuel combustion, and what enthusiastic policy wonks would call a potential "game-changer." Some have likened the urgency of developing carbon capture and storage to the development of the atomic bomb. In a 2009 floor speech, US Senator Lamar Alexander said "we should launch another mini-Manhattan Project and reserve a Nobel Prize for the scientist who can get rid of the carbon from existing coal plants, because coal provides half our energy.” 63 But the lofty rhetoric seems misplaced for a technology that remains prohibitively expensive. As recently as 2008, demonstration costs remained in the range of 60 to 90 Euros per ton of C02 stored (approximately 88 to 131 US dollars per ton"), but were expected to "come down to" about 30 to 45 Euros per ton by 2030 (approximately $45 to $62 per ton, using a 2010 currency conversion).05 Even if this bears out, this would still be much more expensive than many dozens of other emissions abatement and reduction strategies, even notoriously expensive nuclear power. 00 Moreover, the physical challenge of capturing and storing even a modest amount of American carbon emissions is staggering. The United States currently emits around 1.5 billion tons per year of carbon from coal-fired power plants, and the world's largest sequestration project, at the Sleipner gas field in the North Sea, is 1 million tons a year of carbon dioxide, or about 0.06 percent of United States emissions.08 If carbon capture and storage were to capture all of the carbon dioxide from US coal-fired power plants, the total weight that would need to be transported would equal three times the annual volume of natural gas transported in the United States by pipeline. Dr. Joan Brnnecke, director of the Notre Dame Energy Center where researchers have been working on carbon capture and storage technology for years under DOE grants, laments that despite recent advances, economical carbon capture technology is still at least a decade away from commercial application, remarking that "no matter what, it is going to be painful to do C02 capture.'X'9 It is surely telling that an industry consortium formed to pursue and support a pilot carbon capture and storage project, FutureGen, lost two of its biggest industry backers, the two largest electricity providers in the United States: the American Electric Power Company and the Southern Company 70, in the face of the high costs of development. Given these challenges and setbacks, it seems slightly overenthusiastic to call for another Manhattan project for such an expensive technique, and one that has been studied for decades with disappointing results. Once again, an expensive idea has emerged from the convergence of politics, tent-seeking, and the convenient illusion that government can provide (i.e., fund) a solution. Not all of the motivation is scandalous: the temptation for such an important problem is to see the greenhouse gas reduction effort as a "war," in which carbon capture and sequestration can be a "game-changer" in much the same wav that the atomic bomb was perceived to be the game-changer needed to stop the Axis powers. Wishful thinking creates a desire to find "game- changers." Recent technologies labeled as game-changers include: electric vehicle batteries, 71 electricity storage technology generallv,72 shale gas, 73 small nuclear reactors, 74 nuclear reactors that burn spent fuel, 75 underground coal combustion,70 ocean thermal power," a transmission line linkage,78 and General Motors' plug-in hybrid vehicle. Some of these could actually be significant breakthroughs. But most often, politicians proposing technology subsidies for speculative technologies seems more like the behavior of the destitute and desperate, sadly spending their last dollars on lottery tickets instead of undertaking the hard work of change.

#### 4] Subsidizing alt energy fails – no conservation incentive, price rebounding, picking tech backfires

Hsu 11 – Professor of Law at University of British Columbia – previously Associate Prof at George Washington School of Law, Senior Attorney & Economist for the Environmental Law Institute [Shi-Ling Hsu, The Case for a Carbon Tax: Getting Past our Hang-ups to Effective Climate Policy, Island Press] Page 35-37

The case for government subsidization is, as a theoretical matter, straightforward. An unpriced externality like car-bon dioxide emissions can be remedied by either a positive price imposed by carbon taxes or by a negative price created by subsidization. If we know, for example, that lowering the carbon dioxide emissions from the energy sector will require the development and deployment of renewable energy technologies, then it would seem to make sense to provide government funding for wind, solar, and other renewable energy technologies. This would be true whether the subsidy takes the form of a per-unit production subsidy, or direct funding for research and development: either wav, the goal is to lower costs and concomitantly lower prices. Compare, then, the effects of taxing carbon and of subsidizing renewable energy. At the margins, raising the price of carbon-emitting energy has the same competitive effect of lowering the price (through subsidies) of renewable energy. The net effect of subsidizing renew- able instead of pricing carbon is a transfer of money from tax- payers to the entire energy industry—to the renewable energy industry through subsidies, and to the carbon-emitting energy industries by not taxing them. Since pricing carbon would raise energy prices, the net effect on the average person, who is both a taxpayer and an energy consumer, would appear to be roughly a wash.

There are three core problems with this argument. First, and most simply, higher energy prices are needed to spur energy conservation. Low energy costs undermine incentives to make industrial processes more energy-efficient, drive less, better insulate homes and construct more -efficient buildings, and to develop and WII (and buy) energy efficient appliances. Energy conservation measures may in fact turn out to be the greatest source of greenhouse gas reductions. A re- cent report by the consulting firm McKinsey found that some fairly routine and well-known energy conservation measures could produce a whopping $680 billion dollars worth of net energy savings, and re- duce projected energy demand by the year 2020 by 23 petcent.20 Many energy conservation measures actually have a negative abatement cost—that is, their energy savings exceeded the amortized cost of the upfront investments. These included insulation retrofits for residential and commercial buildings (especially the latter), switching residential lighting from incandescent bulbs to LEDs (light-emitting diodes), and capturing methane from landfills to generate electricity. 21 As Dieter Helm has observed, a problem with climate pol- icy is that it has by and large focused on reducing greenhouse gases from production, and not consumption.22 Reducing consumption does not sound like a good thing for love-starved politicians who have no stomach to curb energy consumption through taxation, even as we waste energy in mind-boggling ways. But the simple truth is that efforts to combat climate change will be unsuccessful without steps to reduce consumption. And there is nothing as effective as higher prices if the goal is to reduce consumption.

Second, there is a limit on how low energy prices can be made through subsidization. Lowering the price of renewable energy lowers the demand for fossil fuels. But lowering demand for fossil fuels means that it will lower the price of fossil fuels. A lower price for fossil fuels encourages its use, exactly what we don't want. This "rebound" effect of lowering fossil fuel prices by subsidizing its alternatives dampens the effectiveness of subsidies in altering consumption choices. Re- bound effects for various renewable fuel standards policies in the United States are estimated to be on the order of a quarter to a third of reduced emissions.23 Moreover, at a certain point, prices be- come so low that they become irrelevant. If, hypothetically, you had a choice between buying electricity from a coal-fired plant for 3.7 cents per kilowatt-hour or buying electricity from a wind farm for 3.4 cents per kilowatt-hour, which would you chose? The answer could well be, "who cares?" For many energy consumers, the savings does not justify the time needed to investigate. Such is the pushing-on-a-string effect of trying to lower prices for everyone instead of raising them. So while higher taxes and lower energy costs may seem to be a wash, they are not.

Third, the effectiveness of government subsidies assumes with- out justification—in fact, in the face of a mountain of evidence to the contrary—that it is possible to identity the "best" renewable energy technologies, or in general the "best" ideas to reduce greenhouse gas emissions. Too often, legislators think they catch wind of a great idea—such a revolutionary way of doing something that they can hardly resist the temptation to lend some assistance (all the better if the idea comes from a constituent or potential donor). It requires a bit of gullibility to ignore the failure of these supposedly great ideas to at- tract sufficient private financing. The danger is not so much in the waste of taxpayer dollars—this is addressed in another part of this chapter—but that emissions reductions will be both smaller and costlier than if a better instrument was used.

### 1AR---MLPPA

#### 1] Turn – MLPPA harms investment and oil and gas MLP’s uniquely profit off of it while leaving out renewables – only removing subsidies solves

**Powers ’17** (Powers, David (2017) "Fighting the Wrong Fight: Why the MLP Parity Act Is a Misguided Attempt at Achieving Renewable Energy Capital Raising Parity," Sustainable Development Law & Policy: Vol. 17 : Iss. 1 , Article 5. Available at: <http://digitalcommons.wcl.american.edu/sdlp/vol17/iss1/5>) //ZL

Senator Coons explains the MLPPA as “[a] bill to level the playing field by giving investors in renewable energy projects access to a decades-old corporate structure with a tax advantage currently available only to investors in fossil fuel-based energy projects.”114 While leveling the playing field is certainly an admirable goal when it comes to renewable energy, Senator Coons and supporters fail to consider the negative aspects of the MLP.115 There are three main reasons why the MLPPA should not be passed. First, in 1987, Congress decided to close the MLP loophole by taxing all publicly traded partnerships as corporations except for those engaged in passive type activities.116 Through effective lobbying, the oil and gas industry was able to maintain that loophole in the tax code by asserting that they should be considered a passive activity and continue to utilize the MLP structure.117 Allowing certain types of publicly traded partnerships to operate without incurring taxation was based upon the idea that they held such investments that were akin to investments one could purchase in their individual capacity.118 The current MLPs do not resemble pooled passive investments; rather they are large operating companies.119 Allowing them to operate as MLPs is clearly in direct contravention of Congress’ original intent.120 Renewable energy providers are no different. Large scale solar projects and wind farms are not passive activities which investors can purchase individually or as a pooled investment. They require skilled management teams and operational expertise121 and therefore should not be considered passive investments eligible for MLP treatment. Second, allowing MLPs to operate without incurring entity level tax costs the Treasury millions in tax revenue each year. In February of 2015, President Obama’s 2016 budget proposed to eliminate the availability of the MLP to the oil and gas industry by 2021.122 The proposal projected that taxing MLPs as corporations would rise upwards of $300 million a year in tax revenue starting in 2021.123 This again appeared in the 2017 budget.124 While the 2016 budget proposal attracted some media attention, the 2017 proposal along with the entire 2017 budget garnered minimal media coverage and has largely been viewed as irrelevant.125 Nevertheless, the budget proposals serve to quantify the amount of subsidies the oil and gas industry receive each year by approximating the amount of taxes saved by utilizing the MLP structure. Lastly, the MLP’s incentive structure is designed to benefit the sponsor at the detriment of investors. Instead of being managed by a board of directors, MLPs are frequently managed by a general partner (or a manager when structured as an LLC) and, as a result, investors in MLPs may have less protection than investors in corporations.126 Furthermore, ownership of the IDRs incentivizes management behavior, which diverges from investors’ best interests127 and substantial evidence exists that many retail investors do not understand exactly what they are buying when they purchase MLP units on the stock exchange. Rather than expanding the MLP to include renewable energy sources, those that truly wish to level the playing field should be focused on closing this loophole available to oil and gas.128 In order to put the renewable energy industry on par with fossil fuels, the appropriate step should be eliminating Section 7704(d)(1)(E) from the Internal Revenue Code. This would have the effect of eliminating the tax subsidies available to fossil fuels by taxing them as any other operating company129 and in the process raising tax revenues.

