

BACKGROUND

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The Green New Deal: A Raw Deal for American Taxpayers, Energy Consumers, and the Economy

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Abstract

On February 7, 2019, Representative Alexandria Ocasio-Cortez (D-NY) and Senator Ed Markey (D-MA) released their plan for a Green New Deal in a non-binding resolution. The goal of the Green New Deal as outlined is to achieve global reductions in greenhouse gas emissions from human activity of 40 percent to 60 percent (from 2010 levels) by 2030 and net zero emissions by 2050 in what the resolution calls a “10-year national mobilization.” If enacted, the proposal would fundamentally change how people produce energy, harvest crops, raise livestock, build homes, drive cars, and manufacture goods. It would be economically disastrous and have negative ripple effects across the economy—all for a meaningless impact on the climate. Instead of the same tried-and-failed calls for government subsidies, taxes, mandates, and regulation, Congress should put forth an agenda rooted in free-market principles. Federal and state governments should remove barriers to technology innovation, permitting new projects and energy trade.

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This paper, in its entirety, can be found at <http://report.heritage.org/bg3386>

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KEY POINTS

- A non-binding resolution proposed by Representative Alexandria Ocasio-Cortez (D-NY) and Senator Ed Markey (D-MA) urges monumental changes to America’s electricity, transportation, manufacturing, and agricultural sectors to reduce U.S. greenhouse gas emissions.
- The goal of the “Green New Deal” as outlined is to achieve global reductions in greenhouse gas emissions from human activity of 40 percent to 60 percent from 2010 levels by 2030 and net zero emissions by 2050.
- This would be fiscally and economically catastrophic for American families and businesses—all for no meaningful climate benefit.
- Instead of a massive tax, subsidize, and regulate approach, policy-makers should put forth policy improvements that will drive innovation among all forms of energy.
- Breaking down barriers to competition, freeing up innovative pathways for new technologies, and freely trading energy technologies will meet America’s and the world’s energy needs while reducing emissions.

Whatever legislative form the Green New Deal would take, the policy proposals would likely not be new. The only “green” involved would be wasted taxpayer money—and the “deal” would be for well-connected crony companies that stand to benefit from massive tax-and-spend programs. American taxpayers and energy consumers would be the ones paying the steep price. Enacting the new proposal would be economically disastrous and have negative ripple effects across the economy—all for a meaningless impact on the climate.

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Instead of the same tried-and-failed calls for government subsidies, taxes, mandates, and regulation, Congress should put forth an agenda rooted in free-market principles. Federal and state governments should remove barriers to technology innovation, permitting new projects and energy trade. Furthermore, Congress should provide efficient pathways to commercialize research at America’s national laboratories, and states should champion competitive electricity market policies that empower consumers to choose what type of energy they want. Improving access to markets in the U.S. and abroad will yield economic and environmental benefits.

What Is the Green New Deal?

The Green New Deal is not just an energy and climate policy: It is a plan to transform the economy. The Green New Deal aims to achieve 40 percent to 60 percent global reductions in manmade greenhouse

gases from 2010 levels by 2030 and net zero emissions by 2050.¹ As stated in the non-binding resolution, “climate change, pollution, and environmental destruction have exacerbated systemic racial, regional, social, environmental, and economic injustices.”² To correct for those “injustices,” the plan would fundamentally change how people produce energy, harvest crops, raise livestock, build homes, drive cars, and manufacture goods. Some of the top-line goals are to:

- Derive 100 percent of America’s electricity from “clean, renewable, and zero-emission” energy sources. Sixty-three percent of electricity came from carbon dioxide-emitting conventional fuels in 2017.³ Nuclear power added another 20 percent, and, according to one fact sheet distributed by the Cortez office, the Green New Deal would not include new nuclear plants.⁴
- Eliminate greenhouse gas emissions from manufacturing, agricultural, and other industrial sectors to the extent it is technologically feasible.
- Spend massively on clean energy manufacturing and renewable energy manufacturing.
- Eliminate greenhouse gas emissions from transportation and other infrastructure as much as technologically feasible, which includes spending on clean infrastructure and high-speed rail. Petroleum accounted for 92 percent of America’s transportation fuel in 2017.⁵
- Maximize efficiency for every single new and existing residential and industrial building.
- Ensure that the deal creates well-paying union jobs and “guarantee[s] a job with a family-sustaining wage.”⁶

1. “Recognizing the Duty of the Federal Government to Create a Green New Deal,” Draft resolution, 116th Congress, 1st Sess., <https://assets.documentcloud.org/documents/5729033/Green-New-Deal-FINAL.pdf> (accessed February 7, 2019).

