

DEPARTMENT OF ENERGY AND RELATED COMMISSIONS

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AMERICAN ENERGY AND SCIENCE DOMINANCE

The next conservative Administration should prioritize energy and science dominance to ensure that Americans have abundant, affordable, and reliable energy; create good-paying jobs; support domestic manufacturing and technology leadership; and strengthen national security. Achieving these goals will require bold policy action and reforms that involve the U.S. Department of Energy (DOE); the Federal Energy Regulatory Commission (FERC); and the Nuclear Regulatory Commission (NRC).

American Energy Dominance. Access to affordable, reliable, and abundant energy is vital to America’s economy, national security, and quality of life. Yet ideologically driven government policies have thrust the United States into a new energy crisis just a few short years after America’s energy renaissance, which began in the first decade of the 2000s, transformed the United States from a net energy importer (oil and natural gas) to energy independence and then energy dominance. Americans now face energy scarcity, an electric grid that is less reliable, and artificial shortages of natural gas and oil despite massive reserves within the United States—all of which has led to higher prices that burden both the American people and the economy.

The new energy crisis is caused not by a lack of resources, but by extreme “green” policies. Under the rubrics of “combating climate change” and “ESG” (environmental, social, and governance), the Biden Administration, Congress, and various states, as well as Wall Street investors, international corporations, and progressive special-interest groups, are changing America’s energy landscape. These ideologically

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driven policies are also directing huge amounts of money to favored interests and making America dependent on adversaries like China for energy. In the name of combating climate change, policies have been used to create an artificial energy scarcity that will require trillions of dollars in new investment, supported with taxpayer subsidies, to address a “problem” that government and special interests themselves created. The result has been increased energy costs that:

- Hurt individuals and families, especially low-income Americans and seniors on fixed incomes;
- Make businesses that create the jobs that drive our economy and quality of life less competitive; and
- Make America less energy secure.

Moreover, increased energy scarcity will allow government, either directly or through access to banks and Wall Street investors, to decide who is “worthy” to receive funding for energy projects. In the end, government control of energy is control of people and the economy. This is one reason why the trend toward nationalization of our energy industry through government mandates, bans on the production and use of oil and natural gas, and nationalization of the electric grid is so dangerous.

At the same time, adversaries like China, Russia, North Korea, Iran, and non-state actors are constantly engaged in cyberattacks against our energy infrastructure. We have already seen what supposedly “minor” attacks, such as the cyberattack on the Colonial Oil Pipeline¹ or the physical attack on electric infrastructure in North Carolina,² can do. A coordinated cyber and physical attack on natural gas pipelines and the electric grid during an extended cold spell could be catastrophic. Yet the current Administration’s first concern is plowing taxpayer dollars into intermittent wind and solar projects and ending the use of reliable fossil fuels.

A conservative President must be committed to unleashing all of America’s energy resources and making the energy economy serve the American people, not special interests. This means that the next conservative Administration should:

- **Promote** American energy security by ensuring access to abundant, reliable, and affordable energy.
- **Affirm** an “all of the above” energy policy through which the best attributes of every resource can be harnessed for the benefit of the American people.

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- **Support** repeal of massive spending bills like the Infrastructure Investment and Jobs Act (IIJA)³ and Inflation Reduction Act (IRA),⁴ which established new programs and are providing hundreds of billions of dollars in subsidies to renewable energy developers, their investors, and special interests, and support the rescinding of all funds not already spent by these programs.
- **Unleash** private-sector energy innovation by ending government interference in energy decisions.
- **Stop** the war on oil and natural gas.
- **Allow** individuals, families, and business to use the energy resources they want to use and that will best serve their needs.
- **Secure and protect** energy infrastructure from cyber and physical attacks.
- **Refocus** the Department of Energy on energy security, accelerated remediation, and advanced science.
- **Promote** U.S. energy resources as a means to assist our allies and diminish our strategic adversaries.
- **Refocus** FERC on ensuring that customers have affordable and reliable electricity, natural gas, and oil and no longer allow it to favor special interests and progressive causes.
- **Ensure** that the Nuclear Regulatory Commission facilitates rather than hampers private-sector nuclear energy innovation and deployment.

American Science Dominance. Ever since the age of Benjamin Franklin, the United States has been at the forefront of scientific discovery and technological advancement. Beginning with the groundbreaking science of the Manhattan Project, the U.S. has developed 17 National Laboratories that conduct fundamental and advanced scientific research. The National Labs have been critical in supporting national defense and ensuring that the United States leads on scientific discoveries with transformative applications that benefit America and the world.

In recent years, however, U.S. science has been under threat. Externally, adversaries like the Chinese military have been engaged in scientific espionage, infiltrating taxpayer-funded scientific research projects, and funding their own science research. In addition, the National Labs have been too focused on climate change and renewable technologies.

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American science dominance is critical to U.S. national security and economic strength. The next conservative President therefore needs to recommit the United States to ensuring this dominance.

MISSION STATEMENT FOR A REFORMED DEPARTMENT OF ENERGY

The Department of Energy should be renamed and refocused as the Department of Energy Security and Advanced Science (DESAS). DESAS would refocus on DOE's five existing core missions:

- Providing leadership and coordination on energy security and related national security issues,
- Promoting U.S. energy economic interests abroad,
- Leading the nation and the world in cutting-edge fundamental advanced science,
- Remediating former Manhattan Project and Cold War nuclear material sites, and
- Developing new nuclear weapons and naval nuclear reactors.

These missions work together by using advanced science to promote national security while getting the government out of the business of picking winners and losers in energy resources. Reform is needed because DOE, instead of focusing on core energy and security issues, has been spending billions of taxpayer dollars to subsidize renewable energy developers and investors, thereby making Americans less energy secure and distorting energy markets.

OVERVIEW

DOE was created by the Department of Energy Organization Act of 1977⁵ in response to the 1970s oil crisis, consolidating various energy programs that previously had operated without coordination throughout the federal government in a single department. In addition to addressing energy issues, DOE is tasked with:

- Engaging in basic and fundamental science and research through the 17 National Laboratories;
- Cleaning up the Manhattan Project and Cold War nuclear material and weapons sites;

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- Developing sites for the storing of civilian nuclear waste; and
- Developing new nuclear weapons and naval reactors through the semiautonomous National Nuclear Security Agency (NNSA).

Beyond these core responsibilities, DOE currently administers billions of dollars that support research and commercialization of energy technology, provides loans to the private sector for energy infrastructure and technology commercialization, and issues energy efficiency standards for appliances. More recently, DOE has focused its work and taxpayers' money on renewable energy and climate change.⁶

It is one thing for government to engage in fundamental scientific research that the private sector would not perform, particularly because advancements in science promote national security through technological prowess. Government, however, should not be picking winners and losers in dealing with energy resources or commercial technology. Such government favoritism can crowd out new innovation, devolve into cronyism, and raise energy prices for consumers and businesses. It is time for the United States to use all of its energy resources again for the benefit of the American people.

New Policies: Energy

To ensure that the American people have access to abundant, affordable, and reliable energy, DESAS's energy role should be focused on:

- Working with the energy industry and networks to ensure energy infrastructure security through science and coordination with the private sector.
- Assessing international energy issues that constitute threats to U.S. national security.
- Promoting U.S. energy resources as a means to assist our allies, diminish our strategic adversaries, and ensure the existence of markets that will support domestic energy production.
- Pursuing early and advanced science, including materials science, that is related to energy and national security.
- Developing the leadership necessary for the disposal of commercial and government spent nuclear fuel.

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National Energy Security. Protecting American infrastructure from cyber and physical threats, both natural and human, is vital to national security, the economy, and the well-being of the American people. Protecting and advancing these national security interests is a proper role for the federal government. DESAS should:

- **Focus on studying threats to the electric grid, natural gas, and oil infrastructure; sharing such information with the energy industry; promoting the reliability and security of energy resources and infrastructure; and developing strategies and technologies to combat threats by working with the National Labs.** The following offices would report to the DESAS Undersecretary of Energy Security:
 1. Office of Cybersecurity, Energy Security, and Emergency Response (CESER), elevated to an Assistant Secretary. CESER would work with the existing or reconstituted versions (as described in more detail below) of the Office of Electricity (OE); Office of Nuclear Energy (NE); Office of Fossil Energy (FE), currently the Office of Fossil Energy and Carbon Management (FECM); Office of Energy Efficiency and Renewable Energy (EERE); and the Strategic Petroleum Reserve (SPR) to identify and address threats to energy infrastructure.⁷ Instead of trying to decarbonize the American economy and allocating taxpayer dollars for commercialization of energy technologies, these offices would focus on energy security by identifying threats to energy supplies and infrastructure, developing strategies to address those threats, and funding fundamental science and technology where appropriate.
 2. Office of Electricity (Assistant Secretary).
 3. Office of Nuclear Energy (Assistant Secretary).
 4. Office of Fossil Energy (Assistant Secretary, with Carbon Management deleted from its title and purpose).
 5. Office of Energy Efficiency and Renewable Energy (Assistant Secretary).
 6. Strategic Petroleum Reserve (stand-alone or part of CESER).
- **Eliminate special-interest funding programs.** Many DOE energy funding programs are not targeted on fundamental science and technology; instead, they focus more on commercialization and act as subsidies to the

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private sector for government-favored resources. The DOE Office of Clean Energy Demonstrations (OCED); Office of State and Community Energy Programs; ARPA-E; Office of Grid Deployment (OGD); and DOE Loan Program should be eliminated or reformed. If they continue to exist, FECM, NE, OE, and EERE should focus on fundamental science and technology issues, particularly in relation to cyber and physical threats to energy security, rather than subsidizing and commercializing energy resources.