### 1AR---Nuclear

#### Plant production sucks – it leads to nuclear terror

CFR 06 (“Targets for Terrorism: Nuclear Facilities.” Council on Foreign Relations, Council on Foreign Relations, 1 Jan. 2006, [www.cfr.org/backgrounder/targets-terrorism-nuclear-facilities.)//LK](http://www.cfr.org/backgrounder/targets-terrorism-nuclear-facilities.)//LK) [Accessed 10/28/19]

Could terrorists target U.S. nuclear power plants? More From Our Experts Robert K. Knake Expanding Disclosure Policy to Drive Better Cybersecurity Bruce Hoffman Halle Shooting: The New Terrorism Reality Farah Anwar Pandith How We Win Yes. In his January 2002 State of the Union speech, President Bush said that U.S. forces “found diagrams of American nuclear power plants” in al-Qaeda materials in Afghanistan. An al-Qaeda training manual lists nuclear plants as among the best targets for spreading fear in the United States. The government is taking the threat seriously: in February 2002, the Nuclear Regulatory Commission (NRC) issued an advisory to the nation’s 103 nuclear power plants that terrorists might try to fly hijacked planes into some of them. And eight governors have independently ordered the National Guard to protect nuclear reactors in their states. How vulnerable are U.S. nuclear weapons sites? More on: Homeland Security Terrorism and Counterterrorism Not very, most experts say. Nuclear weapons production and storage sites are guarded by security forces supervised by the Department of Energy. John Gordon, the administrator of the Department of Energy’s National Nuclear Security Administration, has called such sites “one of the last places a terrorist would think about attacking and having hopes of success; the security basically bristles.” But a watchdog organization, the Project on Government Oversight (POGO), charged that security at U.S. nuclear weapons complexes was inadequate and that hundreds of tons of weapons-grade plutonium and highly enriched uranium could be stolen, sabotaged, or even detonated. The Department of Energy dismisses such criticism, adding that security has been stepped up since September 11. Experts note that a terrorist looking to steal nuclear weapons or weapons-grade material would have a much easier time in Russia or Pakistan than in the United States. How might terrorists attack other U.S. nuclear facilities? U.S. homeland security planners are most concerned about the following scenarios: A massive release of radiation after a nuclear plant is hit with a bomb delivered by truck or boat. A September 11-type attack using a plane as a guided missile to crash into a nuclear facility. Sabotage at a nuclear facility by an insider or by intruders. A ground assault on a nuclear plant by a commando team attempting to blow up the plant. Suicide terrorists might also try to break in to a nuclear plant and quickly build and detonate a “dirty bomb”—a conventional explosive laced with radioactive material. Attackers could also use conventional explosives to blow up some nuclear waste or nuclear fuel, thereby spewing radioactive materials into nearby areas. Finally, experts warn that terrorists might target the pools in which nuclear reactors’ highly radioactive waste (“spent fuel”) is kept. This waste, which is kept cool by water, could ignite if exposed to the air. One nuclear expert, Robert Alvarez, has said that this would cause a “catastrophic fire” that could be “worse than a reactor meltdown.” What kind of damage could such attacks cause to a nuclear power plant? Experts say that an attack on a nuclear power plant, all of which are guarded by private security forces hired by the plants and supervised by the NRC, couldn’t lead to a nuclear explosion. The danger, they say, is that attackers could cause a meltdown or a fire or set off a major conventional explosion, all of which could spew radiation into nearby cities and towns. What would happen if a plane crashed into a nuclear plant? No one knows. U.S. nuclear power plants are built to withstand hurricanes, tornadoes, earthquakes, and small plane crashes. Their “containment walls” are typically made of two to five feet of reinforced concrete with an interior steel lining. But the NRC didn’t anticipate the type of attacks seen on September 11—large passenger airliners loaded with fuel slamming into targets. Both the NRC and the International Atomic Energy Agency (IAEA) have said that U.S. nuclear plants were not designed to withstand such an impact, and the NRC has ordered a study of plant designs to look at what would happen in such a scenario.

#### That causes extinction – terror guarantees retaliation.

Peter **Hayes 18**, PhD from Berkeley, Director of the Nautilus Institute and Honorary Professor at the Centre for International Security Studies at the University of Sydney, "NON-STATE TERRORISM AND INADVERTENT NUCLEAR WAR", NAPSNet Special Reports, January 18, 2018, https://nautilus.org/napsnet/napsnet-special-reports/non-state-terrorism-and-inadvertent-nuclear-war/

**Nuclear terrorism** post-cold war: trigger for **inadvertent nuclear war?** The possible catalytic effect of nuclear terrorism on the risk of state-based nuclear war is not a simple linkage. The multiple types and scales of nuclear terrorism may affect state-nuclear use decisions along multiple pathways that lead to **inadvertent nuclear war**. These include: **Early warning systems fail** or are “tripped” in ways that lead to **launch-on-warning** Accidental nuclear detonation, including sub-critical explosions. **Strategic miscalculation** in crisis, show of force **Decision-making failure** (such as irrational, misperception, bias, degraded, group, and time-compressed decision-making) **Allied or enemy choices** (to seek revenge, to exploit nuclear risk, to act out of desperation) Organizational cybernetics whereby a nuclear command-control-and communications (NC3) system generates error, including the interplay of national NC3 systems in what may be termed the meta-NC3 system. Synchronous and coincident combinations of above.[4] Exactly how, where, and when nuclear terrorism may “ambush” nuclear armed states already heading for or on such a path to inadvertent nuclear war depends on who is targeting whom at a given time, either immediately due to high tension, or generally due to a structural conflict between states. Nuclear armed states today form a complex set of global threat relationships that are not distributed uniformly across the face of Earth. Rather, based on sheer firepower and reach, the nine nuclear weapons states form a global hierarchy with at least four tiers, viz: Tier 1: United States, clear technological supremacy and qualitative edge. Tier 2: Russia, China, global nuclear powers and peers with the United States due to the unique destructive power of even relatively small nuclear arsenals, combined with global reach of missile and bomber delivery systems, thereby constituting a two-tiered global “nuclear triangle” with the United States. Tier 3: France, UK, NATO nuclear sharing and delivery NATO members (Belgium, Germany, Italy, the Netherlands and Turkey) and the NATO and Pacific nuclear umbrella states (Japan, South Korea, Australia) that depend on American nuclear extended deterrence and directly and indirectly support US and US-allied nuclear operations even though they do not host nor deliver nuclear weapons themselves. Tier 4: India, Pakistan, Israel, DPRK. The first two tiers constitute the global nuclear threat triangle that exists between the United States, Russia, and China, forming a global nuclear “truel.” Each of these states targets the others; each represents an existential threat to the other; and each has a long history of mutual nuclear threat that is now a core element of their strategic identity. Tier three consists of states with their own nuclear force but integrated with that of the United States (even France!) that expand the zone of mutual nuclear threat over much of the northern and even parts of the southern hemisphere; and states that host American nuclear command, control, communications, and intelligence systems that support US nuclear operations and to whom nuclear deterrence is “extended” (if, for example, Australia’s claim to having an American nuclear umbrella is believed). The fourth tier is composed of smaller nuclear forces with a primarily regional reach and focus. Between most of these nuclear armed states and across the tiers, there are few shared “rules of the road.” The more of these states that are engaged in a specific conflict and location, the more unpredictable and unstable this global nuclear threat system becomes, with the potential for cascading and concatenating effects. Indeed, as the number of nuclear states projecting nuclear threat against each other increases, the notion of strategic stability may lose all meaning. The emergence of a fifth tier—of non-state actors with the capacity to **project nuclear threat** against nuclear-armed and nuclear umbrella states (although not only these states)—is a critically important possible **catalytic actor** in the new conditions of nuclear threat complexity that already exist today. Such a layer represents an **“edge of chaos”** where the attempts by nuclear armed states to exert absolute “vertical” control over the use of nuclear weapons confront the potential of non-state entities and even individuals (insiders) to engage in **“horizontal” nuclear terrorism**, presenting radically different control imperatives to the standard paradigm of organizational procedures, technical measures, and safeguards of various kinds. This tier is like the waves and tides on a beach that quickly surrounds and then causes sand castles to collapse. In 2010, Robert Ayson reviewed the potential linkages between inter-state nuclear war and non-state terrorism. He concluded: “…[T]hese two nuclear worlds—a non-state actor nuclear attack and a catastrophic interstate nuclear exchange—**are not necessarily separable**. It is just possible that some sort of terrorist attack, and **especially an act of nuclear terrorism**, could precipitate a **chain of events** leading to a **massive exchange of nuclear weapons** between two or more of the states that possess them.”[5] How this linkage might unfold is the subject of the next sections of this essay. Are non-state actors motivated and able to attempt nuclear terrorism? A **diverse set of non-state actors** have engaged in terrorist activities—for which there is no simple or consensual definition. In 2011, there were more than 6,900 known extremist, terrorist and other organizations associated with guerrilla warfare, political violence, protest, organized crime and cyber-crime. Of these, about 120 terrorist and extremist groups had been blacklisted by the United Nations, the European Union and six major countries.[6] **Some have argued** that the **technical**, **organizational**, and **funding demanded** for a successful nuclear attack, especially involving nuclear weapons, exceeds the capacity of most of the non-state actors with terrorist proclivities. Unfortunately, this assertion is **not true**, especially at lower levels of impact as shown in Figure 1; but **even at the highest levels** of obtaining authentic nuclear weapons capabilities, a small number of non-state actors already exhibit the **motivation** and **possible capacity** to become nuclear-armed. Ellingsen suggests a useful distinction that nuclear terrorists may be impelled by two divergent motivations, as shown in Figure 2, creating “opportunistic” and “patient” profiles.[7] The requirements for an opportunist non-state nuclear terrorist tend towards immediate use and the search for short-term payoffs with only tactical levels of commitment; whereas the patient non-state nuclear terrorist is able and willing to sustain a long-term acquisition effort to deal a strategic blow to an adversary in a manner that could be achieved only with nuclear weapons. In turn, many factors will drive how a potential nuclear terrorist non-state organization that obtains nuclear weapons or materials may seek to employ them, especially in its nuclear command-and-control orientations. Blair and Ackerman suggest that the goals, conditions, and capacity limitations that shape a possible nuclear terrorist’s posture lead logically to three types of nuclear terrorist nuclear command-and-control postures, viz: pre-determined (in which the leadership sends a fire order to a nuclear-armed subordinate and no change is entertained and no capacity to effect change is established in the field, that is, the order is fire-and-forget); assertive (in which only the central command can issue a nuclear fire order, central control is maintained at all times, with resulting demanding communications systems to support such control); and delegative (in which lower level commanders control nuclear weapons and have pre-delegated authority to use them in defined circumstances, for example, evidence of nuclear explosions combined with loss-of-connectivity with their central command).[8] An example of such delegative control system was the November 26, 2008 attack on Mumbai that used social media reporting to enable the attacking terrorists to respond to distant controller direction and to adapt to counter-terrorist attacks—a connectivity tactic that the authorities were too slow to shut down before mayhem was achieved.[9] Logically, one might expect nuclear terrorists oriented toward short-term, tactical goals to employ pre-determined nuclear command-and-control strategies in the hope that the speed of attack and minimum field communications avoids discovery and interdiction before the attack is complete; whereas nuclear terrorists oriented toward long-term, strategic goals might employ more pre-delegative command-and-control systems that would support a bargaining use and therefore a field capacity to deploy nuclear weapons or materials that can calibrate actual attack based on communications with the central leadership with the risk of interdiction through surveillance and counter-attack. These differing strategic motivations, timelines, and strategies in many respects invert those of nuclear weapons states that rely on large organizations, procedures, and technical controls, to ensure that nuclear weapons are never used without legitimate authorization; and if they are used, to minimize needless civilian casualties (at least some nuclear armed states aspire to this outcome). The **repertoire** of state-based practices that presents other states with credible nuclear threat and reassures them that nuclear weapons are **secure** and **controlled** is likely to be **completely mismatched with the strengths and strategies of non-state nuclear terrorists** that may seek to maximize civilian terror, are **not always concerned about their own survival** or even that of their families and communities-of-origin, and may be willing to take **extraordinary risk** combined with **creativity** to exploit the opportunities for attack presented by nuclear weapons, umbrella, and non-nuclear states, or their private adversaries. For non-state actors to succeed at complex engineering project such as acquiring a nuclear weapons or nuclear threat capacity demands substantial effort. Gary Ackerman specifies that to have a chance of succeeding, non-state actors with nuclear weapons aspirations must be able to demonstrate that they control **substantial resources**, have a **safe haven** in which to conduct research and development, have their own or procured **expertise**, are able to learn from failing and have the **stamina and strategic commitment** to do so, and manifest **long-term planning** and **ability to make rational choices** on decadal timelines. He identified **five such violent non-state actors** who **already conducted such engineering projects** (see Figure 3), and also noted the important facilitating condition of a global network of expertize and hardware. Thus, **although the skill, financial, and materiel requirements of a non-state nuclear weapons project present a high bar, they are certainly reachable.** Figure 3: Complex engineering projects by five violent non-state actors & Khan network Source: G. Ackerman, “Comparative Analysis of VNSA Complex Engineering Efforts,” Journal of Strategic Security, 9:1, 2016, at: http://scholarcommons.usf.edu/jss/vol9/iss1/10/ Along similar lines, James Forest examined the extent to which non-state actors can pose a threat of nuclear terrorism.[10] He notes that such entities face practical constraints, including expense, the obstacles to stealing many essential elements for nuclear weapons, the risk of discovery, and the difficulties of constructing and concealing such weapons. He also recognizes the strategic constraints that work against obtaining nuclear weapons, including a cost-benefit analysis, possible de-legitimation that might follow from perceived genocidal intent or use, and the primacy of political-ideological objectives over long-term projects that might lead to the group’s elimination, the availability of cheaper and more effective alternatives that would be foregone by pursuit of nuclear weapons, and the risk of failure and/or discovery before successful acquisition and use occurs. In the past, almost all—but not all—non-state terrorist groups appeared to be restrained by a combination of high practical and strategic constraints, plus their own cost-benefit analysis of the opportunity costs of pursuing nuclear weapons. However, should some or all of these constraints diminish, a rapid non-state nuclear proliferation is possible. Although only a few non-state actors such as Al Qaeda and Islamic State have exhibited such underlying stamina and organizational capacities and actually attempted to obtain nuclear weapons-related skills, hardware, and materials, **the past is not prologue**. An **incredibly diverse set** of variously motivated terrorist groups **exist already**, including politico-ideological, apocalyptic-millenarian, politico-religious, nationalist-separatist, ecological, and political-insurgency entities, some of which converge with criminal-military and criminal-scientist (profit based) networks; **but also pyscho-pathological mass killing cults**, lone wolves, **and ephemeral copy-cat non-state actors**. The social, economic, and deculturating conditions that generate such entities are likely to persist and even expand. In particular, rapidly growing coastal mega-cities as part of rapid global urbanization offer such actors the ability to sustain themselves as “flow gatekeepers,” possibly in alliance with global criminal networks, thereby supplanting the highland origins of many of today’s non-state violent actors with global reach.[11] Other contributing factors contributing to the supply of possible non-state actors seeking nuclear weapons include new entries such as city states in search of new security strategies, megacities creating their own transnationally active security forces, non-states with partial or complete territorial control such as Taiwan and various micro-states, failing states, provinces in dissociating, failing states that fall victim to internal chaos and the displacement effects of untrammeled globalization, and altogether failed states resulting in ungoverned spaces. To this must be added domestic terrorist entities in the advanced industrial states as they hollow out their economies due to economic globalization and restructuring, adjust to cross-border migration, and adapt to cultural and political dislocation. In short, the prognosis is for the fifth tier of non-state actors to beset the other four tiers with intense turbulence just as waves on a beach swirl around sandcastles, washing away their foundations, causing grains of sand to cascade, and eventually collapsing the whole structure. Observed non-state nuclear threats and attacks In light of the constraints faced by non-state terrorist actors in past decades, it is not surprising that the constellation of actual nuclear terrorist attacks and threats has been relatively limited during and since the end of the Cold War. As Martha Crenshaw noted in a comment on the draft of this paper: We still don’t know why terrorists (in the sense of non-state actors) have not moved into the CBRN [chemical,biological, radiological or nuclear ] domain. (Many people think biosecurity is more critical, for that matter.) Such a move would be extremely risky for the terrorist actor, even if the group possessed both capability (resources, secure space, time, patience) and motivation (willingness to expend the effort, considering opportunity costs). So far it appears that “conventional” terrorism serves their purposes well enough. Most of what we have seen is rhetoric, with some scattered and not always energetic initiatives.[12] Nonetheless, those that have occurred demonstrate unambiguously that such threats and attacks are not merely hypothetical, in spite of the limiting conditions outlined above. One survey documented eighty actual, planned attacks on nuclear facilities containing nuclear materials between 1961-2016[13] as follows: 80 attacks in 3 waves (1970s armed assaults, 1990s thefts, post-2010, breaches) High threat attacks: 32/80 attacks posed substantial, verified threat of which 44 percent involved insiders. All types of targets were found in the data set—on reactors, other nuclear facilities, military bases leading Gary Ackerman and to conclude: “Overall, empirical evidence suggests that there are sufficient cases in each of the listed categories that no type of threat can be ignored.”[14] No region was immune; no year was without such a threat or attack. Thus, there is a likely to be a coincidence of future non-state threats and attacks with inter-state nuclear-prone conflicts, as in the past, and possibly more so given the current trend in and the generative conditions for global terrorist activity that will likely pertain in the coming decades. Of these attacks, about a quarter each were ethno-nationalist, secular utopian, or unknown in motivation; and the remaining quarter were a motley mix of religious (11 percent), “other” (5 percent), personal-idiosyncratic (4 percent), single issue (2 percent) and state sponsored (1 percent) in motivation. The conclusion is unavoidable that there a non-state nuclear terrorist attack in the Northeast Asia region is possible. The following sections outline the possible situations in which nuclear terrorist attacks might be implicated as a trigger to interstate conflict, and even nuclear war. Particular attention is paid to the how **nuclear command, control and communications systems** may play an **independent and unanticipated role** in leading to **inadvertent nuclear war,** separate to the contributors to inadvertency normally included such as degradation of decision-making due to time and other pressures; accident; “wetware” (human failures), software or hardware failures; and **misinterpretation of intended or unintended signals from an adversary**. Regional pathways to interstate nuclear war At least **five distinct nuclear-prone axes of conflict are evident** in Northeast Asia. These are: **US-DPRK conflict** (including with United States, US allies Japan, South Korea and Australia; and all other UNC command allies. Many permutations possible ranging from non-violent collapse to implosion and civil war, inter-Korean war, slow humanitarian crisis. Of these implosion-civil war in the DPRK may be the most dangerous, followed closely by an altercation at the Joint Security Area at Panmunjon where US, ROK, and DPRK soldiers interact constantly. **China-Taiwan conflict**, whereby China may use nuclear weapons to overcome US forces operating in the West Pacific, either at sea, or based on US (Guam, Alaska) or US allied territory in the ROK, Japan, the Philippines, or Australia); or US uses nuclear weapons in response to Chinese attack on Taiwan. **China-Japan conflict** escalates via attacks on early warning systems, for example, underwater hydrophone systems (Ayson-Ball, 2011). **China-Russia conflict**, possibly in context of loss-of-control of Chinese nuclear forces in a regional conflict involving Taiwan or North Korea. **Russia-US conflict**, involving horizontal escalation from a head-on collision with Russian nuclear forces in Europe or the Middle East; or somehow starts at sea (mostly likely seems ASW) or over North Korea (some have cited risk of US missile defenses against North Korean attack as risking Russian immediate response). Combinations of or simultaneous eruption of the above conflicts that culminate in nuclear war are **also possible**. Other unanticipated nuclear-prone conflict axes (such as Russia-Japan) could also emerge with little warning. Precursors of such nuclear-laden conflicts in this region also exist that could lead states to the brink of nuclear war and demonstrate that nuclear war is all too possible between states in this region. Examples include the August 1958 Quemoy-Matsu crisis, in which the United States deployed nuclear weapons to Taiwan, and the US Air Force has only a nuclear defense strategy in place to defend Taiwan should China have escalated its shelling campaign to an actual attack; the October 1962 Cuban Missile Crisis, when a US nuclear armed missile was nearly fired from Okinawa due to a false fire order; the March 1969 Chinese-Soviet military clash and resulting consideration of nuclear attacks by both sides; and the August 1976 poplar tree crisis at Panmunjon in Korea, when the United States moved nuclear weapons back to the DMZ and the White House issued pre-delegated orders to the US commander in Korea to attack North Korea if the tree cutting task force was attacked by North Korean forces. Loss-of-control of Nuclear Weapons As is well known, nuclear armed states must routinely—and in the midst of a crisis—ensure that their nuclear weapons are never used without legitimate authority, but also ensure at the same time that they are always available for immediate use with legitimate authority. This “always-never” paradox is managed in part by a set of negative and positive controls, reliant upon procedural and technical measures, to maintain legitimate state-based command-and-control (see Figure Four).