2. *Ibid.*, pp. 3–4.

3. U.S. Energy Information Administration, “Frequently Asked Questions: What Is U.S. Electricity Generation by Energy Source?” October 29, 2018, <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3> (accessed February 1, 2019).

4. See “Green New Deal: FAQ,” <https://assets.documentcloud.org/documents/5729035/Green-New-Deal-FAQ.pdf> (accessed February 7, 2019).

5. U.S. Energy Information Administration, “Use of Energy in the United States Explained: Energy Use for Transportation,” May 23, 2018, https://www.eia.gov/energyexplained/?page=us_energy_transportation (accessed February 1, 2019).

6. “Recognizing the Duty of the Federal Government to Create a Green New Deal.”

- Make green energy technologies a major export of the U.S. to bring about a “global Green New Deal.”⁷

To achieve these targets, the resolution proposes a massive government spending program in addition to carbon dioxide taxes, subsidies, and regulation. In a Frequently Asked Questions (FAQ) section on Representative Cortez’s website, the office writes, “We will finance the investments for the Green New Deal the same way we paid for the original New Deal, World War II, the bank bailouts, tax cuts for the rich, and decades of war—with public money appropriated by Congress. Further, government can take an equity stake in Green New Deal projects so the public gets a return on its investment.”⁸ While the resolution does not explicitly call for a carbon tax and additional regulation, the FAQ section on Representative Cortez’s website stresses that taxes, regulation, and targeted tax credits for renewables are not nearly enough.⁹ Carbon taxes, subsidies, and cap-and-trade would be small pieces of the overall plan. Cortez’s office argues that massive amounts of spending is necessary—and “government is best placed to be the prime driver.”¹⁰

Representative Cortez softened the language in the non-binding resolution compared to the draft text, which called for the composition of a Select Committee for a Green New Deal.¹¹ Instead of proposing to meet 100 percent of America’s electricity needs from “clean, renewable, and zero-emission” energy sources, the draft to form the select committee proposed 100 percent renewables. The FAQ distributed by the

Cortez office also called for 100 percent renewables, writing the Green New Deal “makes new fossil fuel infrastructure or nuclear plants unnecessary. This is a massive mobilization of all our resources into renewable energies.”¹²

Furthermore, the draft text to form the select committee also excluded the words “as much as technologically feasible” when calling for the elimination of greenhouse gas emissions from the transportation, manufacturing, and agricultural sectors. The language from the Green New Deal FAQ section on Representative Cortez’s website and the draft text to form the select committee is very similar and in several cases word-for-word.¹³

In fact, the same draft text mentioned Representative Tulsi Gabbard’s (D-HI) Off Fossil Fuels for a Better Future Act (OFF Act) as a “good starting point.”¹⁴ Introduced in September 2017, the legislation requires that 80 percent of America’s electricity come from clean energy sources by 2027.¹⁵ However, the text does not include nuclear or hydroelectric power, the two largest sources of emissions-free energy, in its definition of “clean energy.”¹⁶ In addition, the text requires that 80 percent of new vehicle sales be zero-emissions vehicles and 80 percent of rail line trains and rail engines be electric by 2027. All three percentages jump to 100 percent by 2035. If mandates were not enough, the legislation would also permanently extend subsidies for renewable power sources, zero emission programs, and green jobs programs.¹⁷

7. “Draft Text for Proposed Addendum to House Rules for the 116th Congress of the United States: Establishment of the Select Committee for a Green New Deal,” <https://docs.google.com/document/d/1jxUzp9SZ6-VB-4wSm8sselVMsqWZrSrYpYC9slHKLzo/edit> (accessed February 1, 2019).

8. Alexandria Ocasio-Cortez, “Green New Deal FAQ,” February 5, 2019, <https://ocasio-cortez.house.gov/media/blog-posts/green-new-deal-faq> (accessed February 7, 2019). As of February 8, 2019, the referenced webpage was no longer available; however, an archived copy can be found at <https://web.archive.org/web/20190207191119/https://ocasio-cortez.house.gov/media/blog-posts/green-new-deal-faq> (accessed February 8, 2019).