- **Eliminate political and climate-change interference in DOE approvals of liquefied natural gas (LNG) exports.** In addition, Congress should reform the Natural Gas Act⁸ to expand required approvals from merely nations with free trade agreements to all of our allies, such as NATO countries.
- **Focus the Federal Energy Management Program (FEMP) on ensuring that government buildings and operations have reliable and cost-effective energy.** FEMP should stop using taxpayer dollars to force the purchase of more expensive and less reliable energy resources in the name of combating climate change.
- **Ensure that information provided by the U.S. Energy Information Agency (EIA), a data and statistical organization, is data-neutral.**
- **Focus FERC on its statutory obligation to ensure access to reliable energy at just, reasonable, and nondiscriminatory rates.** FERC is a five-member commission created under the DOE Organization Act that regulates the wholesale sales and transmission of electricity, promotes electric reliability through standards, permits natural gas pipelines and LNG export facilities, sets natural gas pipeline shipping rates, and sets oil pipeline shipping rates. It is an economic regulator and should not make itself a climate regulator.
- **Streamline the nuclear regulatory requirements and licensing process.** Such changes would help to lower costs and accelerate the development and deployment of civilian nuclear, such as advanced nuclear reactors (including small modular nuclear reactors). The Nuclear Regulatory Commission (NRC) is commission tasked with the licensing of civilian nuclear reactors and power plants and regulating other uses of nuclear materials, such as nuclear medicine. Although it is not a DOE agency, its jurisdiction over nuclear reactor, fuel, safety, and trade issues often relates to or impinges on DOE's jurisdiction.

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- **Focus on energy and science issues, not politicized social programs.** The next Administration should stop using energy policy to advance politicized social agendas. Programs that sound innocuous, such as “energy justice,”⁹ Justice40,¹⁰ and DEI,¹¹ can be transformed to promote politicized agendas. DOE should focus on providing all Americans with access to abundant, affordable, reliable, and secure energy, and DOE should manage its employees so that everyone is treated fairly based on his or her talent, skills, and hard work.

New Policies: International Energy Security

To help the President and policymakers understand and apply U.S. energy interests in international affairs more effectively, various DOE programs offices need to be reformed.

- **Promote American energy interests.** The next Administration should make U.S. energy dominance a key component of its foreign policy while ensuring that domestic and international goals are aligned. American energy dominance will allow the United States to secure energy for its citizens, markets for its energy exports, and access to new energy natural resources and will provide tools for U.S. policymakers to assist our allies and deter our adversaries. DESAS should analyze U.S. international energy security interests and develop a National Energy Security Strategy (NESS). This strategy would take account of the energy landscape across the globe to inform the President in his foreign policy and defense roles, but it should not be a tool for U.S. industrial policy, although it might highlight how current domestic industrial and climate policies threaten U.S. energy and national security.
- **Strengthen the role of the new Department of Energy Security and Advanced Science.** There are frequent turf battles on energy issues between the Department of State and DOE. Although the State Department clearly has the policymaking authority under the DOE Organization Act, it tends to ignore the expertise and perspectives that DOE provides. The existing Assistant Secretary for International Affairs should provide the principal support for the DOE Secretary and Deputy Secretary on National Security Council (NSC) activities and should interface with colleagues at the Departments of Defense, State, Treasury, and Commerce, as well as the Intelligence Community (IC).

New Policies: Advanced Science

To ensure that America continues to lead the world in fundamental science, the National Labs should be refocused, and national science policy should be reviewed and coordinated.

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- **Refocus the National Labs on fundamental and advanced science.** DOE currently oversees 17 National Laboratories. The three National Labs run by DOE's NNSA should continue to focus on national security issues. The remaining 14 science and energy labs should focus on basic research projects; demonstration and deployment of technology should be left to the private sector. This goal can be achieved by realigning the labs to limit duplication and mission creep and to maximize potential.
- **Conduct a whole-of-government assessment and consolidation of science.** Before the start of a new Administration, there should be a review of all the federal science agencies.¹² This should include a review of the ill-advised attempt to expand the National Science Foundation's mission from supporting university research to supporting an all-encompassing technology transition. Specific to DOE, there should be a review to measure, prioritize, and consolidate DOE programs based on a range of beneficial factors, including degree of relationship to national security; furtherance of energy security (cyber but also international aspects); and importance to scientific discovery/advancement.

New Policies: Remediation of Nuclear Weapons Development Programs and Civilian Nuclear Waste

Cleaning up the radioactive waste produced in support of the Manhattan Project and the Cold War at America's nuclear development sites is a massive and complicated process led by DOE's Office of Environmental Management. Projected liabilities and costs to be borne by America's taxpayers, according to DOE's FY 2023 budget request, total \$887,205 billion.¹³ In addition, the federal government is required by law to dispose of nuclear waste produced by the private sector, including spent fuel rods from nuclear power plants. The new DESAS should:

- **Continue DOE's remediation of radioactive waste created by the nuclear weapons projects from the Manhattan Project and Cold War.** Strong leadership focused on accelerating the cleanup, coupled with technical and administrative innovation, will be needed to reduce the federal government's third largest liability.
- **Develop a new approach that increases the level of private-sector responsibility for the disposal of nuclear waste.** Disposing of civilian nuclear waste is an important national issue that requires strong scientific study. According to an independent audit conducted by the public accounting firm of KPMG, the Nuclear Waste Fund holds \$46 billion in payments by utilities and their ratepayers, plus interest, for a permanent waste disposal site for spent nuclear fuel and other nuclear waste.¹⁴ The

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licensing process for Yucca Mountain as a permanent repository for spent nuclear fuel is on hold. Without storage sites, spent nuclear fuel remains temporarily stored at nuclear plants. In addition to permanent storage, low-level nuclear waste facilities are needed.

New Policies: NNSA

The U.S. nuclear arsenal needs to be updated and reinvigorated if we are to be able to deal effectively with threats from China, Russia, and other adversaries. As a semi-autonomous agency, the NNSA has the primary responsibility for researching and designing new nuclear warheads and for ensuring that the existing nuclear arsenal is still potent. These efforts require significant funding and scientific know-how. In addition, NNSA develops and designs nuclear propulsion reactors for the U.S. Navy. NNSA also plays a role in preventing nuclear proliferation. With strong leadership by the Secretary of DESAS, the next Administration should:

- **Fund the design, development, and deployment of new nuclear warheads, including the production of plutonium pits in quantity.**¹⁵
- **Expand the U.S. Navy and develop new nuclear naval reactors to ensure that the Navy has the nuclear propulsion it needs to secure America’s strategic interests.**
- **End ineffective and counterproductive nonproliferation activities like those involving Iran and the United Nations.**

Budget

DOE’s total FY 2023 budget request (which does not include IIJA, IRA, and CHIPS and Science Act funding) was for \$48,183,451,000.¹⁶ Many DOE activities are required by various authorization and appropriations bills. To implement many of the policies contained in these proposals, several laws will need to be amended, including the Department of Energy Organization Act, IIJA, IRA, and possibly portions of the CHIPS (Creating Healthy Incentives to Produce Semiconductors) and Science Act.¹⁷ Ending taxpayer subsidies will promote an “all of the above” energy policy, lead to more energy resources, reduce costs, and save taxpayers billions of dollars.

OFFICE OF CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE (CESER)

Mission/Overview

CESER’s mission is to “enhance the security and resilience of U.S. critical energy infrastructure to all hazards,” to “mitigate the impacts of disruptive events and risk

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to the sector overall through preparedness and innovation,” and to “respond to and facilitate recovery from energy disruptions in collaboration with other Federal agencies, the private sector, and State, local, tribal, and territory governments.”¹⁸

Needed Reforms

The threats to U.S. energy infrastructure are real and persistent, and CESER’s role—working to support national security by working with the private sector to ensure energy security—is a proper one for government. Though CESER is properly focused on the threat to the grid from inverter-based resources like wind and solar, it needs to focus on the entire energy system, including the interdependence between natural gas and electric generation and cybersecurity. A good first step would be to reinstate an iteration of the Trump Administration’s Executive Order 13920, “Securing the United States Bulk-Power System.”¹⁹ The Biden Administration also placed the Strategic Petroleum Reserves (SPR) and DOE’s Federal Power Act 202(c) authority²⁰ under the CESER office, which should continue in the next Administration.

New Policies

CESER should be refocused to prioritize the cybersecurity, physical security, and resilience of critical infrastructure. Through research and development, technical assistance to states and industry, and emergency exercises, CESER can make a difference in our energy security posture.

Budget

CESER received \$177 million for FY 2022 under the Energy and Water Development and Related Agencies Appropriations Bill, 2022,²¹ and \$550 million through the Infrastructure Investment and Jobs Act.²² The FY 2023 budget request is for \$202 million.²³ In addition, the White House has sent a letter to Congress requesting additional appropriations of \$500 million to modernize the SPR.²⁴

OFFICE OF ELECTRICITY (OE)

Mission/Overview

OE was created after the 2003 blackouts to improve grid reliability and energy assurance.²⁵ OE works to defend and promote the reliability and resiliency of the electric grid through power grid modeling and analytics, cyber resilience programs, and coordination with private-sector electricity providers. It also works to identify Defense Critical Electric Infrastructure.

Needed Reforms

- **Focus more intently on grid reliability.** There are significant cyber, physical, and reliability threats to the electric grid, and it is important

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that a government agency with access to national security information develops data and plans to address threats to the grid and assist the private sector in securing it. Although OE does not stand out as a problematic office, additional focus and priority could be given to its original mission of working on grid reliability and resilience. OE could be combined with CESER (as well as what is left of the Grid Deployment Office if it is eliminated).

- **Eliminate applied programs.** OE administers grant programs for things like energy storage and the testing of grid-enhancing technologies (GETs). These programs should be eliminated. The next Administration should work with Congress to eliminate all DOE applied energy programs including OE (except perhaps those related to basic science for new energy technology).

New Policies

- **Prioritize grid security.** OE (along with CESER if they are combined) should focus on the security of critical infrastructure equipment used in the bulk power system as envisioned in President Trump’s May 2020 Executive Order 13920 and a related December 2020 Prohibition Order,²⁶ which was revoked in April 2021 by President Biden.²⁷ In addition, CESER/OE should:
 1. Focus on the interdependence of and threats to electric generation and natural gas pipelines.
 2. Continue to focus on Defense Critical Electric Infrastructure.
 3. Work with FERC and the North American Electric Reliability Corporation (NERC) to ensure that there is sufficient dispatchable on-demand generation available to generate the electricity the grid needs when intermittent generation like wind and solar is not available.
- **End funding of programs for commercial technology and deployment.** The next Administration should work with Congress to eliminate nonessential funding of commercial technology and deployment. These activities can be conducted by the private sector.

