Department of Energy
Washington, DC 20585

March 11, 2021

Kevin Bogardus
E&E News
122 C Street N.W., Suite 722
Washington, D.C. 20001

Via email: kbogardus@eenews.net

Re: HQ-2021-00378-F

Dear Mr. Bogardus:

This is the final response to the request for information that you sent to the Department of Energy (DOE) under the Freedom of Information Act (FOIA), 5 U.S.C. § 552. You requested the following:

> Records of all responses to Questions for the Record provided to Congress from the Department of Energy from Jan. 1 to Jan. 31, 2021.

Your request was assigned to DOE's Office of Congressional and Intergovernmental Affairs (CI) to conduct a search of its files for responsive documents. CI started its search on February 10, 2021, which is the cut-off date for responsive documents. CI has completed its search and identified one (1) document responsive to your request. The document is being released in its entirety as described in the accompanying index.

The adequacy of the search may be appealed within 90 calendar days from your receipt of this letter pursuant to 10 C.F.R. § 1004.8. Appeals should be addressed to Director, Office of Hearings and Appeals, HG-1, L'Enfant Plaza, U.S. Department of Energy, 1000 Independence Avenue, S.W., Washington, D.C. 20585-1615. The written appeal, including the envelope, must clearly indicate that a FOIA appeal is being made. You may also submit your appeal to OHA.filings@hq.doe.gov, including the phrase "Freedom of Information Appeal" in the subject line (this is the preferred method by the Office of Hearings and Appeals). The appeal must contain all of the elements required by 10 C.F.R. § 1004.8, including a copy of the determination letter. Thereafter, judicial review will be available to you in the Federal District Court either: 1) in the district where you reside; 2) where you have your principal place of business; 3) where DOE's records are situated; or 4) in the District of Columbia.

You may contact DOE's FOIA Public Liaison, Alexander Morris, FOIA Officer, Office of Public Information, at 202-586-5955, or by mail at MA-46/Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. 20585, for any further assistance and to

discuss any aspect of your request. Additionally, you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, Maryland 20740-6001, e-mail at ogis@nara.gov; telephone at 202-741-5770; toll free at 1-877-684-6448; or facsimile at 202-741-5769.

The FOIA provides for the assessment of fees for the processing of requests. *See* 5 U.S.C. § 552(a)(4)(A)(i); *see also* 10 C.F.R. § 1004.9(a). In our February 9, 2021 letter, you were advised that your request was placed in the "news media" category for fee purposes. Requesters in this category are charged fees for duplication only and are provided 100 pages at no cost. DOE's processing costs did not exceed $15.00, the minimum amount at which DOE assesses fees. Thus, no fees will be charged for processing your request.

If you have any questions about the processing of your request or this letter, you may contact me or Ms. Michelle Burgess of this office at MA-46/Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. 20585, or at 202-596-5955.

I appreciate the opportunity to assist you with this matter.

Sincerely,

Alexander C. Morris

Digitally signed by Alexander C. Morris
Date: 2021.03.11 13:18:33 -05'00'

Alexander C. Morris
FOIA Officer
Office of Public Information

Enclosures

INDEX

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U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTIONS FROM RANKING MEMBER JOE MANCHIN III

Q1. With only two power plants with carbon capture installed operating in the entire world, can you explain to me why the Department has recommended such substantial cuts for Carbon Capture, Utilization and Storage (CCUS)?

A1. While DOE recognizes and understands the importance of scaling up and developing technologies, the FY 2021 budget request for CCUS prioritizes early-stage research and development (R&D), which is lower cost, higher risk, and where private industry is least likely to invest. Private industry is best positioned to invest in later stage R&D.

Q2. How much more quickly could we get CCUS technologies commercialized and deployed with a budget, $1 billion per year for CCUS versus the proposed 43 percent budget cut and do you believe industry will step in to advance CCUS if federal funding is reduced?

A2. Government funding in R&D is critical to the advancement of science and accelerating the development and commercialization of advanced technologies. The funding levels proposed in the President's Budget can help catalyze industry to make investments and accelerate R&D in advanced technologies and concepts by reducing the risk of research decisions being made by industry and the broader research community. The amount of federal funding, however, is not the only factor that will determine commercialization and deployment of CCUS technologies. Other factors, such as market conditions, financing, and regulatory frameworks, will also play a role in whether industry decides to invest.