9. Ibid.

10. Ibid.

11. “Draft Text for Proposed Addendum to House Rules for the 116th Congress of the United States.”

12. Ocasio-Cortez, “Green New Deal FAQ.”

13. See “Draft Text for Proposed Addendum to House Rules for the 116th Congress of the United States,” Ocasio-Cortez, “Green New Deal FAQ.”

14. Ibid.

15. The Off Fossil Fuels for a Better Future Act, H.R. 3671, 115th Cong., 2nd Session, <https://www.congress.gov/bill/115th-congress/house-bill/3671/text> (accessed February 8, 2019).

16. Ibid.

17. Ibid.

All Costs, No Climate Benefit

Credibly estimating the cost of the Green New Deal for American taxpayers, households, and businesses is exceedingly difficult. Even projecting the cost of switching to 100 percent renewable power for electricity relies on a set of largely unknowable assumptions. How companies would make large-scale investments to meet the mandate and how intermittent power sources would receive backup power is mostly a guessing game.

Capital Costs. Technological challenges aside, the up-front capital costs would reach trillions of dollars. Even though the cost of wind turbines and photovoltaics will likely continue to fall, rapid expansion would push development into areas where the wind and sun is less optimal for power generation. Increased transmission costs would be substantial. The development of large-scale battery storage is another uncertain variable that would significantly impact the price.

The reality is that the costs to families, businesses, and the economy would be considerably greater than any direct cost to taxpayers.

Columbia University economist Geoffrey Heal estimates that the investment to achieve an 80 percent reduction in greenhouse gas emissions from 2005 levels by 2050 would require between *\$3.3 trillion and \$6.0 trillion* in generating capacity, energy storage, and energy transmission.¹⁸ When counting the reduce costs of fossil investment, Heal calculates the net costs at \$1.3 trillion to \$4.0 trillion.¹⁹ Another study by the American Action Forum estimates the capital costs of switching to 100 percent renewables to be \$5.7 trillion—under a set of very generous

assumptions that likely underestimate the costs.²⁰ For instance, the study assumes low costs for electricity storage, flat electricity demand (rather than demand fluctuating, as it currently does), and no increased transmission costs.

Direct Taxpayer Costs. Regardless, the Green New Deal proposes that the federal government largely pay for the transition, and this would come at significant cost to the taxpayer. Moreover, switching over to a 100 percent renewable electricity grid is only a fraction of the plan. Eliminating greenhouse gas emissions from the transportation, manufacturing, and agriculture sectors would substantially increase economic harm.

Americans will pay as taxpayers for the government borrowing and taxing to finance the Green New Deal but will also devote more money to their energy bills. The reality is that the costs to families, businesses, and the economy would be considerably greater than any direct cost to taxpayers. An essential reason coal, natural gas, and nuclear power provide 83 percent of America's electricity generation is because these resources are abundant, reliable, and affordable. A government-forced transition to 100 percent renewables or politically determined clean energy sources would cause electricity rates to skyrocket. In fact, 29 states, the District of Columbia, and 3 territories have a Renewable Portfolio Standard (RPS), which mandates that a certain percentage of a given state's electricity generation come from politically determined renewable sources. While a number of variables impact the price of electricity, RPSs are a factor in driving electricity bills higher.²¹

Research from the Massachusetts Institute of Technology in November 2018 has perhaps the most detailed model estimating the costs of deep decarbonization in the electricity sector.²² The authors run 912 scenarios looking at a wide range of uncertainties that take into account geographical differences in renewable potential, different technology cost assumptions,

18. Geoffrey Heal, "What Would it Take to Reduce U.S. Greenhouse Gas Emissions 80 Percent by 2050?" National Bureau of Economic Research *Working Paper* No. 22525, August 2016, <https://www.nber.org/papers/w22525.pdf> (accessed February 1, 2019).

19. *Ibid.*

20. Philip Rossetti, "What it Costs to Go 100 Percent Renewable," American Action Forum, January 25, 2019, <https://www.americanactionforum.org/research/what-it-costs-go-100-percent-renewable/> (accessed February 1, 2019).