Budget

OE’s FY 2021 enacted budget was \$211,720,000, and DOE has requested \$297,386,000 for FY 2023.²⁸

OFFICE OF NUCLEAR ENERGY (NE)

Mission/Overview

The Office of Nuclear Energy’s “mission is to advance nuclear energy science and technology to meet U.S. energy, environmental, and economic needs.” It has five stated goals: “Enable continued operation of existing U.S. nuclear reactors,” “Enable deployment of advanced nuclear reactors,” “Develop advanced nuclear fuel cycles,” “Maintain U.S. leadership in nuclear energy technology,” and “Enable a high-performing organization.”²⁹ Under the Nuclear Waste Policy Act,³⁰ the Office of Nuclear Energy “has also been responsible for the DOE’s statutory requirements to collect and dispose of spent nuclear fuel...since the Obama Administration’s dissolution of the Office of Civilian Radioactive Waste Management.”³¹

Needed Reforms

NE is too influential in driving the business decisions of commercial nuclear energy firms. Instead of focusing on a limited set of basic research and development activities that solve foundational technical issues that apply broadly to energy production, NE intervenes in nearly all aspects of the commercial nuclear energy industry. Absent wholesale reforms that restructure the federal energy and science bureaucracy to eliminate such functional energy offices, the next Administration should:

- **Substantially limit NE’s size and scope.**
- **Adopt broader regulatory and energy policy reforms that reduce regulatory obstacles, allow all energy sources to compete fairly in the marketplace, and establish a predictable policy environment.** This will avoid unfair bias against the nuclear industry.

New Policies

NE should transition to a more limited scope of responsibilities that focuses on basic research, solving broadly applicable technology challenges, and solving the nuclear waste management issue as it relates to the development and deployment of advanced next-generation reactors, which can include small modular reactors (SMR). While respecting existing contractual obligations, NE should not initiate any new civilian reactor demonstration and commercialization projects. NE also should:

- **Focus on overcoming technical barriers that are preventing commercial reactor demonstration projects from moving forward.** Any activities in support of existing nuclear plants and any other projects

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directed toward commercialization, including licensing support, should be shouldered by the private sector.

- **Reorganize its remaining activities into three basic lines of responsibility: nuclear fuels across the fuel cycle, reactor technology, and civilian radioactive waste.**

Budget

The above reforms would cost substantially less than the \$1,675,060,000 requested for FY 2023.³² Legislation such as the IIJA placed additional funding for new reactor demonstration projects outside of NE. These responsibilities and their associated funds should be moved to NE as appropriate. NE should not simply add or subtract programs, as some programs may help to support NE's new priorities. The better approach would be to build a new budget and program strategy that accounts for related DOE programs and submit a new budget request reflecting NE's new priorities.

OFFICE OF FOSSIL ENERGY AND CARBON MANAGEMENT (FECM)

Mission/Overview

DOE is authorized by law to increase the conversion efficiency of all forms of fossil energy, reduce costs, improve environmental performance, and increase the energy security of the United States.³³ In recent years, the Office of Fossil Energy (FE) has been transformed from its statutory role of improving fossil energy production to one that is focused primarily on reducing the carbon dioxide emissions from fossil fuel extraction, transport, and combustion. This change is reflected in the office's new name, the Office of Fossil Energy and Carbon Management (FECM), effective as of July 2021, and FECM's mission: "to minimize the environmental impacts of fossil fuels while working towards net-zero emissions."³⁴

Needed Reforms

- **Eliminate carbon capture utilization and storage (CCUS) programs.** Despite the recent expansion of the 45Q tax credit for carbon capture utilization and storage (CCUS) to \$87 per ton, most carbon capture technology remains economically unviable, although private-sector innovations are on the horizon. CCUS programs should be left to the private sector to develop.³⁵ If the office continues any CCUS research, that research should be focused more on innovative utilization.
- **Pursue the processing of critical minerals.** Development of domestic critical material sources is important for national security, as the vast

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majority of critical materials are mined or processed (or both) in Russia and China.³⁶ The processing of critical materials from fossil fuel waste products (primarily coal) has shown some potential and, in view of our vast domestic reserves of coal and abundant waste from coal mining and combustion, should be pursued.

New Policies

- **Eliminate FECM.** The next Administration should work with Congress to eliminate all of DOE's applied energy programs, including those in FECM (with the possible exception of those that are related to basic science for new energy technology). Taxpayer dollars should not be used to subsidize preferred businesses and energy resources, thereby distorting the market and undermining energy reliability.
- **Rename FECM (if it cannot be eliminated) under its original designation as the Office of Fossil Energy and with its original mission: increasing energy security and supply through fossil fuels.**
- **Focus on energy security and supply.** Absent elimination of FECM, Congress should direct FECM appropriations toward increasing energy security and supply. Congress has already directed these goals (including the reduction of costs).³⁷
- **Ensure that LNG export approvals are reviewed and processed in a timely manner.** In particular:
 1. Ensure that LNG export applications are reviewed and approved expeditiously.
 2. Maintain the categorical exclusion from the National Environmental Policy Act (NEPA)³⁸ for LNG exports that was established by the Trump Administration³⁹ or (if it is revoked by the Biden Administration) reinstate it.
 3. Work with Congress to expand automatic approvals to include allies such as NATO as well as nations that have free trade agreements with the U.S.
- **Strategic Petroleum Reserve (SPR).** The Biden Administration moved responsibility for the SPR to CESER. Regardless of where the responsibility lies, the new DESAS should ensure that the SPR is maintained for national strategic purposes and not misused for political gain.

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Budget

The FY 2023 budget request for FECM was approximately \$893.2 million.⁴⁰ FECM's requested appropriation can be compared to the more than \$4.0 billion requested for the Office of Energy Efficiency and Renewable Energy.⁴¹ The disparity in funding demonstrates how DOE's research activities and substantial portions of its organizational structure are now focused entirely on the reduction of CO₂ emissions rather than energy access or energy security.

OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY (EERE)

Mission/Overview

The Office of Energy Efficiency and Renewable Energy traces its roots to the Energy Policy and Conservation Act of 1975,⁴² but most of its programs today are rooted in the Energy Policy Act of 2005.⁴³ Under the Biden Administration, EERE's mission is "to accelerate the research, development, demonstration, and deployment of technologies and solutions to equitably transition America to net-zero greenhouse gas (GHG) emissions economy-wide by no later than 2050" and "ensure [that] the clean energy economy benefits all Americans."⁴⁴ The office is made up of three "pillars": energy efficiency, renewable energy, and sustainable transportation.

Needed Reforms

- **End the focus on climate change and green subsidies.** Under the Biden Administration, EERE is a conduit for taxpayer dollars to fund progressive policies, including decarbonization of the economy and renewable resources. EERE has focused on reducing carbon dioxide emissions to the exclusion of other statutorily defined requirements such as energy security and cost. For example, EERE's five programmatic priorities during the Biden Administration are all focused on decarbonization of the electricity sector, the industrial sector, transportation, buildings, and the agricultural sector.⁴⁵
- **Eliminate energy efficiency standards for appliances.** Pursuant to the Energy Policy and Conservation Act of 1975 as amended, the agency is required to set and periodically tighten energy and/or water efficiency standards for nearly all kinds of commercial and household appliances, including air conditioners, furnaces, water heaters, stoves, clothes washers and dryers, refrigerators, dishwashers, light bulbs, and showerheads. Current law and regulations reduce consumer choice, drive up costs for consumer appliances, and emphasize energy efficiency to the exclusion of other important factors such as cycle time and reparability.

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New Policies

- **Eliminate EERE.** The next Administration should work with Congress to eliminate all of DOE's applied energy programs, including those in EERE (with the possible exception of those that are related to basic science for new energy technology). Taxpayer dollars should not be used to subsidize preferred businesses and energy resources, thereby distorting the market and undermining energy reliability.
- **Reduce EERE funding.** If EERE cannot be eliminated, then the Administration should engage with Congress and the House and Senate Appropriations Committees on EERE's budget. EERE's budget was around \$1.5 billion a year when the advances were made that led to dramatic cost decreases in wind, solar, and battery technology. In recent years, Congress has appropriated many billions of dollars in excess of EERE's normal budget (DOE requested more than \$4.0 billion for FY 2023).⁴⁶ It should rescind these excess monies so that DOE is not required to spend them. If funding cannot be reduced, then it should be reallocated to more fundamental research and less toward commercialization and deployment.
- **Focus on fundamental science and research.** If EERE cannot be eliminated, then the Administration should focus on broader and more fundamental energy research, consistent with law. The Biden Administration is too focused on deploying technologies instead of relying on the private sector. Moreover, under the Biden Administration, EERE is too focused on decarbonization and not at all on the cost of energy.
- **Eliminate energy efficiency standards for appliances.** The next Administration should work with Congress to modify or repeal the law mandating energy efficiency standards. Before (or in lieu of) repealing the law, there are steps the agency can take to refocus on the consumer by giving full force to the provisions already in the law that serve to limit regulatory overreach and protect against excessively stringent standards. For example, the Trump DOE prioritized the relatively few appliance regulations that were likely to save consumers the most energy and refrained from those whose modest benefits are unlikely to justify the costs. It also took steps to ensure that any new standards do not compromise product quality or eliminate any features. These and other consumer protections are in the statute but have often been ignored.

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Budget

EERE was funded at slightly more than \$2.8 billion in FY 2021, and DOE requested slightly more than \$4.0 billion for FY 2023.⁴⁷ Congress needs to rescind the appropriated monies that EERE has not spent and begin fresh with new appropriations.

GRID DEPLOYMENT OFFICE (GDO)

Mission/Overview

The Grid Deployment Office was established to implement parts of the Infrastructure Investment and Jobs Act. Pursuant to the IIJA, GDO administers funds appropriated by Congress to support transmission expansion and low/zero carbon resources. In addition, GDO is developing studies of the electric grid to address congestion, enhance reliability and resilience, and promote “clean” energy.⁴⁸

Needed Reforms

- **End grid planning and focus instead on reliability.** FERC and NERC have the primary responsibility for addressing reliability, states have the primary authority to site and permit transmission lines, and regional transmission organizations assist in planning regional transmission needs for parts of the country, but Congress granted some grid planning and siting authority to FERC and DOE through the Energy Policy Act of 2005 and IIJA, as well as grid funding through the Inflation Reduction Act. Instead of focusing on grid expansion for the benefit of renewable resources or supporting low/carbon generation, GDO should be incorporated into the reformed Office of Cybersecurity, Energy Security, and Emergency Response, which would work to enhance the grid’s reliability and resilience. To the extent that they remain in effect, the funding programs that GDO oversees and administers should emphasize grid reliability, not renewables expansion.
- **Consider whether to defund the civil nuclear tax credit program and hydroelectric power efficiency and production incentives established in the IIJA and administered through GDO.** If subsidies for renewable resources are not repealed, it may be necessary to continue subsidies for nuclear and hydro to ensure grid reliability.