### 1AR---Bubbles

#### 1] CP kills biod, causes ocean acidification, climate change, war, and 2 billion deaths through droughts

GM 18 (“Microbubbles/Sea Foam (Technology Factsheet).” Geoengineering Monitor, Geoengineering Monitor, Geoengineering Monitor aims to be a timely source for information and critical perspectives on climate engineering. Our goal is to serve as a resource for people around the world who are opposing climate geoengineering and fighting to address the root causes of climate change instead. Our editors regularly post news and resources about proposed geoengineering technologies, and their anticipated effects. When dangerous real-world implementations of geoengineering move forward, we will connect our readers to opportunities for collective action. The site is a collaboration between ETC Group, Biofuelwatch, Heinrich Boell Foundation, and the Global Forest Coalition. 16 July 2018, [www.geoengineeringmonitor.org/2018/06/microbubbles-sea-foam/.)//LK](http://www.geoengineeringmonitor.org/2018/06/microbubbles-sea-foam/.)//LK) [Accessed 10/28/19]

Impacts of the technology Deploying microbubbles or sea foam at the scale required to impact the climate could disrupt the entire basis of ocean and freshwater life, which is dependent on access to light, from phytoplankton to dolphins.4 The microbubbles approach would also reduce oxygen in the upper layers of the ocean, where most fish and other species live. The effects of bubble clouds on oceanic life, both in terms of temperature and sunlight changes, are unknown. Ocean currents are complex, and the impacts on geoengineering are poorly understood (NOAA). A cooler ocean will also absorb CO2 more efficiently, enhancing ocean acidification. Bubble clouds would change oceanic circulation and cause unexpected or unusual evaporation, which would in turn affect atmospheric heating and circulation. This would also raise questions about the possibility of regional climate control, with potential unilateral deployment and even using the technology as a weapon.5 The potential impacts of microbubbles on human society was highlighted by research conducted by the Integrated Assessment of Geoengineering Proposals. Through modelling exercises, it found that geoengineering with ocean microbubbles could affect 2 billion people through regional weather changes and extreme events such as floods and droughts.6 Reflecting sunlight into space on a mass scale could disrupt global weather patterns and create geographic winners and losers, opening the door to weaponization and the use of microbubbles and similar technologies as an implement of force in geopolitics. The ship wake brightening theory described above brings its own potential impacts, as large volumes of unnamed “surfactants” would be added to the oceans in the process. Although the researchers do point out that the surfactants would need to be ecologically benign, and natural surfactants can be derived from phytoplankton and marine processes, these chemicals can also be highly toxic. The BP oil disaster in the Gulf of Mexico in 2011 is an example: the oil dispersant BP used was a mixture of two surfactants, which they claimed were safe, and the US Environmental Protection Agency didn’t require any safety testing prior to use. A record 1.8 million gallons were used to disperse the oil, and it potentially killed more sea life than the oil would have destroyed by itself.7 This illustrates what “technofixes” of this kind could mean in practice, especially if put in the hands of irresponsible companies, or unscrupulous government agencies. Another issue unique to the ship wake approach is that there are far more shipping movements in the Northern Hemisphere than the Southern, resulting in a very uneven distribution of microbubbles. This imbalance would need to be addressed, perhaps through even more ships burning diesel in the southern oceans?