21. Stephen Moore and Andrew Vanderplas, "State Renewable Energy Mandates: A Regressive Green Tax on America's Poor," Heritage Foundation *Special Report* No. 206, October 30, 2018, https://www.heritage.org/sites/default/files/2018-10/SR206_0.pdf.

22. Nestor A. Sepulveda, "The Role of Firm Low-Carbon Electricity Resources in Deep Decarbonization of Power Generation," *Joule*, Vol. 2, No. 11 (November 21, 2018), pp. 2403-2420, <https://www.sciencedirect.com/science/article/pii/S2542435118303866> (accessed February 5, 2019).

and different carbon-dioxide-emission-reduction targets. In some scenarios they include “firm” low-carbon power sources, such as nuclear power, natural gas, and coal with carbon capture and sequestration and high-capacity reservoirs for hydroelectric power. In the scenario that achieves zero carbon dioxide emissions in the power sector by using 100 percent renewable power, the study projects that average electricity prices would increase to \$150 to \$300 per megawatt hour.²³ (In 2017, the average was \$105 per megawatt hour.²⁴) As calculated by Philip Rossetti at the American Action Forum, families would face electricity costs that are between 43 percent and 286 percent higher, resulting in households paying hundreds of dollars more in their monthly electricity bill.²⁵

If policymakers were to spend, tax, and regulate to achieve greenhouse gas–neutral energy, agricultural, and industrial sectors, the costs would be staggering.

Regardless of what Green New Deal proponents ultimately accept as clean energy sources, the reality is that 63 percent of America’s electricity needs are met by coal and natural gas. Petroleum products account for 92 percent of the country’s transportation sector use. They make up such high percentages because they are abundant, reliable, and affordable. Significantly restricting their use would, in turn, significantly raise the costs of electricity bills and the price at the pump. Importantly, the policies proposed in the Green New Deal are highly regressive. More expensive energy adversely affects low-income households disproportionately because they spend a higher percentage of

their budget on energy costs. Americans with after-tax incomes of less than \$30,000 spend 23 percent of their budgets on energy, compared to just 7 percent for those earning more than \$50,000, according to a report by the American Coalition for Clean Coal Electricity.²⁶

According to the 2011 National Energy Assistance Survey, a poll of low-income families, 24 percent went without food for a day, and 37 percent decided to forego medical and dental coverage, in order to pay higher energy bills. Nearly one in five had a family member who became sick due to the home being too cold.²⁷

Indirect Costs. Even more concerning, the direct impact from higher energy costs is just a small part of the story. Energy is a necessary input for nearly all goods and services. Consequently, Americans would pay more for food, health care, education, clothes—and every other good or service that requires energy to make and transport. Any policy that combines taxes, regulation, and subsidies is going to carry a massive deadweight loss to the economy. In multiple studies, The Heritage Foundation modeled the adverse economic effects of a \$37-per-ton carbon tax that increases gradually. To quantify such impacts, Heritage economists used the Heritage Energy Model, a derivative of the Energy Information Administration’s National Energy Modeling System. Each analysis found an average shortfall of hundreds of thousands of jobs with peak-year unemployment, eventually reaching over 1 million jobs lost, with half the job losses coming in energy-intensive manufacturing industries. Over a 20-year period, the total income loss would be tens of thousands of dollars per household, and the aggregate gross domestic product loss would be over \$2.5 trillion.²⁸

No End in Sight. And—as the draft proposal mentions—the carbon tax is only one of many policy tools Green New Deal advocates hope to implement. If policymakers spent, taxed, and regulated to achieve

23. Ibid.

24. U.S. Energy Information Administration, *Electric Power Annual 2017*, December 2018, <https://www.eia.gov/electricity/annual/pdf/epa.pdf> (accessed February 5, 2019).

25. Rossetti, “What it Costs to Go 100 Percent Renewable.”

26. American Coalition for Clean Coal Electricity, “Energy Cost Impacts on American Families,” June 2015, <http://www.americaspower.org/sites/default/files/Trisko-National-Family-Energy-Costs-June-2015-FINAL.PDF> (accessed February 12, 2019).

27. National Energy Assistance Directors’ Association, “2011 National Energy Assistance Survey Summary Report,” October 2011, <http://neada.org/wp-content/uploads/2013/10/final-neada-2011-summary-eport.pdf> (accessed February 12, 2019).