Q3. What has been the result of the Loan Program Office consultation outreach and business development efforts to prepare prospective applicants to submit applications and reduce their costs? Has the Loan Program Office consultation efforts increased the number of qualified applications being considered?

A3. FY 2019 was the first full year for implementing the outreach and business pre-application consultation conversations. Overall LPO reported 294 consultation conversations. LPO is monitoring the effectiveness of the newly implemented pre-application process to increase qualified applicants, but there is currently insufficient data to analyze the impact.

Q4. Why has the Department been unable to obligate funds across the Department and explain how you will improve the Department's effectiveness to obligate appropriated funds?

A4. Department-wide DOE Programs obligate virtually all of the funding available. In fact, 95% of DOE funds are obligated within 12 months of enactment. However, and primarily in the applied energy programs, a percentage of funding is placed into reserve to fund Funding Opportunity Announcements (FOA) developed during the current year and issued late in the fiscal year. Time and care is taken in the formulation of these FOA requests, and in funding the most promising research and development (R&D) proposals received in responses from industry. While the amounts in reserve appear large, percentage-wise they are consistent with the outlay rates experienced in recent years, particularly given the funding increases that the programs have experienced.

Q5. How has the Cyber Security, Energy Security, & Emergency Response Office been supporting efforts to bolster industrial control system security and if any support is being provided to pipelines and oil and gas facilities to strengthen their cybersecurity?

A5. The Department of Energy's (DOE) Office of Cybersecurity, Energy Security, and Emergency Response (CESER) leads DOE's efforts in close collaboration with the government and the private sector, to enhance the security and resilience of the Nation's critical energy infrastructure. This includes identifying and mitigating cybersecurity vulnerabilities in key industrial control systems and operational technologies (OT) through programs like CESER's Cyber Testing for Resilience of the Industrial Control Systems (CyTRICS™). Under the CyTRICS program, DOE's National Laboratories will test key industrial control systems to identify cybersecurity and reliability vulnerabilities, and will further inform efforts to identify systemic and supply chain risks and vulnerabilities to the sector by linking threat information with supply chain information and enriching it with other data sources and methods. As part of CyTRICS, DOE works with government, National Laboratory, and industry partners to identify key energy sector industrial control system components and apply a targeted, prioritized, and collaborative approach to these efforts.

Another example of DOE's work to advance the security of industrial control systems is CESER's Cyber Analytics Tools and Techniques (CATT ™ 2.0) program, which will create a secure platform for government and the energy sector to timely share emerging threat data and vulnerability information pertaining to energy sector information technology (IT) and OT systems. The CATT 2.0 platform will ingest and process the voluntarily provided energy sector IT and OT data through automated analysis, enriched with classified threat information utilizing unique and sophisticated U.S. Government tools.

As part of DOE's work with the energy sector, CESER provides support to the oil and natural gas subsector, and pipeline operators specifically, in a variety of ways. As the Sector-Specific Agency for the energy sector, DOE's CESER, as well as the Department of Homeland Security's (DHS) Cybersecurity and Infrastructure Security Agency (CISA) co-chair the Energy Government Coordinating Council (EGCC), which convenes industry and other key stakeholders such as the Federal Bureau of Investigation, and the Office of the Director of National Intelligence, to foster information sharing between government and the private sector and support a shared national homeland security strategy as it relates to energy infrastructure.

DOE CESER and DHS CISA are also the government co-chairs of the Oil and Natural Gas Sector Coordinating Council (ONG SCC), the primary vehicle for coordination with all operational segments of the oil and natural gas industry—drilling, exploration and production, marketing, processing, refining, service and supply, transmission, and distribution—on a variety of security and resilience issues, including cybersecurity. The ONG SCC meets three times a year with senior cybersecurity and physical security representatives from industry, further enabling the public and private sectors to coordinate oil and natural gas security strategies, activities, and communication to support the Nation's homeland security mission.

DOE also works closely with the trade associations of the ONG SCC to provide classified threat briefings for cleared sector representatives. Through its ties with the intelligence community, DOE regularly delivers briefings related on emerging cyber and physical threats to energy infrastructure.

In addition to regular coordination through the ONG SCC, CESER regularly engages the energy sector Information Sharing and Analysis Centers (ISACs), including the Oil and Natural Gas (ONG) ISAC and the Downstream Natural Gas (DNG) ISAC. Recognizing the need for continuous improvement of information sharing both between industry and government and across the energy sector, DOE convenes monthly meetings with the ONG ISAC, DNG ISAC, and the Electricity ISAC to share and discuss evolving and emerging cyber threat trends in a classified setting.