New Policies

- **Eliminate GDO and assign necessary activities to the reformed CESER.** It appears that GDO’s current purpose is to promote the integration of low/zero carbon resources onto the grid by supporting subsidies for such resources and building new transmission facilities at

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a cost that poses a barrier to renewable generation expansion. However, some of the grants that it administers under the IIJA appear to be properly focused on enhancing the reliability and security of the electric grid. They should be reassigned to the reformed and expanded CESER.

- **End DOE/GDO’s role in grid planning for the benefit of renewable developers.** Under the Energy Policy Act of 2005 and IIJA, DOE is to perform grid congestion studies and has authority to identify National Interest Electric Transmission Corridors (NIETC). Under the Biden Administration, GDO is working on a National Transmission Planning Study and is administering \$2.5 billion to support “nationally significant transmission lines, increase resilience by connecting regions of the country, and improve access to cheaper clean energy sources.”⁴⁹
- **Defund most GDO programs.** GDO oversees nearly \$20 billion in new appropriations created by the IIJA, including a grid modernization grant program, the transmission facilitation program, and the civil nuclear credit program, among others. Congress should rescind any money not already spent.

Budget

Congress appropriated \$10 million for GDO in FY 2021, and DOE has requested \$90.2 million for FY 2023.⁵⁰

OFFICE OF CLEAN ENERGY DEMONSTRATION (OCED)

Mission/Overview

The OCED was established in December 2021 to implement the IIJA. Its mission is “[to] deliver clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized energy system.”⁵¹

Needed Reforms

- **End market distortions and stop shifting technology and development risks to taxpayers.** The OCED is distorting energy markets and shifting the risk of new technology deployment from the private sector to taxpayers. The IIJA provided more than \$20 billion in government subsidies to help the private sector deploy and market clean energy and decarbonizing resources. Government should not be picking winners and losers and should not be subsidizing the private sector to bring resources to market.

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New Policies

- **Eliminate OCED.** The next Administration should work with Congress to eliminate all DOE energy demonstration programs, including those in OCED. Taxpayer dollars should not be used to subsidize preferred businesses and energy resources, thereby distorting the market and undermining energy reliability.
- **Refocus on resources that will support reliability.** To the extent that the various energy research and development funding authorities cannot be repealed, funded projects should be consistent with the programmatic goals of the next Administration. For example, the already awarded Advanced Reactor Demonstration Program should help to move SMRs from pilot scale to commercialization and in the process address material, fuel, and regulatory issues that would pose deployment risk to utilities and Wall Street.

Budget

DOE's FY 2023 budget request includes \$214 million "to initiate a new \$150 million competition to support demonstrations that address integration issues of renewable energy into the U.S. transmission and distribution grids."⁵² Overall, the "\$21.5 billion provided by the Bipartisan Infrastructure Law"⁵³ supports several OCED programs:

- Advanced Reactor Demonstration Projects (\$2.5 billion).
- Carbon Capture Large-Scale Pilot Projects (\$937 million).
- Carbon Capture Demonstration Projects Program (\$2.5 billion).
- Clean Energy Demonstration Program on Current and Former Mine Land (\$500 million).
- Energy Improvements in Rural or Remote Areas (\$1 billion).
- Industrial Demonstrations Program (\$6.3 billion).
- Long Duration Energy Storage Demonstrations (\$505 million).
- Regional Clean Energy Hubs (\$8 billion).
- Regional Direct Air Capture Hubs (\$3.5 billion).⁵⁴

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Personnel

By drawing resources from across the DOE, the OCED has already grown to 70 personnel in six months. If OCED is eliminated, those positions can be eliminated. If OCED is reduced, its personnel can be reduced to fit its scope.

LOAN PROGRAM OFFICE (LPO)

Mission/Overview

“LPO’s mission is to finance next-generation U.S. energy infrastructure,” serve “as a bridge to bankability for breakthrough projects and technologies,” and “de-risk[] them at early stages of investment so they can be developed at commercial scale and achieve market acceptance.”⁵⁵ The Biden Administration directed the program to subsidize the Administration’s “net zero” energy transition away from conventional fuels by 2050 and to promote union jobs and domestic supply chains.⁵⁶

The LPO coordinates with the U.S. Treasury Federal Financing Bank and is organized into seven divisions: Outreach and Business Development, Origination, Portfolio Management, Risk Management, Technical and Project Management, Legal, and Management and Operation. Its loan programs were originally designed as temporary programs but have since been amended and expanded. Specifically:

The IRA expanded the authority in [LPO’s] existing programs, **1703, ATVM, and Tribal Energy Finance**, by **\$100B**. IRA also created the **Energy Infrastructure Reinvestment (EIR) Financing Program (1706)** which can support up to \$250B in loan authority. The **CO2 Infrastructure Finance and Innovation Act (CIFIA)**—authorized by the [bipartisan infrastructure law], appropriates \$2.1B to support ***approximately \$25B in flexible, low-interest loans***. This new legislation will create jobs and wealth, address environmental justice and equity priorities and strengthen our energy security and supply chains.⁵⁷

Needed Reforms

Taxpayers should not be backing risky business ventures or politically preferred commercial enterprises. To save tax dollars and reduce current risk, the new Administration:

- **Should not back any new loans or loan guarantees.**
- **Should seek to sunset DOE’s loan authority through Congress and eventually eliminate the Loan Program Office.**

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DOE-backed loans and loan guarantees put taxpayers at undue risk, distort private-sector investment decisions, shift private money toward projects with political support, and create additional barriers to entry for companies that are outside of the government’s definition of “innovative” or for companies that choose not to participate.

New Policies

To the extent that DOE loan programs cannot be repealed, the new Administration should:

- **Strengthen due diligence and increase transparency in DOE loan programs.**
- **Limit the use of new loan or loan guarantee authority to projects that will promote the reliability and resilience of the electric grid and other energy infrastructure and support national security objectives.**
- **Establish clear mandatory qualifications requiring applicants to comply with the Uyghur Forced Labor Prevention Act⁵⁸ and to certify that they are not financed with any other local, state, or federal taxpayer-backed loan, loan guarantee, or bond (such as a state “green bank”).**

ADVANCED RESEARCH PROJECTS AGENCY-ENERGY (ARPA-E)

Mission/Overview

ARPA-E was created in 2007 as part of the America Competes (Creating Opportunities to Meaningfully Promote Excellence in Technology Education) Act.⁵⁹ Its statutory goals are “to enhance the economic and energy security of the United States through the development of energy technologies” that reduce “imports of energy from foreign sources;” reduce “energy-related emissions, including greenhouse gases;” improve “the energy efficiency of all economic sectors;” and “ensure that the United States maintains a technological lead in developing and deploying advanced energy technologies.”⁶⁰

Some in Congress see ARPA-E as beneficial because the COMPETES Act provides it with more bureaucratic flexibility than other federal programs are allowed. Its goals are essentially the same as those of DOE’s applied energy offices, but its structure is different, and it is focused around individual programs instead of around offices with longer-term agendas.

Needed Reforms

- **Stop risking taxpayer dollars as venture capital for the private sector.** ARPA-E tends to see its mission as bringing technology from idea to commercialization. Often called the investment trough, ARPA-E is effectively funding projects that the private sector is unwilling to fund. Taxpayers should not in effect be picking winners and losers—and having their dollars at risk but not gaining the economic rewards of success.
- **End duplicative efforts.** Another problem is that ARPA-E’s mission is similar to the missions of DOE’s applied energy offices. If DOE’s applied energy offices are doing their jobs correctly, they will use Funding Opportunities Announcements, prizes, lab calls, and other funding mechanisms that are needed to accomplish a specific goal. In other words, ARPA-E is at best duplicating the work done by other DOE offices.

New Policies

- **Eliminate ARPA-E.** The next Administration should work with Congress to eliminate ARPA-E. The agency is unnecessary, risks taxpayer dollars, and interferes with risk-benefit decisions that should be made by the private sector.

Budget

Congress appropriated \$427 million for ARPA-E in FY 2021, and slightly more than \$700 million has been requested for FY 2023.⁶¹

FEDERAL ENERGY MANAGEMENT PROGRAM (FEMP)

Mission/Overview

The Federal Energy Management Program (FEMP) describes its mission as working with “other federal agencies to meet energy-related goals, identify affordable solutions, facilitate public-private partnerships, and provide energy leadership to the country by identifying government best practices.”⁶² Congress has created a number of energy and energy efficiency requirements and guidelines for federal agencies,⁶³ and FEMP works with those agencies to help them meet their congressionally mandated goals.

Needed Reforms

As the world’s largest single energy consumer, the federal government should use energy efficiently and cost-effectively—especially because the taxpayer is paying the energy bills. The Obama Administration required the federal government to set extrastatutory and aggressive goals regarding the use of renewable

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energy. The Trump Administration took a less aggressive approach in Executive Order 13834, which specified that “each agency shall prioritize actions that reduce waste, cut costs, enhance the resilience of Federal infrastructure and operations, and enable more effective accomplishment of its mission.”⁶⁴

New Policies

A conservative Administration should follow the language of Executive Order 13834 and direct federal agencies to “reduce waste, cut costs, enhance the resilience of Federal infrastructure and operations, and enable more effective accomplishment of its mission.” For FEMP, this means focusing on helping federal agencies to follow the law and use energy efficiently and cost-effectively.

Budget

FEMP was funded at \$40 million in FY 2022,⁶⁵ and slightly less than \$170 million is requested for FY 2023.⁶⁶ If it is focused on helping the federal government to carry out its statutorily based energy goal, much less money is needed.

CLEAN ENERGY CORPS

Mission/Overview

Under the IIJA, “the Clean Energy Corps is charged with investing more than \$62 billion to deliver a more equitable clean energy future for the American people[.]”⁶⁷ The Corps says that it will “focus on deploying next generation clean energy technology” to “help America meet its goals of a carbon-free power sector in 2035 and a decarbonized economy in 2050.”⁶⁸

Needed Reforms

The Clean Energy Corps is a taxpayer-funded program to create new government jobs for employees “who will work together to research, develop, demonstrate, and deploy solutions to climate change.” DOE anticipates recruiting “an additional 1,000 employees using a special hiring authority included in the Bipartisan Infrastructure Law.”⁶⁹ Taxpayers should not have to fund a cadre of federal employees to promote a partisan political agenda.