#### 2] Turn – thermodynamics exists, bubbles pop, and blowing them uses enough carbon to create more warming than they reduce

Morgan 11 (Morgan, John. “Low Intensity Geoengineering – Microbubbles and Microspheres.” Brave New Climate, 30 Nov. 2011, John runs R&D programmes at a Sydney startup company. He has a PhD in physical chemistry, and research experience in chemical engineering in the US and at CSIRO. He is a regular commenter on BNC. bravenewclimate.com/2011/10/08/low-intensity-geoengineering-microbubbles-and-microspheres/.)//LK [Accessed 10/28/19]

Not so fast But won’t these bubbles just bubble up to the surface and burst? Not the small ones, it turns out. The velocity of a rising bubble is readily calculated (from the Stokes equation), and a one micron radius bubble takes about 5 days to rise a metre. With near-surface mixing they’ll be there for a while. No, the real problem is that the bubbles want to dissolve. The air inside a bubble is at a higher pressure than the water it floats in, because surface tension is trying to pull the surface inwards, and the air is compressed. The pressure increase (given by the Young-LaPlace equation) is greater the smaller the bubble, and can be surprisingly large. For a 1 mm diameter bubble in seawater, the internal pressure is almost 3 atmospheres greater than the water outside. At these high pressures the air bubble will rapidly dissolve, even in water that is saturated with air at sea level. Unstabilized 10 μm bubbles in seawater are observed to dissolve in about 10 seconds. However, as Seitz describes, some seawater bubbles are much more durable, being stabilized by adsorption of natural surfactants and small particles on their surfaces. These materials form incompressible surface films that balance the pull of surface tension, and stabilized bubbles in the micron size range have been observed to last for 20-30 hours. So the key to the bright water concept is increasing the lifetime of these bubbles by ensuring that they are stabilized somehow. I’ll discuss some possible strategies for this below. I’m forever blowing bubbles – Doris Day, On Moonlight Bay Another problem is generation of microbubbles. Making large bubbles is easy. Making small bubbles is hard. To make 1 micron bubbles requires we pressurize air to three atmospheres. We could try to do this by pushing high pressure air through one micron holes. But in practice surface tension effects cause bubbles to stick to the hole and continue to inflate to much larger sizes. Seitz presents an image of a tank filled with micron scale bubbles generated by a commercial bubbler system (Figure 1). However, I harbour a degree of scepticism for manufacturer claims of bubble sizes especially below 10 μm, and from the images presented it appears the lower 10 cm has cleared in 120 s, suggesting (from the Stokes equation) that the bubbles are of the order 20 μm, consistent with my expectations for this kind of technology. We could instead inject air into a high shear mixer and break large bubbles down to smaller ones, like shaking up a bottle of soapy water. Here we are relying on turbulence to transiently generate 3 atmospheres of pressure throughout the mix. To do this by, say, shaking a drink bottle, you’d need to generate ~150 g acceleration as you shake. Vortex mixers can do this, but it is obviously an energy intensive process. Seitz calculates the energy cost of 1 micron bubble production to be ~1 kW hr m-3 of air, a theoretical limit which is unlikely to be obtained in practice. Seitz estimates that to sustain a bubble concentration of 0.5 ppm bubbles (1 mg m-3) in the top 10 m of the ocean would require the injection of 50 million tonne of air a year, if bubble stabilization for 20 hours could be achieved. Ignoring fixed structures and coastline, 10 000 ships would have to disperse about 11 000 m3 of air a day. Each ship would need to generate 11 MW hr a day for bubble generation, requiring 0.5 MW of dedicated generation. This is obviously a big ask. We can reduce the scale of the task by being more targeted about where and when we generate bubbles – by restricting deployment to the tropics where the sun is nearly overhead, rather than the high latitudes where the sun is low in the sky, and by timing bubble generation for daylight hours only. Armwrestling thermodynamics The biggest purely technical problem with the bright water idea is that bubbles are thermodynamically unstable due to their high internal pressure, with quite short lifetimes. An air bubble with 3 atmospheres internal pressure will dissolve in water saturated with air at only 1 atmosphere. And the smaller the bubble gets, the faster it dissolves. As observed above, a 10 μm bubble in seawater lasted 10 seconds. A 1 μm bubble would presumably last a fraction of a second. How can we fight this? Well, I can think of a few different ways. We could try to make the bubble surface impermeable to air. Surfactants can improve the barrier properties of surfaces to some kinds of molecular species. Phospholipid bilayers, for instance, are impermeable to water. Unfortunately, they do not present a significant barrier to nitrogen or oxygen molecules, which are soluble in these surfactant layers. I don’t believe targeting the barrier properties of bubbles will be successful. A second approach is to load the bubble surface with a raft of fine particles or proteins, which can support the two dimensional compressive load from surface tension, taking the pressure off the air, rather like a microscopic diving bell. This behaviour is observed in seawater bubbles. The long lived small bubbles reported by Johnson and Cooke were observed to be stabilized by a shell of adsorbed matter (Figure 3). Could this be a viable strategy for bubble stabilization? I don’t think so. Johnson and Cooke report only “some” of the seawater bubbles they observed behaving this way, so we know the yield of stabilized bubbles in natural seawater is small. Stabilizing agents such as surfactants, and surface active proteins – could be added to the water, but the material input would be enormous and capture by low bubble concentrations hopelessly inefficient. And the observed lifetimes are still only about 20 hours. A third strategy is to apply a bit of thermodynamic jujitsu by adding a trace of an insoluble gas to the air, and use the bubble shrinkage against itself. As the bubble shrinks, the insoluble gas remains, and the partial pressure of the soluble gasses drops faster than the internal pressure rises. The bubble eventually stabilizes at a smaller size. Hydrogen is not very soluble in water. If 1% hydrogen were added to the air of a 5 μm bubble, air leakage would be nearly arrested before it got to 1 μm. This approach is actually used in medical ultrasound imaging, where stabilized microbubbles are employed as acoustic contrast agents. The insoluble gases favoured are perfluoroalkanes. These are more insoluble than hydrogen, and we have performance data for this system. The lifetime of these bubbles in blood is short – a half life of 1.3 minutes for one lipid stabilized perfluoroctane bubble product. This does not bode well for bubble geoengineering. These ultrasound contrast agents represent the best that we can do now, under ideal conditions – a small volume, high value cost-no-object pharmaceutical product that can bear the expense of exotic very insoluble gasses and sophisticated lipid encapsulation stabilization strategies – and they still dissolve after a few minutes (Figure 4). In the end, thermodynamics always wins.

### 1AR---LIHEAP

#### 1] Perm do both

#### 2] Perm do the aff – not competitive – separate subsidies

#### **1AC Roberts**

Energy analysts have made the point again and again that fossil fuels, not renewable energy, most benefit from supportive public policy. Yet this fact, so inconvenient to the conservative worldview, never seems to sink in to the energy debate in a serious way. The supports offered to fossil fuels are so old and familiar, they fade into the background. It is support offered to challengers — typically temporary, fragmentary, and politically uncertain support — that is forever in the spotlight. So let’s change that. Let’s talk about “certain regulations and subsidies” — namely, the ones propping up US fossil fuels. Three recent analyses can help. The first does the yeoman’s work of tallying up federal and state energy subsidies. The second shows the effect those subsidies have on oil and gas production. And the third shows how thoroughly the US coal industry is propped up by regulatory policy. Together, they paint a clear picture: The profits of US fossil fuels are built on a foundation of government assistance. All right then. First: What gets subsidized, and how much? OCI is only counting direct production subsidies. As they acknowledge, that leaves out a great deal. For one thing, it leaves out the annual $14.5 billion in consumption subsidies — things like the Low Income Home Energy Assistance Program (LIHEAP), which helps lower-income residents pay their (fuel oil) heating bills. (There are better ways to help poor people, but let’s leave that aside for now.) It also leaves out subsidies for overseas fossil fuel projects ($2.1 billion a year). Most significantly, OCI’s analysis leaves out indirect subsidies — things like the money the US military spends to protect oil shipping routes, or the unpaid costs of health and climate impacts from burning fossil fuels. These indirect subsidies reach to the hundreds of billions, dwarfing direct subsidies — the IMF says that, globally speaking, they amount to $5.3 trillion a year. But they are controversial and very difficult to measure precisely. Finally, OCI acknowledges that its estimates of state-level subsidies are probably low, since many states don’t report the costs of tax expenditures (i.e., tax breaks and credits to industry), so data is difficult to come by. All of which is to say: OCI has produced about the most conservative possible estimate of the subsidies received by fossil fuels in the US. These are solely production subsidies — taxpayer money that goes directly to producing more fossil fuels. So what’s the verdict? Adding everything up: $14.7 billion in federal subsidies and $5.8 billion in state-level incentives, for a total of $20.5 billion annually in corporate welfare. Of that total, 80 percent goes to oil and gas, 20 percent to coal. On the right, subsidies are broken down by stage of production. Extraction gets the most. fossil fuel subsidies (OSI) Notice that asterisk by remediation, which refers to the cost of cleaning up environmental messes and abandoned infrastructure left behind by fossil fuels. Shady insurance, bonding, and liability-cap policies mean that taxpayers are probably on the hook for lots more than this in the end, but it’s difficult to quantify in advance. There are dozens and dozens of fossil fuel production subsidies — OCI’s report has a whole appendix devoted to listing them — but here they are broken down by the biggest offenders: fossil fuel subsidies (OCI) You probably can’t read that text, so here are the top six: Intangible drilling oil & gas deduction ($2.3 billion) Excess of percentage over cost depletion ($1.5 billion) Master Limited Partnerships tax exemption ($1.6 billion) Last-in, first-out (LIFO) accounting ($1.7 billion) Lost royalties from onshore and offshore drilling ($1.2 billion) Low-cost leasing of coal-production in the Powder River Basin ($963 million) (I listed six because that sixth one is the biggie for coal.) These kinds of obscure tax loopholes and accounting tricks are not widely known or debated, partially because you have to be a tax lawyer to understand them, and partially because they are simply old. The single biggest one, the intangible drilling deduction, has been around for over a century! As subsidies age, they start to look less like subsidies. They start looking like fixed features of the landscape, like mountains or rivers, rather than choices we are making. They just look like the status quo. How does this compare to renewable energy subsidies? In terms of permanent tax expenditures, fossil fuels beat renewables by a 7-1 margin: energy subsidies (OCI) (The primary federal tax supports for renewable energy — the investment and production tax credits, respectively — are not permanent. They are set to phase out over the next five years, and are politically vulnerable in the meantime. But if you include them, Stephen Kretzmann of OCI confirmed for me over email, permanent fossil tax breaks still win, at $7.4 billion to $5.6 billion.) If you ask people in fossil fuel industries, their support staff in conservative think tanks, or fossil-state politicians, they will tell you why these fossil fuel production subsidies are necessary. It’s always been this way. They’re more than paid back by tax revenue. Other industries get them too. (For the record: More than half the $20 billion is available to fossil fuels alone). They create jobs. They’re important for national security. Tax expenditures aren’t subsidies at all, if you think about it. Etc. If the endless debate over energy subsidies has taught me anything, it’s that nobody thinks their own subsidy is a subsidy — and no one outside think tanks and universities really gives a damn about the economic distortions of subsidies as such. Everyone thinks their favored energy sources deserve support and the other guys’ don’t. Period. They use whatever economic argument is handy — “picking winners” if you’re against the subsidy, “supporting jobs” if you’re for it — but such arguments are always instrumental. As I said recently about coal’s rent-seeking, there are no true free marketeers in struggling industries. Speaking of rent-seeking, here’s a final fun factoid from OCI: In the 2015-2016 election cycle, oil, gas, and coal companies spent $354 million in campaign contributions and lobbying and received $29.4 billion in federal subsidies in total over those same years — an 8,200% return on investment. Not bad. Fossil fuel executives, basically. (Shutterstock) So, do all these subsidies make a difference. Why, yes. Yes, they do. How much do oil subsidies matter? A lot. The effects of consumption subsidies are fairly well-understood, as it is fairly easy to aggregate consumer decisions and find patterns. But the effects of production subsidies are trickier to pin down; it is difficult to tie particular background subsidies to particular investment decisions by producers. In an analysis published in Nature in October 2017, researchers from the Stockholm Environment Institute (SEI) attempt to clear this up, quantifying, to the extent possible, just how much a difference production subsidies make. They do this by focusing in on a specific economic decision on the part of producers: whether or not to develop a new oil field they’ve discovered. After tallying up their own long list of production subsidies and attempting to calculate how those subsidies shift the economic returns of new production, they came to some pretty startling conclusions, emphasis mine: We find that, at recent US oil prices of US$50 per barrel, tax preferences and other subsidies push nearly half of new, yet-to-be-developed oil into profitability. This potentially increases US oil production by almost 17 billion barrels over the next few decades, equivalent to 6 billion tonnes (Gt) of CO2. Almost half of the new oil fields getting drilled would have been left alone if not for subsidies. That is no small effect! The researchers acknowledge that the impact of subsidies on these decisions is extremely sensitive to oil prices. If oil prices rise back up to, say, $75bbl, as some forecasters project, the impact of subsidies will appear far smaller. Photo of oil rigs sit just outside of Theodore Roosevelt National Park near Watford City, North Dakota. Almost half of these from the least few years are thanks to your taxpayer dollars. Thanks? (Ken Cedeno/Corbis via Getty Images) But at current low oil prices, subsidies are making a huge, huge difference. Coal is propped up by government policy too As the charts from OCI show, direct federal tax expenditures on behalf of coal production are dwarfed by oil and gas subsidies. The main federal tax subsidy is cheap leases to mine coal on public land. But as a report from Carbon Tracker details, coal is still very much propped up by public policy. It’s no big revelation that new coal plants are uneconomic. There hasn’t been a new coal plant built in the US in years and there will probably never be another one, for reasons of raw economics. Here are net capacity additions and subtractions from the US power fleet, from 2011 to 2016: capacity additions (Carbon Tracker) As you can see, crappy old coal plants are coming offline and nobody’s building new plants to replace them. Problem is, new coal plants have to be “clean,” which is to say, they have to have the filters and scrubbers to meet modern pollution standards. And as I’ve been saying for years, coal can either be cheap or clean, not both; making a new coal plant clean makes it uneconomic (to say nothing of what happens when you force it to bury its carbon). What’s more striking is how imperiled existing, fully paid-off coal plants are. Even many of those can’t compete against natural gas or renewables. Many existing coal plants are balanced on a fine edge. To the extent they can escape requirements to upgrade to modern pollution equipment — and believe it or not, decades after the Clean Air Act was passed, they still can — they can stay profitable for longer. “When current costs are considered, 72% of operating coal units are unprofitable compared to the operating cost of an equivalent [natural gas plant],” Carbon Tracker writes, “and 98% when the anticipated costs [of environmental upgrades] are included.” In other words, once the entire coal fleet upgrades to modern pollution standards ... basically none of it will be economically competitive. Cheap or clean; never both. The A.E.P. (American Electric Power) coal burning plant in Conesville, Ohio. Not v. competitive. (Michael Williamson/Washington Post/Getty Images) That’s a narrow path to remaining profitable, and coal plants are only on that path at all because of all the other ways they are propped up by regulatory policy: Capacity markets favor already-built coal over new natural gas or renewables: Unlike electricity markets, which pay for power, capacity markets pay for the ability to spin up, just in case. They are a way of maintaining reserve capacity in case other power plants unexpectedly go offline. For various reasons (see the report), such markets favor plants that are already amortized and have readily available fuel, i.e., generally coal plants. So yeah, even coal plants that rarely produce power still get paid to sit around and ... not be closed. In regulated energy markets, utilities get paid to keep investing in unneeded, expensive coal plants: In competitive energy markets, plants close if they can’t make enough profit from their power to cover their ongoing costs. But in fully regulated markets (which contain 67 percent of US coal capacity), a utility’s return on investment in a plant is guaranteed by regulators, whether or not closing that plant would be better for ratepayers (as it very often would). Ironically, that’s why more coal plants in regulated markets have pollution-control equipment. In competitive markets, that would render them uneconomic (better just to shut them down). But in regulated markets, hell, why not? Every bit of investment means more guaranteed profits. pollution equipment (Carbon Tracker) Utilities shuffle coal plants from their deregulated side to their regulated side, to shield them from competition: This one is so devious. Utility holding companies — which own utilities in both regulated and deregulated markets — move coal plants from the books of the latter to the books of the former, to shield them from competition and keep them alive via regulation. “This accounting practice typically shifts the economic burden from the shareholder to the consumer,” Carbon Tracker writes, “with the former often benefiting to the detriment of the latter. Utilities hedge against changing natural gas costs: Some forecasters expect natural gas prices to rise in coming years (though, honestly, everyone is guessing). To hedge against that, utilities often keep uneconomic coal plants open, just in case rising NG prices retroactively render them economic. This is just a partial accounting. The broader point is that the edifice of regulation governing the US electricity sector favors coal incumbents in myriad ways. If all coal plants had to adopt their full costs and face full market competition tomorrow, the US coal fleet would quickly shrink to negligible size. It only survives because, through taxes and regulations, the US has protected it. All three reports make it clear we’re accelerating in the wrong direction All three reports are very clear that, to achieve the global target of limiting temperature rise to 2 degrees Celsius or less this century, fossil fuels will have to be aggressively phased out. As OCI shows, staying within a 2 degrees Celsius carbon budget means that we can’t even burn all the fossil fuels in already developed reserves: carbon budget vs. reserves (OCI) Hitting our target means no new fossil fuel exploration, no new fields or mines, no new development. Carbon Tracker, meanwhile, develops a detailed scenario for phasing out the US coal fleet on schedule with a 2 degrees Celsius carbon budget. Here’s what it looks like: coal phaseout (Carbon Tracker) (B2DS and 2DS are two International Energy Agency scenarios. You don’t need to worry about the difference.) The 2C carbon budget dictates an extremely rapid phaseout — far faster than anything currently projected by utilities themselves. That is the background against which to understand fossil fuel subsidies: They are intrinsically incompatible with current climate goals. So, let’s take a step back and sum up. Right now, the US pays rhetorical fealty to a carbon goal that would require stopping all new fossil fuel development and phasing out all coal plants. Meanwhile, US taxpayers are spending tens of billions of dollars a year subsidizing new fossil fuel exploration and exploitation, and US regulatory policy keeps the zombie coal fleet shambling on. All the while, conservatives complain volubly about subsidies to renewable energy and the US energy secretary tries to use them as an excuse to dump even more public money on coal companies. It’s a train wreck. But still. The oil and gas companies making decisions to develop new fields and the utilities keeping coal plants alive are going to realize, at some point, that their vulnerability to “carbon risk” grows every year. (Arguably, big oil is way ahead of big coal in understanding this.) The Obama administration identified $8.7 billion a year in federal fossil fuel subsidies to eliminate, but couldn’t get it past Congress. Now both sides of Pennsylvania Avenue are fossil-addled. But if the US ever does get serious about mitigating climate change, those companies are going to be the ones caught with their pants down, holding a bunch of high-carbon assets that are destined to be stranded. US fossil fuel companies and utilities are basically gambling on the continued perversity of US energy policy. It’s not a terrible bet — an odds-on winner, historically speaking, and probably for the next few years — but it can’t last forever. Can it?