With regard to specific pipeline initiatives, DOE has established a productive public-private partnership with government partners and the pipeline industry to secure the transport of oil and natural gas. Through CESER, DOE works with DHS's CISA, Transportation Security Administration (TSA), and U.S. Coast Guard, and the Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA), and the Federal Energy Regulatory Commission (FERC) to streamline pipeline security and safety initiatives as they relate to resilience and reliability.

Moreover, in October 2018, DOE and DHS launched the joint Pipeline Cybersecurity Initiative to specifically address pipeline security. This collaboration leverages DHS CISA's cybersecurity resources, DOE's energy sector expertise, and TSA's regular and ongoing assessments of pipeline security, ensuring all stakeholders gain a comprehensive understanding of the risks the sector faces. This initiative is leveraging the unique expertise of DOE, DHS CISA, TSA, and other federal agencies to support the efforts of the ONG SCC to address the evolving threats to our nation's pipelines.

Q6. The Weatherization Assistance Program helps lower-income Americans weatherize their homes. That leads to reduction in energy waste and money saved for West Virginians – many of whom suffer the disproportionate impacts of high energy costs due to their modest incomes. West Virginia receives over $3 million per year from the Weatherization Assistance Program but that's not nearly enough to weatherize all of the homes that are eligible for assistance in my state. Nationally, the program weatherizes approximately 35,000 homes per year—resulting in an average annual savings of $283 dollars per household per year. The Department has indicated the desire for states to fund weatherization work. Have you received input from states like West Virginia that indicates they have the ability to replace this federal support?

A6. To reduce federal intervention in state-level energy policy and implementation activities, the President's Budget request includes no funding for the Weatherization Assistance Program (WAP). The Administration's focus for the Office of Energy Efficiency and Renewable Energy (EERE) is on early-stage applied research and development. DOE is focused on higher risk activities that are more appropriately performed by the federal government, versus those that are more appropriately left to the private sector, states, and local governments. DOE also understands congressional interest in these programs, and continues to manage WAP activities consistent with the statute and execute appropriated funds in an expeditious manner. The WAP program continues to work with states like West Virginia, and takes their feedback into consideration.

West Virginia (WV) has been allocated $3,947,952 for WAP in FY 2020 funds, set to be awarded by the July 1st start date of the WAP program year. As for the State Energy Program (SEP), WV was allocated $606,000 in FY 2020 funds, set to be awarded by the October 1st start date of their SEP program year.

Q7. As markets and other forces continue to transition our economy to reduced utilization of fossil fuels, the U.S. cannot quit on rural economies that have produced our energy for decades and policymakers must find ways to integrate these communities into the new clean energy economy, what role do you think Department can play in developing our energy workforce? What exactly is Department's existing authority with respect to workforce development? Is the Department is equipped to handle workforce training programs and distributing grant funding for workforce training focused on a clean energy economy? If not what more needs to be done?

A7. To address the demand for a talented pool of workers, DOE is expanding outreach programming that integrates rural economies and the energy industry through the expansion of existing programs and investments in learning. The Department focuses on training at all skill levels, including industry-based training, certifications, and apprenticeships, to support the development of a skilled energy workforce.

DOE derives its authority to lead and participate in workforce development initiatives from federal mandates and Departmental directives for several industries in the energy sector. These industries include manufacturing, engineering, construction, and other technical jobs that can show direct correlation to the energy industry. The Department continues to review and prioritize workforce development by ensuring our programs are designed with legislation such as this in mind. Additionally, pursuant to the Natural Energy Conservation Policy Act of 1978, Public Law 95-619, the Office of Economic Impact and Diversity (ED) is authorized to implement programs which impact minority communities to include workforce development initiatives. To this extent, ED's programs are focused on ensuring that minorities can participate fully in the energy sector. For example, ED recently launched the Equity in Energy Initiative to expand the participation of underserved communities such as minorities, women, veterans, and formerly incarcerated persons in the energy workforce to ensure America's energy independence. In FY19 and FY20, ED has also organized separate Equity in Energy discussions around the country for Asian American and Pacific Islander, African American, Native American and Alaska Native, and Hispanic stakeholders.