28. Nick Loris, “Flaws in the Social Cost of Carbon, the Social Cost of Methane, and the Social Cost of Nitrous Oxide,” testimony before the Subcommittee on Energy and Mineral Resources, Committee on Natural Resources, U.S. House of Representatives, July 27, 2017, <https://docs.house.gov/meetings/II/II06/20170727/106337/HHRG-115-II06-Wstate-LorisN-20170727.pdf> (accessed February 1, 2019).

greenhouse gas–neutral energy, agricultural, and industrial sectors, the costs would be several orders of magnitude higher.

Importantly, Americans have little appetite to pay such costs. In fact, a recent Associated Press poll found that 68 percent of Americans oppose paying an additional \$10 per month to fight climate change.²⁹ Hardworking income earners are right to be skeptical. The trade-off that Americans would receive—higher energy prices, unemployment, and dramatically lower levels of prosperity—is not an appealing one.

Ineffectiveness. No matter where one stands on the urgency to combat climate change, the Green New Deal policies would be ineffective in combatting climate change. In fact, the U.S. could cut its carbon dioxide emissions 100 percent and it would not make a difference in global warming. Using the same climate sensitivity (the warming effect of a doubling of carbon dioxide emissions) as the U.N.’s Intergovernmental Panel on Climate Change assumes in its modeling, the world would only be less than 0.2 degree Celsius cooler by 2100.³⁰

Instead of a massive “tax, subsidize, and regulate” approach, policymakers should put forth policy improvements that will drive innovation among all forms of energy.

Wishful Thinking. Although one of the priorities of the Green New Deal is to make the U.S. a lead exporter in green technologies, assuming developing countries will forego cheap abundant carbon dioxide–emitting energy for more expensive intermittent sources is pure fantasy. Developing countries will likely expand their use of renewable power sources, but not to the extent it will have any meaningful impact on global temperatures. While some countries are shuttering their coal-fired plants, others in both developed and developing countries are

building new plants and expanding the life of existing generators. Affordable, reliable, and widely available energy is essential to lifting people out of poverty and improving the life, health, and comfort of people trying to reach a better standard of living.

A Better Path Forward

Americans want affordable, reliable energy *and* they want a clean environment. The two are certainly not mutually exclusive. Policies that sustain the four pillars of economic freedom—rule of law, limited government, regulatory efficiency, and open markets—are more successful not only in stimulating economic growth and innovation, but also in using energy more efficiently.

Instead of a massive “tax, subsidize, and regulate” approach, policymakers should put forth policy improvements that will drive innovation among all forms of energy. Breaking down barriers to competition, freeing up innovative pathways for new technologies, and freely trading energy technologies will meet America’s and the world’s energy needs while reducing emissions. Specifically, Congress and state policymakers should:

Open Access to America’s National Laboratories. The Department of Energy’s role, through its system of national laboratories and scientific research facilities, should be to conduct the basic research to meet national objectives that the private sector would not undertake. Too often, advocates of government spending on technology-specific activities tout the federal government’s involvement in commercial successes, such as the Internet or the Global Positioning System. Yet, the initial intention for these government projects was not any private commercial need. Entrepreneurs saw a *commercial* opportunity in these defense technologies and created commercially viable products.

Instead of funneling taxpayer money to specific technologies, Congress should create a pathway that allows the private sector, using private funds, to tap into that research and commercialize it. Congress should also give lab directors more autonomy and allow federal lab employees (when appropriate and

29. James Rainey, “More Americans Believe in Global Warming—But They Won’t Pay Much to Fix It,” NBC News, January 24, 2019, <https://www.nbcnews.com/news/us-news/more-americans-believe-global-warming-they-won-t-pay-much-n962001> (accessed February 1, 2019).