### 1AR---Consult ICJ

#### 1] Agent CP is a voting issue –

#### a. Unpredictable – Infinite number of actors that can be consulted. Creates a race to the bottom where negs are always trying to find the most obscure actor to consult. Predictability is key to fairness.

#### b. Timeframe CP’s Bad – Forces us to debate not IF the plan should pass but WHEN and under WHAT conditions, shifts focus and purpose of debate which is key to education.

#### Permutation do the aff and ask the ICJ to rule on the United States’ decision to exit the Paris Agreement! Net benefit is the case.

#### Permutation – consult the ICJ after the aff – order doesn’t matter as long as it’s consulted at some point

#### Multiple alt causes swamp the CP

Ogbodo ’12 (Law Prof-University of Benin, “An Overview of the Challenges Facing the International Court of Justice in the 21st Century, 18 Ann. Surv. Int'l & Comp. L. 93, Spring, Lexis)

V. CONCLUSIONS AND RECOMMENDATIONS The ICJ continues to command the pre-eminent position as the "principal judicial organ" of the United Nations, but **to renew the influence and efficacy of the Court, vital reforms concerning the problems outlined above must be undertaken**. With membership consisting of almost all the countries of the world, the sphere of influence of the ICJ is wide and encompassing. n76 Such a court deserves to be most equipped to handle the increasingly evolving judicial disputes arising in the 21st century. As the world population continues to increase exponentially, n77 so do issues arising from an ever-changing world. Issues concerning environmental protection, terrorism, drug trafficking, human trafficking, globalization, etc., are global in nature and deserve attention from an influential international court. Although the Court has managed to do reasonably well in the last six decades, there are still areas for improvement and efficiency in order to ensure maximum performance. This article proffers recommendations in the following subsections: (A) **the removal of judges from the permanent member states**; (B) **the acceptance of the compulsory jurisdiction of the Court**; (C) **the abolishment of Article 31** of the ICJ statute, **and**; (D) **an overhaul of the system of the election and re-election of judges.** A.The Removal of Judges From the Permanent Member States **The UN Security Council permanent members' place on the International Court of Justice conveys a poor impression of the Court**. As it were, the [\*110] actions of the five permanent members on the Security Council have been largely attributed to the disordered discharge of the onerous responsibilities of the Council. It is common knowledge that since the Cold War era, n78 the effectiveness of the Security Council had been hampered by the tendency of the 'big five' to defend ideological interests in the Council. Even in the post-Cold War era of the 21st century, n79 such ideological bias still persists. n80 The presence of the judges from those permanent member states on the ICJ does not add any shine to the judicial image of the Court. Rather, it is merely another extension of the dominance of the five permanent members of the Security Council. Moreover, the **fact that the decisions of the ICJ are primarily enforced by the Security Council n81 generates a conflict of interest that warrants** a **separation** between the ICJ decisions and the Security Council. The likelihood that the enforcement of the ICJ decisions by the Security Council will be **subject to the same political shenanigans** as in the Council is likely. A classic case is the use of the veto power by the United States in 1986 to frustrate the resolution of the Security Council for full compliance with the ICJ's judgment in the case of Nicaragua v. United States. n82 A situation where four out of five permanent members of the Security Council and the ICJ have rejected the Court's compulsory jurisdiction while simultaneously acting as chief enforcers of its decisions, is not only hypocritical but morally wrong. In any case, **what is the** [\*111] **enforcement option if one of the 'big five' refuses to perform its obligation under a judgment of the ICJ** in light of Article 94(2) of the UN Charter? For example, after the Court had made an interim order for restraint and was still deliberating on the final judgment in the Case Concerning United States Diplomatic and Consular Staff in Tehran, the US government made a futile attempt to rescue US citizens held as hostages in Iran. n83 The court appropriately expressed its displeasure at the action when it tersely condemned the action as one "of a kind calculated to undermine respect for the judicial process in international relations." n84 This recommendation is in tandem with the practice at the national level where there is a clear distinction of roles between the judiciary and the chief enforcer of judicial decisions, i.e. the executive.

#### Electoral reform is necessary for ICJ credibility

Ogbodo ’12 (Law Prof-University of Benin, “An Overview of the Challenges Facing the International Court of Justice in the 21st Century, 18 Ann. Surv. Int'l & Comp. L. 93, Spring, Lexis)

D.An Overhaul of the System of Election and Re-election of Judges Political influences in the election and re-election of ICJ judges warrant an overhaul in order to restore integrity to the ICJ. By so doing, the ICJ judges will enjoy maximum independence which is a sine qua non for an effective administration of justice. Rather than continue the current system, it is recommended that the coordination of the process for the election and re-election of the judges should be the prerogative of the International Law Commission, which is an arm of the United Nations. n90 Since the ILC is composed of internationally acclaimed legal jurists and publicists, they will be in a better position to conduct the election and re-election of the ICJ judges without undue political influence. [\*113] Practically speaking, the General Assembly can cede the functions with respect to the compilation and short-listing of nominated candidates for the ICJ to the ILC. By so doing, the ILC may be designated as the 'electoral body' for the ICJ. n91 After the election and re-election process has been conducted by the ILC, the confirmation process may then be undertaken by the General Assembly. The election and re-election process will be professionally conducted by professional peers who will be guided primarily by the highest ethics and standards of the legal profession, while the confirmation process will be conducted by the General Assembly to ensure universal confirmation of such a judge's election or re-election. The recommendations made by this article seek to restore the status of the ICJ, in both name and practice, as the world's apex court. Facing issues of jurisdiction and composition, the ICJ's legitimacy and impartiality have been compromised. The reforms proffered in this article are requisite if the Court is to be equipped to effectively handle the evolving myriad of legal issues confronting the global community in the 21st century.