DOE has also been fully engaged in charting a path in workforce development for the clean energy economy. The Office of Energy Efficiency & Renewable Energy (EERE) leads several workforce development initiatives with the most recent being an announced grant program called the Minority Education and Workforce Training (MEWT) program for college and universities to participate in developing an energy workforce development program for their respective institutions. Additionally, the Office of Science (SC) supports the training of scientists and engineers careers in academia, the

DOE national laboratories, and the private sector which supports the DOE mission areas in science, energy, and national security. SC accomplishes this through supporting students and postdoctoral researchers on research awards as well as supporting targeted research and technical training opportunities at the DOE national laboratories – including those from community colleges, undergraduates from 4-year institutions, and faculty from academic institutions historically underrepresented in the DOE R&D portfolio. These activities not only support the DOE mission, but will train the next generation of skilled workers who will engage in the Industries of the Future – fields like artificial intelligence, quantum information science, 5G, and advanced manufacturing.

It is our commitment to continue to work with Congress and our federal, state, local, and industry partners to continue to advance DOE's workforce development initiatives. As with any and all workforce development programs, we will continue to defer to the Department of Labor which is the lead Federal agency over workforce development and job training programs under the Workforce Innovation and Opportunity Act (WIOA).

Q8. Does the Department provide any guidance to the Department of Labor in order to ensure we are providing individuals with the right skills needed to build our clean energy workforce?

A8. EERE does not provide formal guidance to DOL.

Q9. Can you explain to me why the Department has recommended such drastic cuts to the Office of Energy Efficiency and Renewable Energy? Do you believe the Office of Energy Efficiency and Renewable Energy will be able to function at full capacity with the proposed level of funding?

A9. The FY 2020 budget request focuses resources on early-stage R&D, where the Federal role is strongest, and reflects an increased reliance on the private sector to fund later-stage research, development, and commercialization of energy technologies. Through investments in DOE labs, industry, and academia, EERE's technology offices will continue to lead the world in developing domestic, clean, reliable energy choices in power generation and energy efficiency, which strengthen the U.S. economy while increasing energy security. EERE will continue to conduct cutting-edge R&D to improve

the affordability of clean energy technologies. At the same time, EERE is focusing resources on the emerging challenges of grid integration and energy storage. For example, the FY 2021 request includes funding for the Energy Storage Grand Challenge, an integrated R&D effort across the applied energy offices to develop storage technologies that enhance flexibility of generation and consumption to support grid reliability.

Q10. How have the Chinese and Russians used civil nuclear as a geopolitical tool and why is it important that the U.S. offset these efforts? Should the U.S. increase its foreign financing capabilities to support civil nuclear programs?

A10. The People's Republic of China (PRC) and the Russia Federation (Russia) seek to dominate the global nuclear energy market for strategic and economic advantage. Like other energy projects, nuclear projects build 50-100 year relationships. The PRC and Russia understand the strategic significance, and at the highest levels, are signing Memorandums of Understanding for cooperation with other countries around the world. They see the long-term relationships developed out of civil nuclear cooperation as an opportunity to deepen political relationships with partner countries through economic interdependence, gain leverage for economic coercion to affect political ends, and undermine alliance (e.g. North Atlantic Treaty Organization) networks through closer relationships. North American and European market share of nuclear power has dropped precipitously, and Japan and Korea are retreating due to domestic political situations. Of the 107 reactors planned by 2030, two thirds will be built by China and Russia, and most of those will be exported outside their countries (*Restoring America's Competitive Nuclear Energy Advantage*, U.S. Nuclear Fuel Working Group, 2020). This poses a risk to the high standards of nuclear safety security and nonproliferation that the United States (U.S.) and like-minded countries have championed for decades. We are also carefully evaluating and are alarmed at how the Russian and Chinese civil nuclear cooperation agenda is designed to undercut security frameworks such as NATO and U.S. bilateral security assistance. For these reasons, DOE is also actively engaged with the NSC and the interagency to discuss how energy security, and the civil nuclear component, must be

an integrated component of U.S. participation with NATO and our bilateral assistance to many of these effected nations.

The PRC and Russia also use state-backed funding to undercut competitors. Financing international civil nuclear projects should be a priority for the U.S. Government. Currently, many countries interested in developing a civil nuclear industry find it difficult to finance civil nuclear projects, particularly from vendors that are not state-owned enterprises.

Q11. What was the rationale behind the administration's decision to cut funding for battery recycling research? Additionally, what assurance can you provide me that the Department is committed to finding a solution to improve lithium-ion battery recycling in this country?