New Policies

Eliminate the Clean Energy Corps by revoking funding and eliminating all positions and personnel hired under the program.

Budget

Funding for Clean Energy Corps employees is not clearly defined in the FY 2023 DOE budget request.

ENERGY INFORMATION ADMINISTRATION (EIA)

Mission/Overview

The U.S. Energy Information Administration “collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment.”⁷⁰

Needed Reforms

EIA is not an inherently problematic agency and historically has provided independent and impartial analysis. Requests for EIA analyses can be made by the Administration or from Members of Congress or congressional committees. EIA needs to be committed to providing unbiased forecasting and data so that policymakers, industry, and the public can have a clear understanding of our energy resources and energy economy. Strong leadership will be needed to ensure that data and reporting are not misused to promote a politicized “energy transition.”

New Policies

- **Clarify levelized cost of electricity.** “Levelized cost of electricity (LCOE) refers to the estimated revenue required to build and operate a generator over a specified cost recovery period.”⁷¹ It is used in the National Energy Modeling System (NEMS) to compare the cost of technologies to determine which technologies are expected to be constructed in the future. Although it is useful in comparing the costs of resources over time, LCOE can also mask the massive amounts of capital needed to deploy new generation. Moreover, in the case of intermittent resources such as wind and solar, LCOE does not include the cost for backup or firming power from dispatchable resources. EIA should ensure that its reporting provides an accurate assessment of generation costs. The cost of backup power for when wind and solar resources are not available should be included when comparing the technologies and reported as a separate component in the modeling documents.
- **Revise reserve margins.** EIA, in conjunction with FERC, NERC, regional transmission organizations (RTOs), and the electric industry, should change how electric grid reserve margins are defined and calculated. In the past, reserve margins have looked at the amount of nameplate capacity on the grid to serve peak load plus a reserve. With the increasing number of intermittent, nondispatchable resources like wind and solar, peak load and reserve margins need to be reevaluated. Reserve margins need to be timed to load changes throughout the day and consider the availability of dispatchable on-demand resources to meet load when renewables may not be available.

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- **Update reports on the impacts of federal financial interventions and subsidies.** EIA's most recent report on federal financial interventions and subsidies was issued in April 2018.⁷² This is an important analysis because it clearly shows the level of the federal government's intervention in each area of the energy system for a given fiscal year. In the past, EIA performed the analysis pursuant to a request from Congress or the Administration. This report should become a project that is performed annually or every other year as part of EIA's base program.
- **Ensure the objectivity of the *International Energy Outlook (IEO)*.** In the past, EIA published the *IEO* every year. It is now published every two years. *IEO* forecasts are important because the International Energy Agency's forecasts in its annual *World Energy Outlook* are becoming unrealistic and politically oriented to push Europe's climate goals. EIA forecasts should be based on current laws and regulations and should not be used to promote favored policies.
- **Assess the case for privatization.** There are some who think that EIA should be privatized. The cost savings to taxpayers should be considered. On the other hand, EIA has generally demonstrated neutral data presentation that is helpful to policymakers and the private sector.

Budget

Congress appropriated \$126.8 million for EIA in FY 2021, and the FY 2023 budget request is for approximately \$144.5 million.⁷³

OFFICE OF INTERNATIONAL AFFAIRS (IA)

Mission/Overview

"The Office of International Affairs has primary responsibility for addressing international energy issues that have a direct impact on research, development, utilization, supply, and conservation of energy affecting the United States."⁷⁴ It "focuses on enhancing global energy security through countering malign influence, diversifying supplies, and increasing energy access" and "is committed to increasing U.S. energy exports and trade to enhance growth."⁷⁵

Needed Reforms

- **Expand IA's role and focus its activities on U.S. international energy security interests.** International energy activities should be consolidated under IA (and the Department of State's Bureau of Energy Resources should be eliminated) to ensure a proper understanding of domestic energy

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policy and how it affects foreign policy, as well as the international energy landscape and how it affects U.S. national and economic security.

- **Develop a strategy for identifying and accessing resources and advancing U.S. economic interests.** America has recently become a net energy exporter, but it still imports large amounts of essential energy resources such as oil and natural gas as well as such materials as uranium (including yellowcake), lithium, certain rare earth minerals, and energy generation and transmission components and technology. The United States needs a clear understanding of its global energy and economic interests and a strategy for protecting them.
- **Oppose “climate reparations.”** During the November 2022 United Nations climate conference in Egypt, the Biden Administration and other “developed” countries agreed to provide “climate reparations” to developing countries for the harm allegedly caused by the developed countries’ use of fossil fuel.⁷⁶ A reparations slush fund administered by a non-U.S. organization provides no assurance that U.S. interests will be protected and should not be supported in any form.

New Policies

- **Identify U.S. energy security interests and promote American energy dominance.** To this end, IA should work closely with the DESAS Office of Policy on the National Energy Security Strategy.
- **Strengthen the new DESAS vis-à-vis the Department of State.** The State Department’s Bureau of Energy Resources has generally excluded IA from serious discussions of international affairs to the detriment of DOE and broader interagency policy development. In addition, DOE embassy representatives are generally excluded from giving policy advice to senior diplomats and are used merely as sources of information instead of being active advocates for the Secretary’s priorities. The Secretary of Energy is a senior member of the President’s National Security Council and should function as such. The DOE’s Deputy Secretaries, Under Secretaries, and Assistant Secretaries should be guaranteed representation at all Deputies and Policy Coordination Committee meetings. In addition, senior political and career staff should hold positions on the NSC staff equivalent to their counterparts at State, Defense, Treasury, and the Intelligence Community (IC). DESAS billets should replace State Department Bureau of Energy Resources billets at the relevant posts worldwide.

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- **Stop “climate reparations.”** The President should refuse to provide climate reparations under an unratified treaty, and IA should encourage other countries to reconsider their desire to provide reparations.

ARCTIC ENERGY OFFICE (AE)

Mission/Overview

AE was established during the Trump Administration to create a central office overseeing U.S. Arctic interests in Alaska and the other Arctic nations in response to the growing strategic sensitivity of this geographic region and the natural resources it contains. It “serves as the principal advisor to the Under Secretary on all domestic Arctic issues, including energy, science, and national security.”⁷⁷

Needed Reforms

In October 2022, the Biden Administration released its National Strategy for the Arctic Region.⁷⁸ Although recognizing national security threats in the Arctic, it also focuses heavily on climate change, sustainability, and international cooperation. The United States must establish a strategic plan to promote its national security, energy, and economic interests in the Arctic. An analysis and plan to support the responsible development of Alaska’s energy assets should be a priority.

New Policies

- **Defend American interests in the Arctic Circle.** The next Administration needs to define American strategic and economic interests in the Arctic Circle. AE should help to identify those interests, as well as threats posed by countries like Russia and China, and develop appropriate policy options for the President’s consideration.
- **Ensure that AE is clearly focused.** In particular, this means identifying U.S. energy interests in the Arctic Circle, identifying foreign government and commercial interests and activity in the region, and ensuring that the United States does not forgo important energy and national security interests in the Arctic.
- **Expand AE’s operations in Alaska.** AE’s operations in Alaska should be expanded to encompass broader national energy security interests in the region including rare earths, oil, and natural gas. AE should also be the lead for DOE Antarctic operations as a counter to growing Russian and Chinese interest in Antarctic resources.

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Personnel

AE should provide a senior Arctic Energy official to the U.S. Arctic Council delegation in recognition of the key role that energy plays in Arctic development.

OFFICE OF INTELLIGENCE AND COUNTERINTELLIGENCE (IAC)

Mission/Overview

DOE's Office of Intelligence and Counterintelligence "is responsible for all intelligence and counterintelligence activities throughout the DOE complex, including nearly thirty intelligence and counterintelligence offices nationwide." It "leverage[s] the Energy Department's unmatched scientific and technological expertise in support of policymakers as well as national security missions in defense, homeland security, cyber security, intelligence, and energy security" and "is a member of the U.S. Intelligence Community."⁷⁹

Needed Reforms

Robust security protocols are necessary to protect DOE technology and innovations from foreign penetration and espionage. In addition, DOE's general isolation from the rest of the Intelligence Community prevents appropriately cleared senior staff from getting the thorough issue briefings that their colleagues elsewhere in the national security realm receive.

New Policies

- **Improve accountability and utilization.** IAC should be led by a qualified appointee and report directly to the Secretary and Deputy Secretary. IAC will require strong political leadership, which means finding an appointee with an IC background. In addition, upgrading the new DESAS's general security posture would require the Secretary's direct intervention to improve protocols and access the necessary resources from the rest of the IC. This would not be achievable at a lower level.

OFFICE OF POLICY (OP)

Mission/Overview

OP has taken various roles over different Administrations. During the Obama Administration, OP was a large office and was tasked with drafting the Quadrennial Energy Review (QER). The Trump Administration shut down the QER and gave OP a leaner research and advisory role. Under the Biden DOE, OP appears to be focused on preparing reports on climate change and renewables.⁸⁰

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Needed Reforms

- **Help to develop policy.** Because the appointees running DOE's various program offices are properly focused on managing their programs, not enough thought is given to identifying future challenges and developing potential solutions to benefit the American people.
- **Help to ensure that policies are properly implemented.** Policy initiatives from the Secretary are often understood or implemented inconsistently by program offices. OP can help the Secretary to ensure that important policy initiatives are implemented, particularly when they involve multiple program offices.

New Policies

- **Develop a National Energy Security Strategy.** OP could be tasked with developing a National Energy Security Strategy for the Secretary. This strategy could be prepared in conjunction with the White House National Security Strategy and the DOD National Defense Strategy to convey these priorities to Congress and design policy initiatives for their implementation. Such a strategy could summarize cyber and physical threats to energy infrastructure, challenges involved in obtaining rare earth minerals to support domestic energy production and consumption, and foreign actions that threaten U.S. energy security and dominance. However, it would be important to guard against attempts to transform the strategy into a government-led industrial policy or, in a progressive Administration, an economy-wide climate policy.