30. Kevin D. Dayaratna, “Methods and Parameters Used to Establish the Social Cost of Carbon,” testimony before the Subcommittee on Environment and Oversight, Committee on Science and Technology, U.S. House of Representatives, February 24, 2017, <https://docs.house.gov/meetings/SY/SY18/20170228/105632/HHRG-115-SY18-Wstate-DayaratnaK-20170228.pdf> (accessed February 1, 2019).

without violating conflict of interest rules) to push research into the marketplace if they see an opportunity. While these activities happen to some degree today, giving the labs more autonomy with proper oversight and transparency will encourage more innovation at the national labs.³¹

Fix the Regulatory and Policy Problems Facing Commercial Nuclear Power. Facing a complex and burdensome regulatory system, commercial nuclear power in the U.S. has unnecessarily high construction costs. The regulatory system that licenses and permits nuclear reactors failed to keep up with technological innovations and overregulates existing nuclear technologies. Instead of addressing underlying government-imposed problems, policymakers have focused on mitigating the cost of those policies through subsidies, leading to a predictable path of failure: While such an approach may spur some amount of commercial activity, it is limited only to what is subsidized. Nuclear plants in America today continue to exhibit superior safety performance. Policy and regulations should reflect that track record. Congress should instill regulatory discipline at the Nuclear Regulatory Commission (NRC), encourage the Environmental Protection Agency to right-size radiation-exposure standards, review foreign ownership caps, reform the NRC's cost-recovery structure, and introduce market principles into spent-fuel management.³²

Fix the Regulatory and Policy Problems Facing Renewable Energy. Like most other energy projects, renewable power projects face excessive and duplicative regulations that increase costs and cause delays. Siting and permitting issues can be particularly problematic for wind and solar because the most advantageous locations for generations are in more remote areas. Therefore, additional transmission

lines are necessary to take the power to densely populated places. Complex regulatory processes mean a company has to hire more lawyers and compliance officers to navigate complex, unclear regulatory schemes and fend off legal challenges to development.

Two of the biggest hindrances to energy project development are the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). Congress should repeal NEPA and reform ESA laws by removing redundancies and transitioning authority to the states, when applicable. Congress should also allow renewable energy companies to form Master Limited Partnerships (MLPs). Under an MLP, businesses have the tax structure of a partnership or a limited liability company, but ownership equity trades publicly on a securities exchange. The combination of the partnership tax status and the liquidity of a publicly traded company make MLPs an attractive investment vehicle.

Yet another policy that senselessly drives up the cost of renewable energy is the Trump Administration's stance on tariffs. Section 201 tariffs hurt the growth of the solar industry,³³ and steel and aluminum tariffs increase construction costs of wind turbines.³⁴ Most important, these tariffs hurt consumers. The Administration should pursue a zero-tariff policy.³⁵

Expand Technological Innovation Internationally. In addition to removing the tariffs, Congress and the Trump Administration should work with other countries to open up their energy markets. For instance, the shale revolution in the U.S. is largely responsible for providing families and businesses with cheap energy while also lowering emissions. Investment and innovation have the power to unlock an abundance of shale resources in developing countries like China. Currently, China has the world's largest shale gas reserve.³⁶

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31. Nicolas Loris, "INNOVATES Act Creates a More Effective National Lab System," Heritage Foundation *Issue Brief* No. 4141, January 24, 2014, http://thf_media.s3.amazonaws.com/2014/pdf/IB4141.pdf.
 32. Katie Tubb, Nicolas D. Loris, and Rachel Zissimos, "Taking the Long View: How to Empower the Coal and Nuclear Industries to Compete and Innovate," Heritage Foundation *Background* No. 3341, September 5, 2018, <https://www.heritage.org/energy-economics/report/taking-the-long-view-how-empower-the-coal-and-nuclear-industries-compete>.
 33. Solar Energy Industries Association, "Section 201 Solar Tariffs," <https://www.seia.org/research-resources/section-201-solar-tariffs> (accessed February 1, 2019).
 34. American Wind Energy Association, "U.S. China Tariffs Hurt Wind Industry Jobs in Your State," https://www.awea.org/Awea/media/About-AWEA/US-China-Tariffs-Wind_10-12-2018.pdf (accessed February 1, 2019).
 35. Tori Whiting, "Time for Trump to Make Good on His Zero-Tariff Offer," Heritage Foundation *Commentary*, September 14, 2018, <https://www.heritage.org/trade/commentary/time-trump-make-good-his-zero-tariffs-offer>.
 36. "China Sits on the World's Biggest Shale Gas Prize. Pumping It Out Is the Hard Part," Bloomberg News, July 19, 2018, <https://www.bloomberg.com/news/features/2018-07-19/peetrochina-sinopec-are-chasing-an-elusive-shale-boom> (accessed February 8, 2019).