#### Ad hoc judges pound signal

Ogbodo ’12 (Law Prof-University of Benin, “An Overview of the Challenges Facing the International Court of Justice in the 21st Century, 18 Ann. Surv. Int'l & Comp. L. 93, Spring, Lexis)

Article 31 of the ICJ Statute **corrupts the integrity of the Court** by allowing a party before it to nominate an ad hoc judge if none of the ICJ judges is a nationality of the party. n69 In other words, every party before the ICJ is entitled to either a judge of the same nationality on the Court or an ad hoc judge. n70 On the face of it, this practice may be geared towards ensuring fairness and democracy in the operation of the Court. n71 However, a critical examination of this practice--as well as the outcome--portrays an **abuse of the judicial process at the highest level**. n72 The records indicate that **ad hoc judges typically vote for their country of nationality, irrespective of the majority decision of the Court**. n73 Guaranteeing a contentious party the right to a representative judge does not augur well for the Court's **image of impartiality**. n74 **The impression created by this practice** is that a party can only be guaranteed a fair and impartial justice before the Court if, and only if, the party is represented by one of the judges - either one of the elected judges or an ad hoc judge. Moreover, the mere fact that a party before the court must have a representative judge **does not only** negate the impartial appearance **of the Court, but speaks volumes about its ability to** [\*109] **dispense States-blind justice** to the parties before it. n75 This practice contravenes the claim that a member of the Court is not a delegate of the government of her/his own country. Since an ad hoc judge is an appointee of a state party before the Court, the likelihood of future appointment will definitely sway the judge to be sympathetic to the state party which typically is his home state.

### 1AR---Fuel Tax Credit

#### 1] Perm do both

Davidson 14 Sinclair Davidson, 5-11-2014, Sinclair Davidson is Professor of Institutional Economics at RMIT University and a senior fellow at the Institute of Public Affairs. His opinion pieces have been published in The Age, The Australian, Australian Financial Review, The Daily Telegraph, Sydney Morning Herald, and Wall Street Journal Asia. Some of the arguments here are drawn from his 2012 paper "Mining Taxes and Subsidies: Official evidence" published by the Minerals Council of Australia., "Viewpoints: should fuel tax credits be cut in the budget?", Conversation, https://theconversation.com/viewpoints-should-fuel-tax-credits-be-cut-in-the-budget-25988, Accessed on 11-2-2019 // JPark

Sinclair Davidson: The fuel tax credit scheme is not an example of corporate welfare – it is not a subsidy – and the case for increasing taxation is superficial. I advocate that it is left alone. On the other hand, the age of entitlement is increasingly unaffordable and should be substantially wound back. A good place to start looking for examples of corporate welfare is the Productivity Commission’s annual Trade and Assistance Review reports.

### 1AR---BLDTF

- context: their argument is that Trump cut BLDTF in new tax budget – BLDTF is a tax on companies which pay a certain amount per ton of coal

- their definition is trash – only the one time appropriation counts as a subsidy- but it was ***already paid***, which means it’s irrelevant – the ***bonds*** are what keep the fund full, which are separately funded by Congress ----- the aff doesn’t cut those bonds

#### 1. perm do the aff and their second plank – the “subsidy” is a one-time appropriation of funds, not long-term bonds, which is the PIC’s NB

1NC Adeyeye Adenike Adeyeye (Chief of Staff to Commissioner of California Public Utilities Commission), James Barrett (partner in the Washington, D.C. office of Latham & Watkins, Leadership council of Environmental Law Institute, specializes in cases concerning the Clean Air Act and various solid and hazardous waste laws, including CERCLA), Jordan Diamond (Co-Director of Ocean Project at Environmental Law Institute), Lisa Goldman (Acting Assistant General Counsel at Environmental Protection Agency), John Pendergrass (Vice President, Programs & Publications at ELI, JD Case Western University), and Daniel Schramm, Report produced on behalf of the Environmental Law Institute, Estimating U.S. Government Subsidies to Energy Sources: 2002-2008, September 2009, https://www.eli.org/research-report/estimating-us-government-subsidies-energy-sources-2002-2008 WJ Recut //ZL **\*We read yellow**

The Black Lung Disability Trust Fund (BLDTF) pays health benefits to coal miners afflicted with pneumoconiosis or “black lung disease.”32 Created in 1978, it is funded through an excise tax of $1.10/ton on underground coal and $.55/ton on surface coal, exempting lignite coal, imports, and exports.33 As with other excise taxes (for example, those on crude petroleum or transportation fuels), these levies support a trust fund that accrues to the benefit of the fuel market itself (i.e., coal), by covering health costs incurred in the production of that fuel. Thus, the cost and benefit of the tax to the fuel should theoretically net to zero. However, as the excise tax payments did not sufficiently cover early benefits payments, the BLDTF was given “indefinite authority to borrow” from the U.S. General Fund.34 The Office of Inspector General (OIG) at the Department of Labor (DOL) reports that it first alerted Congress and the public to the enormous debt liabilities of the BLDTF to the Treasury in its Semiannual OIG Report to Congress in March 1997. At that time, the OIG reported that the debt stood at $5 billion.35 By the end of FY 2008, the BLDTF had accrued nearly $13 billion in principal debt and accrued interest to the Treasury.36 To fix the problem, Congress partially refinanced and partially “bailed out” the BLDTF in the Emergency Economic Stabilization Act at the end of FY 2008.37 Under this plan, half of the debt was refinanced with zero-coupon bonds, while the $6.498 billion of remaining debt was handled through a one-time appropriation by Congress to the BLDTF, which then immediately paid this sum back to the U.S. Treasury. The study treats the one-time appropriation (but not the bonds) as a subsidy to coal, representing a cost to taxpayers of thirty-three years of advances from the General Fund that were nev er paid back, and which otherwise would have been borne by the coal sector through an excise tax set at a level that would fully cover the needs of the coal miners who contracted black lung disease. The amount of the subsidy is calculated as the percentage of the one-time appropriation of $6.498 billion attributable to the amount of debt (principal plus interest) accrued during the study period of FY2002 – FY2008. While the full amount of the appropriation is properly viewed as a coal subsidy, only 13.47% of that amount is attributable to debt incurred during the study period, or, adjusted for inflation, about $1.035 billion.

#### 2. they can’t solve – we kill companies, which they do too – no more mining means no more funding, which takes out the NB

#### 3. uniqueness counterplans are a voting issue – they’re utopian and artificially influence topic literature by cherry-picking long gone subsidies – that kills predictability and clash – their counterplan literally shifts the debate from tax cuts to excess taxes

### 1AR---Royalties CP

- they increase taxes on companies by 20% - 10% goes back to them, 10% to USFG

- this counterplan literally does nothing – CX should crush solvency and their ev doesn’t solve any of the aff

#### 1. doesn’t solve case –

#### a. our greentech internal link is economic, not perceptual – they mitigate production, but don’t shove fuels out of the market, which doesn’t spill over and isn’t sufficient to solve warming

#### b. a 107 million ton reduction is laughable – they solve barely 25%

Gillingham and Stock ‘16 [Kenneth T. Gillingham School of Forestry and Environmental Studies and Department of Economics, Yale University James H. Stock Department of Economics and Harvard Kennedy School, Harvard University] “Federal Minerals Leasing Reform and Climate Policy” Hamilton Project, December 2016 RE Recut //ZL **\*We read yellow**

Table 4 summarizes the estimated effects on coal production, mining employment, and power sector emissions of a 20 percent SCC royalty adder on federal coal, relative to a scenario with no royalty adder. Estimates are reported for 2025 and 2030. Like all estimates, the specific numerical values depend on the underlying assumptions, which are (other than the carbon adder) the assumptions in the EPA’s Regulatory Impact Analysis for the CPP. The results discussed here are taken from CEA (2016); Gerarden, Reeder, and Stock (2016); and Vulcan (2016). Under the 20 percent SCC royalty adder, federal coal production declines. In the PRB, production declines in 2025 by between 82 and 107 million short tons, depending on the CPP implementation; for comparison, PRB production in 2015 was 399 million short tons.

#### 2. no poverty NB – we put 15,000 workers out of jobs while saving hundreds of thousands of slow and painful deaths

**Bump ’17** (Bump, Philip. “Analysis | There Are Fewer Coal Miners than You Might Realize.” The Washington Post, WP Company, 20 Mar. 2017, [www.washingtonpost.com/news/politics/wp/2017/03/20/there-are-fewer-coal-miners-than-you-might-realize/](http://www.washingtonpost.com/news/politics/wp/2017/03/20/there-are-fewer-coal-miners-than-you-might-realize/).) //ZL

So how many coal miners are there? In the most recent jobs report, the mining industry accounted for [183,300 jobs](https://www.bls.gov/iag/tgs/iag212.htm). But that includes a lot of mining unrelated to coal and a lot of support occupations, too: supervisors, truck drivers and so on. In May 2015, there were [69,460 jobs](https://www.bls.gov/oes/current/naics4_212100.htm#47-0000) in coal mining itself — only 15,900 of which were extraction workers or helpers, mining machine operators or earth drillers. That’s 0.019 percent of the American workforce that month.

#### 3. default aff – counterplan solvency is unquantifiable because their plan text is way too vague – they just cherry-picked the scenario with max reductions

Gillingham and Stock ‘16 [Kenneth T. Gillingham School of Forestry and Environmental Studies and Department of Economics, Yale University James H. Stock Department of Economics and Harvard Kennedy School, Harvard University] “Federal Minerals Leasing Reform and Climate Policy” Hamilton Project, December 2016 //ZL

A 20 percent SCC carbon adder to royalties on federal coal would reduce but not eliminate production of federal coal and would generate substantial federal and state revenues. The adder would also reduce total CO2 emissions in the power sector, with the extent of the emissions reduction depending on the way the CPP ends up being implemented. The results from this section draw on simulations of the U.S. energy sector using the Integrated Planning Model (IPM), developed by the consultancy ICF Incorporated. The IPM is a proprietary model that has been widely used by the U.S. government for the analysis of regulation; for example, the EPA used the IPM for the Regulatory Impact Analysis of the CPP. It includes detailed modeling of key aspects of the energy system relevant to our analysis, including 36 coal supply regions, 14 coal grades, coal transportation and distribution, electricity generation, and production of alternative inputs to electricity generation. It models electricity generation investment, the choice of when to turn up generation, fuel switching, and regulatory compliance. The baseline assumptions used in this analysis are based on the assumptions used in the Regulatory Impact Analysis for the CPP. The estimates vary somewhat depending on how states choose to comply with the CPP. Just as in the Regulatory Impact Analysis, we present the bounding cases of all states choosing a mass-based plan (i.e., a set mass of emissions is permitted for the state and a tradable permit program or other policy is used to meet the target) or all states choosing a ratebased plan (i.e., states meet a carbon intensity target). We also model a no-CPP scenario. For each of these baseline scenarios, our results assume phase-in of the carbon adder as a linearly increasing royalty schedule for all leases, ramping up over a 10-year period from 2016 to 2026. Some mines include both federal and nonfederal coal. For these mines, the adder was assessed at each step of the mine’s supply curve in proportion to the current fraction of federal coal in the mine. This is consistent with the current logical mining unit approach for mining regions—such as the PRB—that commonly contain inholdings of nonfederal coal. Table 4 summarizes the estimated effects on coal production, mining employment, and power sector emissions of a 20 percent SCC royalty adder on federal coal, relative to a scenario with no royalty adder. Estimates are reported for 2025 and 2030. Like all estimates, the specific numerical values depend on the underlying assumptions, which are (other than the carbon adder) the assumptions in the EPA’s Regulatory Impact Analysis for the CPP. The results discussed here are taken from CEA (2016); Gerarden, Reeder, and Stock (2016); and Vulcan (2016). Under the 20 percent SCC royalty adder, federal coal production declines. In the PRB, production declines in 2025 by between 82 and 107 million short tons, depending on the CPP implementation; for comparison, PRB production in 2015 was 399 million short tons. Table 4 provides estimates of the degree of substitution of nonfederal for federal coal. Under a mass-based CPP, the royalty adder reduces PRB production by 82 million tons in 2025, while non-Western coal production increases by 49 million tons, corresponding to a substitution ratio (49/82) of roughly 60 percent. The substitution ratio is less in 2025 under a rate standard—only 35 percent—as electric power generation shifts to new natural gas and renewables.11 The largest increase in nonfederal coal is in the Illinois Basin. Northern Appalachia sees an increase, relative to the noadder case, of approximately 8 million tons (approximately 12 percent) in each of the CPP scenarios.12 Despite this partial switching to nonfederal coal, total power sector emissions decline under the 20 percent carbon adder. The size of this decline depends on the year and on the way the CPP is implemented. The smallest reductions occur under the mass-based CPP, in which case the royalty adder induces emissions reductions in 2025 of 33 million metric tons. Table 4 also provides preliminary estimates of the direct employment effects of the 20 percent SCC adder for the major coal-producing states. Employment falls in the regions with a preponderance of federal coal, but increases in the East and Midwest. On average, nonfederal mines have lower productivity than federal mines, and national mining employment is estimated to increase under the 20 percent SCC carbon adder even though there is only partial substitution of nonfederal for federal coal.