OFFICE OF TECHNOLOGY TRANSITIONS (OTT)

Mission/Overview

The Secretary of Energy authorized the creation of this office in 2015. Its mission "is to expand the public impact of the department's research, development, demonstration, and deployment (RDD&D) portfolio to advance the economic, energy and national security interests of the nation." OTT serves as "the front door to U.S. Department of Energy's...products, facilities and expertise" and "integrates 'market pull' into its planning to ensure the greatest return on investment from DOE's RDD&D activities to the taxpayer."⁸¹

Needed Reforms

OTT should ensure that the best emerging technologies from DOE and the National Labs are properly supported and protected. Because America's technological edge is a key national security asset, and in view of China's predatory thefts of intellectual property, OTT should:

- **Ensure that R&D funds are used for projects that protect and advance that edge.**
- **Ensure that successful advances, with a focus on new natural resource development technologies, artificial intelligence, cybersecurity, and space, are transferred swiftly to American interests in the private sector.**

New Policies

- **Focus on benefits to Americans.** OTT's operations should be based on the recognition that the new technologies generated by American taxpayers' investment in DOE are a significant national security asset rather than some neutral scientific gift to humanity.
- **Increase oversight and coordination.** OTT needs to be vigilant in overseeing and coordinating OTT offices associated with each National Lab. For security and economic espionage reasons, the work funded by the American people needs to be protected, and when commercialized, it needs to go to American businesses.

OFFICE OF SCIENCE (SC)

Mission/Overview

The Office of Science (SC) supports and oversees research facilities and programs that cover basic science through its application to the demonstration and deployment of energy technologies. SC oversees 10 of the 17 DOE National Labs and 28 major federal research user facilities. Its mission is to preserve U.S. leadership in science, fund and perform basic research, and provide the scientific facilities that the private sector is unable or unwilling to provide. New initiatives include quantum information sciences and artificial intelligence. SC is led by a Senate-confirmed Director at the Assistant Secretary level and has eight program offices.⁸²

Needed Reforms

The next conservative President should commit the United States to scientific dominance to support national and economic security, especially in light of similar efforts by China. To aid in this effort, the Office of Science should:

- **Return to its primary mission: nonpartisan and basic science.** SC's mission should be international leadership in basic and early applied science and provision of world-leading facilities for this work. The Infrastructure Investment and Jobs Act and Inflation Reduction Act mark the major

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reorientation of DOE primarily from defense applications in the NNSA and basic and early applied science across SC and the applied offices to a massive federal research, development, demonstration, and commercialization body.⁸³ Distraction from SC's basic science mission should be prevented.

- **Increase the level of accountability.** The National Laboratories need to be more directly accountable to the Secretary of Energy and Congress for their work and management.

New Policies

- **Commit to U.S. science dominance.** The United States is losing its dominance in scientific discoveries and technological development. China and other adversaries have been stealing American science and technology for years and are now on the verge of dominating science—a development that is fraught with negative strategic and economic implications for the United States. The next Administration must commit itself to ensuring that the U.S. continues to dominate scientific discovery and technological advancement.
- **Refocus on mission and eliminate duplication and waste.** The Administration should work with Congress to rationalize the National Lab network to meet specific national objectives (such as the NNSA laboratories' role in national defense) and conduct basic research that the private sector would not otherwise conduct. Activities that duplicate those of other government agencies or the private sector should be eliminated.
- **Properly manage the National Labs' contributions to the private sector.** SC should improve private-sector access to the National Labs, through programs like the GAIN voucher program and consistent with national security considerations, while ensuring that the economic benefits of taxpayer-funded technologies flow back to taxpayers through patent-review sharing or a revolving fund.

Budget

The Office of Science was appropriated slightly more than \$7 billion in FY 2021, and DOE requested slightly less than \$7.8 billion for FY 2023.⁸⁴

OFFICE OF ENVIRONMENTAL MANAGEMENT (EM)

Mission/Overview

The Office of Environmental Management's mission is to “complete the safe cleanup of [the] environmental legacy resulting from decades of nuclear

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weapons development and government-sponsored nuclear energy research.”⁸⁵ Its cleanup program is the world’s largest, and EM reports that 92 (of 107) sites have been completed.⁸⁶

According to the U.S. Government Accountability Office, “DOE is responsible for the largest share of the federal government’s environmental liability—about 85 percent in fiscal year 2020.”⁸⁷ Since 2011, EM has spent a cumulative total of \$63.2 billion, and its liability has grown by \$243 billion.⁸⁸ It is currently projected that cleanup will take another 70 years (FY 2022 to FY 2091).⁸⁹ Projected “Low Range” and “High Range” lifecycle costs total slightly less than \$652.4 billion and slightly more than \$887.2 billion, respectively.⁹⁰

Needed Reforms

Some states (and contractors), see EM as a jobs program and have little interest in accelerating the cleanup. EM needs to move to an expeditious program with targets for cleanup of sites. The Hanford site in Washington State is a particular challenge. The Tri-Party Agreement (TPA) among DOE, the Environmental Protection Agency, and Washington State’s Department of Ecology has hampered attempts to accelerate and innovate the cleanup. A central challenge at Hanford is the classification of radioactive waste. High-Level Waste (HLW) and Low-Level Waste (LLW) classifications drive the remediation and disposal process. Under President Trump, significant changes in waste classification from HLW to LLW enabled significant progress on remediation. Implementation needs to continue across the complex, particularly at Hanford.

New Policies

The next Administration should:

- **Accelerate the cleanup.** This means that a comprehensive cost projection and schedule reflecting the entire scope of the job should be developed and appropriate reforms should be instituted. To save taxpayers a potential \$500 billion over the long run and reduce current risk, a 10-year program to complete all sites by 2035 (except Hanford with a target date of 2060) should be considered. Such a commitment will require increased funding for EM during those accelerated periods. To the extent that funding from the IIJA and IRA cannot be repealed, requests to divert those funds to EM’s cleanup obligations should be considered.
- **Fully implement High-Level Waste determination.** Fully adopting the High-Level Waste (HLW) determination across the DOE complex, particularly at Hanford, would allow LLW to be grouted rather than vitrified.

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- **Increase the use of commercial waste disposal.** Using commercial disposal would reduce capital costs (~ \$2 billion) for new disposal sites to accelerate cleanup and reduce local post-cleanup environmental liability at multiple sites.
- **Revisit the Hanford cleanup’s regulatory framework.** Hanford poses significant political and legal challenges with the State of Washington, and DOE will have to work with Congress to make progress in accelerating cleanup at that site. DOE and EPA need to work more closely to coordinate their responses to claims made under the TPA and work more aggressively for changes, including congressional action if necessary, to achieve workable cleanup goals.
- **Establish more direct leadership and accountability to the Deputy Secretary consistent with Government Accountability Office recommendations.**⁹¹
- **Change Environmental Management’s culture to promote innovation and completion.**

Budget

Environmental Management received slightly less than \$7.6 billion in FY 2021, and its budget request for FY 2023 is approximately \$8.06 billion.⁹² The additional funding necessary to accelerate closure of the program will need to be considered as part of a broader government-wide discussion about yearly appropriations.

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT (OCRWM) (CURRENTLY OFFICE OF SPENT FUEL AND WASTE DISPOSITION)

Mission/Overview

The Nuclear Waste Policy Act (NWPA) of 1982 conferred the responsibility for commercial nuclear waste disposal on the federal government,⁹³ and in 2002, Congress designated a single repository located at Yucca Mountain in Nevada as the national repository site. The act also established the Office of Civilian Radioactive Waste Management (OCRWM).⁹⁴ The Obama Administration shut down OCRWM in 2010. The Office of Spent Fuel and Waste Disposition, which is headed by a non-confirmed Deputy Assistant Secretary in the Office of Nuclear Energy, is currently responsible for the management of nuclear waste, and interim disposal is taking place on various sites. Providing a plan for the proper disposal of civilian nuclear waste is essential to the promotion of nuclear power in the United States.

Needed Reforms

- **Work with the Nuclear Regulatory Commission as it reviews DOE's permit application for Yucca Mountain.** According to both the scientific community and global experience, deep geologic storage is critical to any plan for the proper disposal of more than 75 years of defense waste and 80,000 tons of commercial spent nuclear fuel.⁹⁵ Yucca Mountain remains a viable option for waste management, and DOE should recommit to working with the Nuclear Regulatory Commission as it reviews DOE's permit application for a repository. Finishing the review does not mean that Yucca Mountain will be completed and operational; it merely presents all the information for the State of Nevada, Congress, the nuclear industry, and the Administration to use as the basis for informed decisions.
- **Reform the licensing process.** The reactor licensing process is inadequate. Fixing nuclear waste management will require wholesale reform that realigns responsibilities, resets incentives, and introduces market forces without creating chaos within the current nuclear industry that has been built around the current system.
- **Produce concrete outcomes from consent-based siting.** Beginning in the Obama Administration and resurrected during the Biden Administration, consent-based siting for a civilian waste nuclear repository has been a way to delay any politically painful decisions about siting a permanent civilian nuclear waste facility. In 2022, DOE announced \$16 million to support local communities in consent-based siting.⁹⁶ The next Administration should use the consent-based-siting process to identify and build temporary or permanent sites for a civilian waste nuclear repository (or repositories).

New Policies

- **Restart Yucca Mountain licensing.** DOE should restart the Yucca Mountain licensing process. Any continuation of interim storage facilities should be made part of an integrated waste management system that includes geologic storage. Further, building on the consent-based siting process already underway, DOE should find a second repository site.
- **Fix the policy and cost drivers that are preventing nuclear storage.** The federal government continues to hold \$46 billion⁹⁷ in the Nuclear Waste Fund (NWF),⁹⁸ funded by utilities and their ratepayers for permanent disposal of nuclear waste. However, no such storage exists, and spent nuclear fuel remains on site at most nuclear plants. Meanwhile, Congress uses those funds to finance unrelated spending. Moreover, DOE's

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violation of its contractual obligation to take the waste has resulted in the payment of “approximately \$10.1 billion in settlements and judgments to contract holders.”⁹⁹

- **Develop new NWF funding and accounting mechanisms that allow licensed nuclear operators to guarantee resources for future nuclear waste disposal while also maintaining control of those resources.**
- **Reconstitute OCRWM.** OCRWM, as already established by statute, should be tasked with developing the next steps on Yucca Mountain and nuclear waste management. These steps should include initiating market reforms, including significant amendments to the NWPA, to allow additional industry responsibility for managing waste, market pricing and competition for waste services, and the opportunity for Nevadans to have more partnership involvement with any nuclear facility at Yucca Mountain.
- **Reestablish, consistent with the Nuclear Waste Policy Act, the position of Director of the Office of Civilian Radioactive Waste Management.**

Budget

Within the Office of Nuclear Energy budget, approximately \$100 million is set aside for fuel cycle and waste management activities.¹⁰⁰ These funds should be transferred to the newly established OCRWM, which should also be responsible for managing the Nuclear Waste Fund and given access to the fund as necessary to carry out its responsibilities.