Although the geologic makeup of China's unconventional oil and natural gas resources has been one of the biggest hindrances to increased extraction,³⁷ policy problems also loom. American companies fear that the Chinese state-owned companies will steal their intellectual property. Furthermore, state ownership means China has close control over the process. Opening market opportunities in China and elsewhere could have significant, long-term economic and environmental benefits.

Consumer choice comes not only in the form of resource choice (renewables, conventional fuels, or a mix) but also in financial choices (e.g., fixed rates, risk preferences, indexed rates, or short-term or long-term contracts).

Commercial nuclear energy trade is another avenue that can meet the world's energy needs while reducing emissions. For instance, Saudi Arabia is an important new market in the nuclear industry from both nonproliferation and commercial standpoints. Completing such an agreement would also allow the U.S. industry to compete in Saudi Arabia. Even where an American company fails to win a bid to build a reactor, U.S. companies can supply technical expertise and supply components for new nuclear power plants. Expanded commercial nuclear trade would incentivize both cooperation and competition—and help bring new nuclear technologies to the market.

Encourage Choice in Electricity Markets. Competitive electricity markets have served customers well. Some states have accomplished transition from monopolies to competition more successfully than others, and additional free-market reforms are necessary to spur more entrepreneurial activity in electricity markets. However, when the underlying

structure of competition is sound, the benefits to energy consumers are unambiguously positive.

Competition in electricity services allows greater customer choice through the power of the consumers' own dollars rather than through the disconnected votes of a small panel of public utility commissioners. Consumer choice comes not only in the form of resource choice (renewables, conventional fuels, or a mix) but also in financial choices (e.g., fixed rates, risk preferences, indexed rates, or short-term or long-term contracts). In the end, because electricity providers have to work for their customers, prices are competitive and quality improves.³⁸ States should fix anti-competitive energy policies like renewable energy mandates, which have wreaked havoc in the electricity sector by putting politics and special interests over customers.

Eliminate All Subsidies for All Forms of Energy. Favoritism in the energy sector takes many forms. Over the years, Congress has implemented numerous policies that use the political process to support the production or consumption of one good over another, including direct cash grants, special tax treatment, taxpayer-backed loans and loan guarantees, socialized risk through insurance programs, mandates to produce biofuels, tariffs, and energy sales at below-market costs.

Whatever shape the favoritism takes, the results are the always the same: The government delivers benefits to a small, select group and spreads the costs across families and consumers. Eliminating cronyism and corporate welfare has bipartisan support. If Congress removes all of the policies that pick winners and losers, the most innovative and cost-competitive fuels and technologies will flourish.

Make Immediate Expensing Permanently Available for All Business Investments. Immediate expensing for all new plant and equipment costs—for any industry or type of equipment—would allow new, innovative technologies to come online faster, improving economic and environmental efficiency. The Tax Cuts and Jobs Act of 2017 made some impor-

37. "China Sits on the World's Biggest Shale Gas Prize."

38. For example, Texas has been a model for how competition benefits consumers. See Chuck DeVore, "California Government Mandates Send Electricity Prices Skyrocketing, But Texas Free Market Policies Keep Prices Low," Fox News, November 16, 2017, <http://www.foxnews.com/opinion/2017/11/16/california-government-mandates-send-electricity-prices-skyrocketing-but-texas-free-market-policies-keeps-prices-low.html> (accessed February 1, 2019).

tant improvements to expand the use of expensing; however, the next iteration of tax reform should include making expensing full and permanent.³⁹

Green New Deal: Same Old Tax-and-Spend Cronyism

A Green New Deal would be fiscally and economically catastrophic for American families and businesses—all for no meaningful climate benefit. The plan is far from new and would introduce a completely new level of cronyism and corporate welfare that would harm consumers multiple times over. The policies proposed in the Green New Deal would disrupt energy markets, skew investment decisions toward

politically connected projects, and centralize power in Washington. Instead of implementing economically destructive policies of more taxes, regulations, and subsidies, federal and state policymakers should remove government-imposed barriers to energy innovation. Improving market access and incentivizing competition will be a win for the economy and the environment.

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39. Adam N. Michel, "Tax Reform 2.0: Priorities After the Tax Cuts and Jobs Act of 2017," Heritage Foundation *Backgrounders* No. 3296, March 22, 2018, <https://www.heritage.org/sites/default/files/2018-03/BG3296.pdf>.