### 1AR---Courts

- their cards reference the Public Trust Doctrine – says the US has failed to protect right to life b/c of climate action ----- this is NOT a legitimate usage of the PTD because climate change is global and the US has no such jurisdiction – means either courts refuse to rule on it or that if they do, no enforcement

#### 1. it circumvented to hell – Trump doesn’t care about court rulings, especially in the climate change arena and they have no enforcement mechanism

### ---Short PTD indict version

#### 2. PTD isn’t judiciable – either gets struck down or circumvented b/c of PQD

**Dolsak ’19** (Dolsak, Nives, and Aseem Prakash. “Should the Judiciary Be Making US Climate Policy?” Forbes, 22 June 2019, [www.forbes.com/sites/prakashdolsak/2019/06/22/should-the-judiciary-be-making-us-climate-policy/#655dc89043f6](http://www.forbes.com/sites/prakashdolsak/2019/06/22/should-the-judiciary-be-making-us-climate-policy/#655dc89043f6).) //ZL

The climate crisis is provoking a debate about the resilience of the constitutionally prescribed division of power among the three co-equal branches of the US government. We speak to this issue as political scientists studying regulatory policy, not as constitutional scholars. Our key point is that asking the judiciary to mandate climate policies might have the unintended effect of concentrating policymaking power in the judiciary, thereby affecting the long-term health of the US democracy. The US constitution outlines the [separation of powers in Articles 1-3](https://www.usconstitution.net/consttop_sepp.html). It vests the legislative authority with the Congress. The executive branch is supposed to implement the law, while the judiciary is expected to interpret it. Yet, it seems that with the [judicialization of politics](https://www.jstor.org/stable/1192402?casa_token=DW3100oFBt8AAAAA:4X_R6BlPgsAQgTLPTZzg5EKl8cSdUwIFezIS7fpcuwQLtJVZJjdDbsskxHppcfqcM4AFcWoVgMFE6w1JEOW9klOBFXS_sRvHAQ4wzcD1Sl7GVnOg3w&seq=1#metadata_info_tab_contents), the judiciary is accumulating more policy power than what the constitution intended. In the context of climate policy, we focus on two issues: the inability of the Environmental Protection Agency (EPA) and the California regulators to agree on automobile tailpipe emission standards and the Juliana case, where citizens are petitioning the judiciary to mandate a climate policy. Regulating Tailpipe Emissions Under [Section 209 of the Clean Air Act of 1970](https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations), Congress authorized the EPA to grant California a [waiver from federal standards](https://www.law.cornell.edu/uscode/text/42/7543) and allow it to enact its own (tougher) automobile tailpipe emission standards. The logic was that California had [started regulating these emissions before the](https://www.theatlantic.com/science/archive/2017/03/trump-california-clean-air-act-waiver-climate-change/518649/) 1970 amendments to the Clean Air Act and hence was considerably ahead of the rest of the country in this regard. Other states could either follow the federal standards or the California ones. Because California is the largest automobile market in the country, US automobile firms adopted California’s tougher emissions standards for all cars, irrespective of where they were sold. Consequently, California acquired a de facto authority to influence tailpipe emission standards across the nation, what scholars have called the “[California Effect](http://www.hup.harvard.edu/catalog.php?isbn=9780674900844).”. Congress has the authority to set the Corporate Average Fuel Economy [(CAFE) standards](https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy) and the National Highway Traffic Safety Administration is tasked with implementing this policy. Because the CAFE standards also bear upon air pollution, the EPA gets involved in the regulatory process as well. Under the Obama Administration, [California joined](https://obamawhitehouse.archives.gov/the-press-office/2012/08/28/obama-administration-finalizes-historic-545-mpg-fuel-efficiency-standard) the federal government in agreeing to revised 2008 CAFE standards. The automobile industry signed on. Trump’s administration wants to dilute these standards with its proposed [Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule](https://www.federalregister.gov/documents/2018/08/24/2018-16820/the-safer-affordable-fuel-efficient-safe-vehicles-rule-for-model-years-2021-2026-passenger-cars-and). But if California does not follow suit, the EPA will not be able to persuade automobile firms to follow the less stringent CAFE standards. Therefore, the EPA wants to withdraw California’s Clean Air Act Preemption Waiver. Of course, this decision will be litigated. But this sort of a clash between the EPA and California has punted a political question to the judiciary. One might argue that this sort of federal-state conflict is precisely where the judiciary should play the referee role. But on the other hand, this is also dragging the judiciary into highly contentious political issues which should remain within the purview of the legislature. Perhaps Congress should not have given such power to the EPA in the first place. We are not suggesting that California should give in; it should not. But there is a worrying trend of groups relying too much on the courts to enact environmental policy. This sort of judicial approach inadvertently vests too much policymaking power in the judiciary and creates incentives for interest groups to try to capture the judiciary. Climate Change and the Public Trust Doctrine The second development pertains to [Juliana v. Unites States](https://www.ourchildrenstrust.org/juliana-v-us), where petitioners argue that the federal government has failed its obligations under the “[public trust](https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1226&context=jlasc)” doctrine to rein in climate change. For the young plaintiffs, the government has violated their constitutional rights to life, liberty, and property. Again, it needs to be debated whether such profound policy decisions should be decided by the judiciary. If the judges rule in favor of the petitioners (by recognizing their constitutional right to a stable atmosphere), what sort of remedy can the judiciary insist on, given the global scope of the climate problem? It is not clear whether the US, by unilaterally reducing its future emissions, will secure this right. The remedy requested by different plaintiffs in another case, [Komor v. United States](http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2019/20190529_docket-419-cv-00293_complaint.pdf), is the removal of atmospheric carbon. Will the U.S. government be responsible for removing carbon across the globe? After all, removing carbon emitted only by US-based firms may not provide the relief plaintiffs seek. Liberals support the judicialization of politics because they believe that the judiciary is on their side. But the partisan composition of the judiciary can change –some would say that it is already changing. Might a conservative judiciary then begin to strike down liberal federal laws, as it did in the 1930s, prompting FDR to try to pack the court? Will the purpose of politics now become packing the courts so that judges can do the job the legislative branch cannot? While American democracy is dysfunctional, it is short-sighted to assume that the judiciary is the only hope for getting rational and fair policies. This will lead to further politicization of the judiciary: from a referee, it will become an active political player in its own right. An alternative strategy might be to revitalize politics in order to reform the American democracy. Think of the [17th Amendment](https://www.archives.gov/legislative/features/17th-amendment) that provided for the direct elections to the US Senate or the [Voting Rights Act](https://www.history.com/topics/black-history/voting-rights-act) that created a more representative democracy. Or, think of the ongoing effort, the [National Popular Vote](https://www.nationalpopularvote.com/written-explanation) interstate compact, that would guarantee the Presidency to the candidate who receives the most popular votes nationally. Policymaking via the legislative route can be difficult and slow. But it is durable and eventually strengthens our democracy.

### ---Long SOP DA Version

#### 2. CP kills SOP – also, PTD isn’t judiciable – it gets struck down or circumvented

**Dolsak ’19** (Dolsak, Nives, and Aseem Prakash. “Should the Judiciary Be Making US Climate Policy?” Forbes, 22 June 2019, [www.forbes.com/sites/prakashdolsak/2019/06/22/should-the-judiciary-be-making-us-climate-policy/#655dc89043f6](http://www.forbes.com/sites/prakashdolsak/2019/06/22/should-the-judiciary-be-making-us-climate-policy/#655dc89043f6).) //ZL

The climate crisis is provoking a debate about the resilience of the constitutionally prescribed division of power among the three co-equal branches of the US government. We speak to this issue as political scientists studying regulatory policy, not as constitutional scholars. Our key point is that asking the judiciary to mandate climate policies might have the unintended effect of concentrating policymaking power in the judiciary, thereby affecting the long-term health of the US democracy. The US constitution outlines the [separation of powers in Articles 1-3](https://www.usconstitution.net/consttop_sepp.html). It vests the legislative authority with the Congress. The executive branch is supposed to implement the law, while the judiciary is expected to interpret it. Yet, it seems that with the [judicialization of politics](https://www.jstor.org/stable/1192402?casa_token=DW3100oFBt8AAAAA:4X_R6BlPgsAQgTLPTZzg5EKl8cSdUwIFezIS7fpcuwQLtJVZJjdDbsskxHppcfqcM4AFcWoVgMFE6w1JEOW9klOBFXS_sRvHAQ4wzcD1Sl7GVnOg3w&seq=1#metadata_info_tab_contents), the judiciary is accumulating more policy power than what the constitution intended. In the context of climate policy, we focus on two issues: the inability of the Environmental Protection Agency (EPA) and the California regulators to agree on automobile tailpipe emission standards and the Juliana case, where citizens are petitioning the judiciary to mandate a climate policy. Regulating Tailpipe Emissions Under [Section 209 of the Clean Air Act of 1970](https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations), Congress authorized the EPA to grant California a [waiver from federal standards](https://www.law.cornell.edu/uscode/text/42/7543) and allow it to enact its own (tougher) automobile tailpipe emission standards. The logic was that California had [started regulating these emissions before the](https://www.theatlantic.com/science/archive/2017/03/trump-california-clean-air-act-waiver-climate-change/518649/) 1970 amendments to the Clean Air Act and hence was considerably ahead of the rest of the country in this regard. Other states could either follow the federal standards or the California ones. Because California is the largest automobile market in the country, US automobile firms adopted California’s tougher emissions standards for all cars, irrespective of where they were sold. Consequently, California acquired a de facto authority to influence tailpipe emission standards across the nation, what scholars have called the “[California Effect](http://www.hup.harvard.edu/catalog.php?isbn=9780674900844).”. Congress has the authority to set the Corporate Average Fuel Economy [(CAFE) standards](https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy) and the National Highway Traffic Safety Administration is tasked with implementing this policy. Because the CAFE standards also bear upon air pollution, the EPA gets involved in the regulatory process as well. Under the Obama Administration, [California joined](https://obamawhitehouse.archives.gov/the-press-office/2012/08/28/obama-administration-finalizes-historic-545-mpg-fuel-efficiency-standard) the federal government in agreeing to revised 2008 CAFE standards. The automobile industry signed on. Trump’s administration wants to dilute these standards with its proposed [Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule](https://www.federalregister.gov/documents/2018/08/24/2018-16820/the-safer-affordable-fuel-efficient-safe-vehicles-rule-for-model-years-2021-2026-passenger-cars-and). But if California does not follow suit, the EPA will not be able to persuade automobile firms to follow the less stringent CAFE standards. Therefore, the EPA wants to withdraw California’s Clean Air Act Preemption Waiver. Of course, this decision will be litigated. But this sort of a clash between the EPA and California has punted a political question to the judiciary. One might argue that this sort of federal-state conflict is precisely where the judiciary should play the referee role. But on the other hand, this is also dragging the judiciary into highly contentious political issues which should remain within the purview of the legislature. Perhaps Congress should not have given such power to the EPA in the first place. We are not suggesting that California should give in; it should not. But there is a worrying trend of groups relying too much on the courts to enact environmental policy. This sort of judicial approach inadvertently vests too much policymaking power in the judiciary and creates incentives for interest groups to try to capture the judiciary. Climate Change and the Public Trust Doctrine The second development pertains to [Juliana v. Unites States](https://www.ourchildrenstrust.org/juliana-v-us), where petitioners argue that the federal government has failed its obligations under the “[public trust](https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1226&context=jlasc)” doctrine to rein in climate change. For the young plaintiffs, the government has violated their constitutional rights to life, liberty, and property. 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Think of the [17th Amendment](https://www.archives.gov/legislative/features/17th-amendment) that provided for the direct elections to the US Senate or the [Voting Rights Act](https://www.history.com/topics/black-history/voting-rights-act) that created a more representative democracy. Or, think of the ongoing effort, the [National Popular Vote](https://www.nationalpopularvote.com/written-explanation) interstate compact, that would guarantee the Presidency to the candidate who receives the most popular votes nationally. Policymaking via the legislative route can be difficult and slow. But it is durable and eventually strengthens our democracy.