NATIONAL NUCLEAR SECURITY ADMINISTRATION (NNSA)

Mission/Overview

NNSA’s primary mission is to provide and maintain a modern, safe, and effective nuclear deterrent for the United States. This includes the design and production of nuclear warheads, their integration with delivery systems, and their safe storage and decommissioning. NNSA’s responsibilities also include developing nuclear reactors for the U.S. Navy and “work[ing] to prevent nuclear weapon proliferation and reduce the threat of nuclear and radiological terrorism around the world.”¹⁰¹ NNSA was established by the NNSA Act, which also defines its authority.¹⁰²

Needed Reforms

The United States, through the NNSA, needs to make the design, development, and deployment of new nuclear warheads a top priority. Existing warheads were

designed and built during the Cold War, and the U.S. lacks sufficient plutonium production capabilities.¹⁰³ Because this process will take time, NNSA and the NNSA Labs need to ensure that existing nuclear warheads are viable and provide an appropriate strategic deterrent.

New Policies

The expansion of Chinese nuclear forces, the continued nuclear threat from Russia, and active nuclear programs in North Korea, Iran, and elsewhere require NNSA's recommitment to the nuclear mission. A conservative Administration should:

- **Continue to develop new warheads for each branch of the triad (land, sea, and air defenses).** If possible, reverse the Biden Administration's decision to retire the B83 bomb (in order to maintain two aircraft-delivered warheads) and its decision to cancel the submarine-launched cruise missile (SLCM).¹⁰⁴ Also undertake an evaluation of the need for nuclear antisubmarine and air defense weapons in light of emerging threats.
- **Maintain two production sites for plutonium pits (a key element of warhead production) at Los Alamos and Savannah River.**¹⁰⁵
- **Reject ratification of the Comprehensive Test Ban Treaty and indicate a willingness to conduct nuclear tests in response to adversary nuclear developments if necessary.** This will require that NNSA be directed to move to immediate test readiness to give the Administration maximum flexibility in responding to adversary actions.
- **Review all new Navy, Department of Homeland Security, and U.S. Department of Transportation Maritime Administration construction programs.** The review should be conducted by the Director of Naval Reactors (DNR) with an eye to the possible inclusion of advanced affordable nuclear reactor technology and extension of DNR authority over these agencies' nuclear construction programs.
- **Review the non-national security portfolios at the Los Alamos, Lawrence Livermore, and Sandia labs and identify divestments to focus on nuclear deterrence.** Los Alamos, Lawrence Livermore, and Sandia provide unique capabilities for nuclear deterrence, and each lab maintains extensive non-national security research programs and commercial activities.

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- **Review the operations of the Nuclear Weapons Council (NWC).** The statutorily established NWC is required to report to the President and Congress but needs to refocus its efforts on providing comprehensive oversight of DOE and DOD nuclear weapons policy and requirements.

Budget

Concurrent modernization of the nuclear triad and its warheads will be a major challenge to the DOD and DOE budgets over the coming decade. DOE non-nuclear programs should be the first source of additional resources for NNSA activities. Divestment of non-nuclear activities from NNSA laboratories can address some overhead and operational costs. NNSA received \$19.7 billion in 2021, and its FY 2023 budget request was \$21.4 billion.¹⁰⁶ The next Administration should ensure that funding is targeted to the accelerated development of new warheads.

Personnel

NNSA has tended to act as though it is not part of DOE and has resisted oversight by the Secretary of Energy. The NNSA Act grants some autonomy to the NNSA, but it also makes it clear that NNSA is under the authority of the Secretary. NNSA's leaders need to understand that ultimately, they report to the Secretary.

FERC: ELECTRIC RELIABILITY AND RESILIENCE

Mission/Overview

The Federal Power Act tasks FERC, along with the FERC-designated North American Electric Reliability Corporation (NERC), with promoting the reliability of the bulk power system (the transmission and generation needed to power the electric grid).¹⁰⁷ NERC develops technical standards, and FERC adopts them as mandatory standards (including cyber security standards) with which transmission providers, generators, and utilities must comply. Under the Federal Power Act, critical electric infrastructure security and issues like electromagnetic pulse (EMP) are addressed by both FERC and DOE.¹⁰⁸ In addition, the Infrastructure Investment and Jobs Act directed FERC to establish incentive-based rate treatments by encouraging utilities to invest in advanced cyber security technology and participate in cyber security threat information-sharing programs.

Needed Reforms

There is a growing problem with the electric grid's reliability because of the increasing growth of subsidized intermittent renewable generation (like wind and solar) and a lack of dispatchable generation (for example, power plants powered by natural gas, nuclear, and coal), especially during hot and cold weather.¹⁰⁹ FERC and NERC have been studying the potential for generation shortages across the

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nation in the summer¹¹⁰ and winter.¹¹¹ Cyber and physical attacks also threaten the grid. Specific areas for reform include the following:

- **Limit the impact of subsidized renewables on price formation.** Subsidized renewable resources are undermining electric reliability in RTOs. The increase in subsidized, intermittent resources is undermining the ability of RTOs' pricing models to support the reliable dispatchable generation that is needed to serve the grid at all times.¹¹²
- **Reform the application of reserve margins.** Reserve margins have become largely meaningless. Traditionally, the electric industry has used "reserve margins" to ensure that the grid has enough power plants to guarantee reliability. Generally, reserve margins represent the amount of generation available (power plants) to meet peak electric demand (the time of day and year when people are using the most electricity) plus a percentage of additional generation for backup.¹¹³ However, given the increasing number of intermittent resources (like solar, which may be available during the heat of the day but disappears as the sun sets), other dispatchable generation needs to be available to meet customers' electricity requirements. Therefore, the definitions and calculations of reserve margins and peak load need to be updated to focus on the modern grid's reliability challenges for all times of the day and year.
- **Recognize the interdependence of electric generation and natural gas.** The interdependence of electric generation and natural gas pipelines continues to grow. Given natural gas's important role in generating electricity, especially as backup when renewables are not available, lack of natural gas pipelines or attacks on existing pipelines could threaten our ability to generate electricity.
- **Expand resource diversity and reliability.** Resource diversity is needed to support grid reliability. Pressure to use 100 percent renewables or non-carbon emitting resources threatens the electric grid's reliability. A grid that has access to dispatchable resources such as coal, nuclear, and natural gas for generating power is inherently more reliable and resilient.
- **Protect against cyber and physical attacks.** The threat of cyber and physical attacks on electric infrastructure by foreign actors like China, Russia, North Korea, and Iran, as well as terrorists, continues to grow. The attacks with guns on substations in North Carolina in December 2022 that left customers without power demonstrate the grid's vulnerability.¹¹⁴

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New Policies

- **Reform RTOs to require reliability.** FERC should direct RTOs to establish reliability pricing for eligible dispatchable generation resources or require intermittent resources to procure backup power for times when they are not available to operate. In addition, Congress should repeal subsidies for generation resources.
- **Update the definition and calculation of reserve margins to support reliability.** FERC, NERC, and DOE should revise the definition of reserve margins to ensure the grid's reliability throughout the day and the year. This will mean recognizing that reserve margins may need to consider “net peak” and exclude non-dispatchable resources from inclusion in reserve margin calculations.
- **Expand and protect natural gas infrastructure in support of electric generation.** FERC needs to ensure that its consideration of natural gas pipeline applications recognizes the role that natural gas plays in electric reliability. FERC also needs to make sure that RTO pricing mechanisms support generators that need to contract for natural gas service on a firm basis.
- **Support resource diversity and reliability.** FERC, NERC, and DOE play key roles in balancing consumer, industrial, and national defense interests to ensure an ongoing reliable, plentiful, and accessible national electricity supply. NERC reliability reviews and FERC's reliability roles should be aware that overreliance on any one power generation fuel source entails concurrent cost and availability risk. FERC should reform market rules that unduly discriminate against dispatchable resources needed for reliability.
- **Strengthen security against cyber and physical threats.** FERC and NERC need to enhance the security of the bulk power system by, for example, banning Chinese-made components, investing in transformers, and hardening substations and other critical infrastructure. DOE should play a leading role in identifying and addressing threats to the grid.

FERC: RTOS/ISOS AND “ELECTRIC POWER MARKETS”

Mission/Overview

For more than 20 years, FERC has issued regulations and directed policies for the creation and operation of regional transmission organizations (RTOs) and independent system operators (ISOs) to manage the dispatch of generation and

transmission of electricity.¹¹⁵ Under the misnomer “electric power markets,” these regulatory constructs use marginal price clearing auctions (in some cases both hourly day-ahead auctions and five-minute day-of-need auctions) and locational marginal pricing to procure electric generation and set prices to meet the needs of the grid. Some RTOs also have capacity auctions. Of the nation’s seven RTOs, six are subject to FERC jurisdiction (but not ERCOT in Texas). Areas without an RTO include the Southeast and portions of the West (although California is in an RTO).

Needed Reforms

Too many conservatives have assumed that because RTOs are described as “electric power markets,” market forces of supply and demand set electric prices and benefit customers. RTOs are complex regulatory constructs (with rules set by FERC) that obscure government interference and preferences for preferred resources. Furthermore, government preferences and subsidies for resources like wind and solar distort price formation for electricity that is undermining the reliability of the grid. Finally, customers are not seeing the full economic benefits that non-fuel, subsidized resources should provide. Additionally:

- **Electric reliability is threatened in many RTOs.** As subsidized renewables (like wind and solar receiving tax credits) and state renewable portfolio standards (RPS) programs have disrupted market functions, price distortions have driven out reliable, dispatchable resources like coal, natural gas, and nuclear generation in various RTOs. The result: Electric reliability is decreasing in many parts of the country.¹¹⁶ As noted, FERC and NERC have been studying the potential for summer and winter shortages.¹¹⁷
- **RTOs are not providing the full economic benefits of renewables to customers.** Because RTOs use marginal price auctions where natural gas usually sets the clearing price paid to all generators, the economic benefits of renewables (no fuel, tax credits, etc.) are flowing mainly to renewables investors and not to customers (although customers do benefit from some decrease in marginal costs). Yet reliability is decreasing, so customers are getting the worst of both worlds, paying more for electricity and having less reliability for the money.
- **Big Green and Big Tech want RTO expansion.** Renewable developers, large industrial users, and Big Tech tend to want RTO expansion for their own economic and ESG reasons. These entities can benefit economically from the complexity and marginal pricing regime of the RTOs. Increased costs and reliability problems are often shifted to other customers.

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- **Unlike vertically integrated utilities that are accountable to state elected officials and state public utility commissions, RTOs and their participants are accountable only to FERC.** Even then, however, accountability is indirect through the tariffs (rules) that the RTOs adopt and FERC approves. In addition, unlike utilities, generators in an RTO have no obligation to serve customers.

New Policies

FERC must make reliability of the grid and service to end use top priorities. To do so, it should:

- **Reexamine the premise of RTOs.** RTOs no longer seem to work for the benefit of the American people. Marginal price auctions for energy are not ensuring the reliability of the grid and are not passing the full economic benefits of subsidized renewables on to customers. FERC needs to reexamine the RTOs under its jurisdiction to make sure that they procure reliable and affordable electricity for the benefit of the American people.
- **Ensure that RTOs return to market fundamentals so that they serve customers, not special interests and political causes.** FERC should require RTOs to ensure that reliable, dispatchable resources are properly valued to provide electricity when needed for the benefit of customers. Potential reforms could include:

1. Requiring renewable generators to provide intra-day backup by dispatchable on-demand generation so that bids by intermittent resources into RTOs equate fairly with far more valuable on-demand dispatchable resources;
2. Creating dual energy markets for dispatchable and nondispatchable resources; or
3. Eliminating capacity markets where intermittent resources participate and instead establishing “reliability” markets where dispatchable on-demand resources participate.

Alternatives to marginal price auctions also should be considered.

- **Direct the RTOs to ensure that the economic benefits of renewables (like tax credits and no fuel costs) are passed on to customers.**

- **End undue discrimination that allows subsidized resources to distort price formation in RTOs.**
- **Affirm its commitment that states will decide whether to join an RTO instead of imposing RTOs on regions that do not want them.** FERC should also consider allowing states to enter into non-RTO power pools with alternative structures for the sharing of resources and electric generation.

FERC: ELECTRIC TRANSMISSION

Mission/Overview

Under the Federal Power Act, FERC has the authority to regulate the rates, terms, and conditions of interstate electric transmission. (Pursuant to court cases, interstate transmission can be entirely within a state, although the part of Texas served by ERCOT is not under FERC transmission jurisdiction.)

Needed Reforms

FERC has been considering how to plan for and allocate costs for new transmission lines and how new generation resources will be interconnected to the transmission grid. (Transmission expansion and replacement decisions are usually made by local utilities or by an RTO or regional planning entity). Through two major rulemakings,¹¹⁸ FERC is attempting to facilitate the building of more long-range transmission lines and to socialize more of the costs of transmission buildouts to more customers in order to make it cheaper for renewable developers (primarily) to interconnect to the grid and sell their power. Socializing such costs is a form of subsidy for generators and will cause further price distortions in RTOs and ISOs that will make it less economical for reliable, dispatchable resources like coal, nuclear, and natural gas to stay operational and support reliability.¹¹⁹

Also, under the Infrastructure Investment and Jobs Act, DOE and FERC are granted authority to site and permit high-priority transmission lines as National Interest Electric Transmission Corridors (NIETCs). The Inflation Reduction Act provides funding to DOE to support transmission expansion.¹²⁰ These initiatives will undermine state input and decision-making. FERC will consider rules on how NIETC transmission applications are to be made.

New Policies

FERC should either change course on its existing transmission rulemakings (if still in progress) or issue a new rulemaking to:

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- **Ensure that transmission planning and interconnection processes are resource neutral.**
- **Prevent socializing costs for customers who do not benefit from the projects or justifying such cost shifts as advancing vague “societal benefits” such as climate change.**
- **Stop cost allocation from becoming a subsidy for generators, such as renewables.**

With respect to NIETCs, FERC and the new DESAS should ensure that state interests are respected and not allow such NEITC transmission lines to be developed as a mere subsidy to renewable developers. Furthermore, much of the transmission buildout (including its attendant costs) is being driven by renewable developers seeking market share. These projects are causing rates for customers to go up and hurting reliability. FERC needs to ensure that transmission buildouts are planned for the benefit of customers.

FERC: NATURAL GAS PIPELINES

Mission/Overview

FERC permits, sites, and authorizes the construction and operation of interstate natural gas pipelines.¹²¹ It also regulates the rates for the shipping of natural gas¹²² (but not the price of the natural gas commodity, which is market based). FERC is charged with ensuring that natural gas pipelines are approved if they are required by the “public convenience and necessity.”¹²³ Pipeline permitting is subject to environmental reviews under NEPA, and the rate for the pipeline and the shipping of the commodity is set by FERC under a just and reasonable standard. Once FERC approves a project, the holder of the certificate has the sovereign’s power of eminent domain.

Needed Reforms

Natural gas pipelines are vital for the economy, manufacturing, heating, and electric generation. Opposition from “Keep it in the ground” environmentalists has made it harder to gain approvals for natural gas pipelines. Under Democrat leadership, FERC has proposed official policies to consider upstream and downstream GHG emissions from the use of the natural gas that would be shipped in the pipeline to be part of FERC’s public-interest determination when deciding whether to approve a pipeline. There is conflicting direction from the D.C. Circuit on the GHG issue, which also could be seen as a “major questions” issue under the U.S. Supreme Court’s *West Virginia v. EPA* decision.¹²⁴

New Policies

FERC should:

- **Recommit itself to the NGA’s purpose of providing the American people with access to affordable and reliable natural gas.**
- **Limit its NGA decision-making on natural gas pipeline certificates to the question of whether there is a need for the natural gas.**
- **Limit its NEPA analysis to the impacts of the actual pipeline itself, not indirect upstream and downstream effects.**

In addition, Congress, the states, and FERC should consider how better to protect and compensate property owners whose property is taken for the benefit of the public. FERC also needs to be mindful that natural gas pipelines and projects are important for domestic access to natural gas, including local natural gas utilities, natural gas–fired electric generation, and manufacturing, as well as for exports of liquefied natural gas.

FERC: LNG EXPORT FACILITIES

Mission/Overview

FERC permits, sites, and authorizes the construction and operation of LNG export facilities.¹²⁵ It does not authorize the export of natural gas; DOE exercises that authority. LNG export facilities are important for delivering natural gas to markets around the world and have become an important policy tool in limiting the ability of Russia and Middle Eastern countries to use energy as a tool in foreign affairs.

Needed Reforms

LNG exports are opposed by climate activists. In addition, some domestic manufacturers argue that LNG exports decrease available U.S. supplies of natural gas and increase the domestic price, thereby harming the competitive advantages of U.S. manufacturers in world markets.

Currently, most LNG export facilities are along the Gulf of Mexico in Texas and Louisiana.¹²⁶ Attempts to build facilities on the west coast (Jordan Cove LNG¹²⁷) and the east coast have not moved forward for a variety of reasons; delays and costs of litigation can cause developers to cancel projects. An Alaska facility was approved by FERC in 2020, and the Biden Administration has indicated its support.¹²⁸ An east coast facility in Pennsylvania (or nearby) would unlock Marcellus shale natural gas for export.

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FERC is considering policy statements that would consider GHG emissions as part of its NEPA review and its NGA determination as to whether approval of an LNG export facility is consistent with the public interest.

New Policies

Since Congress through the NGA has already determined that LNG exports to countries with free trade agreements are in the public interest,¹²⁹ and because LNG exports help to ensure America's ability to support our friends and allies around the world while also supporting domestic natural gas production, FERC:

- **Should not use environmental issues like climate change as a reason to stop LNG projects.**
- **Should ensure that the natural gas pipelines that are needed deliver more of the product to market, both for domestic use and export, and are reviewed, developed and constructed in a timely manner.**

NUCLEAR REGULATORY COMMISSION

Mission/Overview

The Energy Reorganization Act of 1974¹³⁰ created the Nuclear Regulatory Commission (NRC). Before then, the commercial nuclear industry was regulated by the Atomic Energy Commission (AEC), which was established by the 1954 Atomic Energy Act.¹³¹ Importantly, the AEC was responsible for encouraging and regulating commercial nuclear power. Broad criticism of this dual function was a major factor in the establishment of the NRC, which held regulatory authority while the newly established Department of Energy held the advocacy function. Today, the NRC is responsible for a broad range of regulatory activities, including reactor safety, oversight of nuclear materials, and protection against radiation as well as permitting new reactors, certifying new reactor designs, and regulating nuclear waste management activities.

Needed Reforms

In 1989, the NRC established alternative licensing processes that were meant to provide a more predictable and efficient regulatory pathway for new Light Water Reactors (LWRs) by combining construction and operating nuclear power plant licenses, allowing for Early Site Permits, and establishing a framework for pre-approval of reactor designs. More recently, the Nuclear Energy Innovation and Modernization Act directed the NRC to establish a technology-neutral licensing process for new, advanced reactor technologies.¹³² Despite these efforts, the NRC remains a significant cost and regulatory barrier to new nuclear power. Especially

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frustrating is that these costs to a large extent are due to the agencies being overly prescriptive rather than outcomes-focused and fall on well-known and understood LWR reactor technologies.

New Policies

While refocusing its regulatory efforts on new reactor technologies, the NRC should also continue to ensure the security of radiological sources and mitigate cybersecurity risks across the industry. Applications for Combined Operating Licenses (COLs) and design certifications that rely on light-water technology should generally be completed within two years. Early Site Permits should generally be issued within one year for construction on or adjacent to an existing reactor site. Additionally, the NRC should:

- **Expedite the review and approval of license extensions of existing reactors, which will require the NRC to streamline and focus its NEPA review process.**
- **Set clear radiation exposure and protection standards by eliminating ALARA (“as low as reasonably achievable”) as a regulatory principle and setting clear standards according to radiological risk and dose rather than arbitrary objectives.**
- **Work with Congress to reform its funding approach so that licensee fees are generally required for activities that are specific to a regulated entity, with other agency costs being provided through normal appropriations.**

Budget

In FY 2022, the NRC was required to recover approximately 85 percent of its \$887.7 million budget through licensee fees.¹³³ The Nuclear Energy Innovation and Modernization Act requires the NRC to recover nearly all of its costs through fees. These reforms would likely not cost additional money but could rebalance the fee-versus-appropriations calculation.

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