#### Congressional power key to political accountability – solves nuke war

David Gray Adler 8, Professor of Political Science at Idaho State University, “The Judiciary and Presidential Power in Foreign Affairs: A Critique”, 6-1, http://www.freerangethought.com/index.php?option=com\_content&task=blogsection&id=6&Itemid=41

{11} The structure of shared powers in foreign relations serves to deter abuse of power, misguided policies, irrational action, and unaccountable behavior.[[31]](http://www.urich.edu/%7Eperspec/adler.htm#31) As a fundamental matter, emphasis on joint policymaking permits the airing of sundry political, social, and economic values and concerns. Such a structure wisely ensures that the ultimate policies will not merely reflect the private preferences or the short-term political interests of the President.[[32]](http://www.urich.edu/%7Eperspec/adler.htm#32) {12} Of course, this arrangement has come under fire in the postwar period on a number of policy grounds. Some have argued, for example, that fundamental political and technological changes in the character of international relations and the position of the United States in the world have rendered obsolete an eighteenth century document designed for a peripheral, small state in the European system of diplomatic relations. Moreover, it has been asserted that quick action and a single, authoritative voice are necessary to deal with an increasingly complex, interdependent, and technologically linked world capable of almost instantaneous massive destruction. Extollers of presidential dominance also have contended that only the President has the qualitative information, the expertise, and the capacity to act with the necessary dispatch to conduct U.S. foreign policy.[[33]](http://www.urich.edu/%7Eperspec/adler.htm#33) {13} These policy arguments have been reviewed, and discredited, elsewhere; space limitations here permit only a brief commentary.[[34]](http://www.urich.edu/%7Eperspec/adler.htm#34NAME=) Above all else, the implications of U.S. power and action in the twentieth century have brought about an even greater need for institutional accountability and collective judgment than existed two hundred years ago. The devastating, incomprehensible destruction of nuclear war and the possible extermination of the human race demonstrate the need for joint participation in any decision to initiate war. Moreover, most of the disputes at stake between the executive and legislative branches in foreign affairs have virtually nothing to do with the need for rapid response to crisis. Rather, they are concerned only with routine policy formulation and execution, a classic example of the authority exercised under the separation of powers doctrine.[[35]](http://www.urich.edu/%7Eperspec/adler.htm#35) {14} Nevertheless, these joint functions have been fused by the executive branch and have become increasingly unilateral, secretive, insulated from public debate, and hence unaccountable.[[36]](http://www.urich.edu/%7Eperspec/adler.htm#36) In the wake of Vietnam, Watergate, and the Iran-contra scandal, unilateral executive behavior has become ever more difficult to defend. Scholarly appraisals have destroyed arguments about intrinsic executive expertise and wisdom in foreign affairs and the alleged superiority of information available to the President.[[37]](http://www.urich.edu/%7Eperspec/adler.htm#37) Moreover, the inattentiveness of presidents to important details and the effects of "groupthink" that have dramatized and exacerbated the relative inexperience of various presidents in international relations have also devalued the extollers' arguments. Finally, foreign policies, like domestic policies, are reflections of values. Against the strength of democratic principles, recent occupants of the White House have failed to demonstrate the superiority of their values in comparison to those of the American people and their representatives in Congress. {15} The assumption of foreign affairs powers by recent presidents represents a fundamental alteration of the Constitution that is both imprudent and dangerous. We turn now to an examination of the judiciary's contribution to executive hegemony in foreign affairs.

### 1AR---States

#### 1] perm do both – 1AC pyper proves federal leadership is key – signaling

#### 2] agent counterplans are a voting issue and aren’t competitive

#### 3] can’t solve modelling – China follow through is dependent on federal competition – they couldn’t care less what states do

#### 4---LS] doesn’t solve renewables transition – need federal oversight

Pyper 18 Julia Pyper, 7-19-2018, Julia Pyper is a Senior Editor at Greentech Media covering clean energy policy, the solar industry, grid edge technologies and electric mobility. She previously reported for E&E Publishing, and has covered clean energy and climate change issues across the U.S. and abroad, including in Haiti, Israel and the Maldives. "No Longer a Novelty, Clean Energy Technologies Boom All Across the US", No Publication, https://www.greentechmedia.com/articles/read/no-longer-a-novelty-clean-energy-technologies-boom-across-the-us, Accessed on 10-28-2019 // JPark

It was 1997, and stakeholders were working hard to help craft the first renewable energy standard in the State of Massachusetts, which ultimately passed as part of an electric utility restructuring act. At that time, the notion that Massachusetts would be one of the top solar states in the country was almost laughable, recalls Rob Sargent, who currently leads the energy program at Environment America. Today, renewable energy is taking off in virtually every state in the nation. A new report and interactive map released this week by Environment America takes stock of U.S. clean energy progress to date. It finds that leadership is no longer concentrated in select parts of the country, but that it is distributed across states with varying economic and democratic makeups. “You’re seeing an evolution that’s happening everywhere; and it will be interesting to see what will happen 10 years from now,” Sargent said. Today, the U.S. produces nearly six times as much renewable electricity from the sun and the wind as it did in 2008, and nine states now get more than 20 percent of their electricity from renewables. Last year, the U.S. produced a record amount of solar power, generating 39 times more solar power than a decade ago. In 2008, solar produced 0.05 percent of electricity in the U.S. But by the end of 2017, solar generation reached more than 2 percent of the electricity mix — enough to power 7 million average American homes. Wind has also seen dramatic growth over the last decade. From 2008 through 2017, American wind energy generation grew nearly fivefold. Last year, wind turbines produced 6.9 percent of America’s electricity, enough to power nearly 24 million homes. And the forecast shows even more growth as America’s offshore wind industry begins to take off. Meanwhile, the average American uses nearly 8 percent less energy today than a decade ago, thanks in large part to energy efficiency improvements. The U.S. transportation fleet is also transforming. Last year, all-electric vehicles broke past 100,000 annual sales for the first time, with 104,000 units sold. As recently as 2010, the number of EVs on American roads numbered in the hundreds, even including plug-in hybrid vehicles. Now there are more than 20 pure-electric models on the market, ranging from affordable commuter cars to ultra-fast luxury vehicles. On the energy storage front, nine of the 10 states that have added the most battery storage capacity to date had zero utility-scale battery capacity in 2008. California, Illinois and Texas are among the battery storage state leaders. In one benchmarking development, a bid to build solar-plus-storage in Arizona beat out competing bids for new natural-gas peaker plants. Environment America’s state-by-state breakdown offers a handy way to track clean energy deployments across the country. To view progress on solar, wind, electric vehicles and energy storage by state, explore the interactive map below. The report leverages data from the U.S. Energy Information Administration, the American Council for an Energy-Efficient Economy, the Auto Alliance and the Solar Energy Industries Association, among others. Thanks to policies like the renewable portfolio standard Sargent and others helped to pass, the report shows Massachusetts saw 247-fold growth in solar generation over the last decade, with an increase from 10 gigawatt-hours in 2008 to 2,554 gigawatt-hours in 2017. Massachusetts is now a top 10 state for solar growth. California is the clear U.S. solar leader, but solar market expansion isn't limited to politically progressive states. Georgia, for instance, is also on the top 10 list. The Southern state produced just 1 gigawatt-hour of solar in 2008. A decade later, Georgia generated 2,364 gigawatt-hours of solar — just shy of the production in solar-incentive-friendly Massachusetts. Source: Environment America In other parts of the country — and Texas, Oklahoma, Kansas, Iowa and North Dakota in particular — strong wind resources have made wind power the predominant renewable energy source. Source: Environment America Announcements such as Xcel Colorado’s proposal to retire two coal plants and deploy 1,800 megawatts of solar and wind, paired with 275 megawatts of battery storage, and NV Energy’s plan to build more than 1,000 megawatts of new solar and 100 megawatts of battery storage, seem to indicate the U.S. clean energy boom will continue. But that’s not a guarantee. Distributed energy resources are facing pushback as utilities figure out how to integrate and manage new technologies on the grid. Large-scale renewables are also coping with opposition as these resources compete head-to-head against conventional energy sources, including coal, nuclear and even natural gas. “People are starting to notice that renewables are happening, but they still think of it as a niche part of our energy mix — and it is a small fraction of it,” Sargent said. “But if renewable energy keeps growing at the rate it's grown over the past 10 years, the notion that you could meet all our current electricity needs with renewable energy is not that far-fetched.” Getting all the way to 100 percent renewable energy is controversial, though, both technically and politically. Even in California, where there’s widespread support for renewables, a 100 percent renewable energy proposal failed in the state legislature last year. And while the bill (SB 100) is now moving through the legislature once more, lawmakers have had to loosen up the language around “100 percent renewable energy” to also include “eligible zero-carbon resources.” Still, Sargent is generally optimistic about the future. “There are very, very few places where someone adopts a clean energy policy and then says, ‘That was stupid; let's get rid of it,’” he said. “Partly because once you do it at scale, it’s cheaper. Also because people see it and like it and want more of it — there’s growing public acceptance of it.” The challenge he sees is that while clean energy is growing substantially in states across the nation, there will ultimately need to be some form leadership at the top, at the federal level — which he said doesn’t exist right now. “It’s frustrating to have one foot on the accelerator and one on the brake,” Sargent said. “We’d go a lot faster if we weren’t doing that.”

#### 5] even if conservative – state subsidies are ¼ of federal, and not every state – they can’t solve even a little bit

**Redman ’17** (Redman, Janet. “Dirty Energy Dominance: Dependent on Denial.” *Oil Change International*, Oct. 2017, priceofoil.org/content/uploads/2017/10/OCI\_US-Fossil-Fuel-Subs-2015-16\_Final\_Oct2017.pdf.) //ZL

State governments, like their federal counterpart, also allow fossil fuel companies to take special tax exemptions and deductions, starving state treasuries of revenue, and to carve out public funding for programs that incentivize investment in oil, gas, and coal production. State subsidies are additional to federal supports, giving fossil fuels another economic advantage over cleaner and more efficient energy options. Even where incentive programs are not targeted to a particular sector, fossil fuel companies are often able to capture a significant share of the benefits.63 The 16 U.S. states reviewed in this report subsidized the oil, gas, and coal sectors to the tune of $5.8 billion on average in 2015 and 2016.64 This is a conservative estimate given that several major fossil fuel producing states that give numerous tax breaks to oil and gas companies provide little to no reporting on their value. North Dakota, for example, does not report any tax expenditure data. Pennsylvania and California have no severance tax on oil and gas extraction, and do not publicly disclose the value of these foregone revenues.

#### Eliminating subsidies requires congressional action

Chen 18

Han Chen (International Climate Advocate, Global Advocacy, International Program, Natural Resources Defense Council). “Can the US Phase Out Fossil Fuel Subsidies?” Our Energy Policy. 25 June 2018. JDN. <https://www.ourenergypolicy.org/can-the-us-phase-out-fossil-fuel-subsidies/>

The first step to eliminate subsidies is to do a full accounting of those that exist. The US completed a subsidy “peer review” in 2016. While the official US report contained gaps, it did include a list of substantial subsidies in need of reform: $1.6 billion in subsidies for expensing of intangible drilling costs, $966 million in unnecessary write-offs for depletion of oil and gas wells, a domestic manufacturing deduction of $1.0 billion, along with many other subsidies. The next step is to eliminate subsidies: which will require action through Congress. It’s time for lawmakers to phase out government support for fossil fuel production, while ensuring a just transition for workers involved in these industries.