A11. The Department of Energy's FY 2021 Budget Request aligns with Administration priorities such as securing America's energy independence and funds innovation for affordable, reliable, and efficiency energy sources. The request for Energy Efficiency and Renewable Energy Office's Vehicle Technologies Office (VTO) supports core early-stage research to accelerate the development of a variety of sustainable transportation technologies. For example, Battery R&D will focus on exploring new battery materials and technologies to significantly reduce cost and enhance performance, while reducing or eliminating the need for critical materials.

Recognizing the importance of lithium-ion battery recycling, the Department established the Lithium Battery Recycling R&D Center (ReCell) and the Lithium-Ion Battery Recycling Prize in FY19 and continue support for both activities in FY20 and in the FY21 Request. Additional lithium battery recycling R&D will be carried out in FY21 with industry through DOE funded, cost-shared projects with the United States Advanced Battery Consortium (USABC).

ReCell has made significant headway in its first year. Multiple processing approaches have shown promise for effective separation of cathode, anode and electrolyte materials

and profitable direct recycling. In FY21, ReCell will demonstrate the more promising approaches and complete development of the lithium ion battery recycling analysis tool (LIBRA), which maps the lithium ion material and manufacturing supply chain globally. This tool can help advance U.S. leadership and various battery material supply chain.

The USABC projects are focused on developing novel recycling processes that recover and produce cathode material that performs the same as the virgin material. These projects take both spent batteries as well as manufacturing scrap material and resynthesize cathode powders. These processes allow for compositional changes in cathode chemistry so older generation cathodes can be upcycled into next generation high capacity low-cobalt materials. These projects also focus on scale up and cost reduction.

The Lithium-Ion Battery Recycling Prize, co-funded between VTO and the Advanced Manufacturing Office (AMO), encourages American entrepreneurs to find innovative solutions to collecting, storing, and transporting discarded lithium-ion batteries for eventual recycling. The prize aims to accelerate the development of solutions from concept to prototype to demonstration. Phase I of the competition is complete, with 15 winners receiving $67,000 each, for a total of $1 million awarded. These 15 competitors have advanced to Phase II, where they will translate the Phase I concepts into end-to-end solutions that demonstrate a viable business model that can be scaled. The prize is fully funded and is expected to run through FY21.

U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTIONS FROM SENATOR RON WYDEN

Q1. During the hearing on DOE's FY2021 Budget request, we discussed the disappointing budget amount requested for ongoing cleanup activities at Hanford and other DOE legacy sites. In the case of funding to address legacy waste facilities at Hanford, this cut was nearly 40%. I was interested in knowing which specific Hanford site projects the Department was going to delay and kick down the road even further as a result of this funding cut. I am especially concerned about this reduction in light of the recent GAO report on the Hanford PUREX tunnel collapse in 2017 and DOE's management of similar risks.

Please identify the specific Richland monitoring, stabilization, and remediation activities (facilities, sites, or sub-projects of record) that will be negatively impacted by a lower budget for Richland EM activities? Please provide details on the impacts on scope, schedule, and health/environmental risks.

A1. At Hanford, the focus is on completing and commissioning the facilities and infrastructure needed for Direct Feed Low-Activity Waste (DFLAW). The Department remains on track to meet the commitment to begin tank waste treatment by the December 31, 2023 Amended Consent Decree milestone.

The Department will continue preparatory work this year in Building 324 to stabilize the structure of the facility in preparation for removing contaminated soil under the building. Work was temporarily paused to address worker safety issues after several incidences where workers experienced minor but recurring skin or clothing contamination. The request will safely maintain Building 324. By taking a risk-informed approach, there will be a suspension of the operation of the groundwater treatment system on the Central Plateau. The request maintains operation of the groundwater treatment along the Columbia River. Design work to move cesium and strontium capsules to dry storage will continue. The Department will continue maintenance, monitoring, and assessment activities at the Waste Encapsulation Storage Facility where the capsules are currently stored.

The Department has begun implementation of the GAO-20-161 recommendations by establishing a risk evaluation process for the aging facilities and structures after the partial collapse of PUREX Tunnel 1. As a result, the Department is proceeding to

stabilize the 216-Z-2 crib, 216-Z-9 crib and 241-Z-361 settling tank in coordination with the U.S. Environmental Protection Agency and Washington State Department of Ecology.

Q2. During the hearing, some of my colleagues asked about uranium and in particular the nuclear fuel working group. The Department is requesting $150M to establish a "Uranium Reserve" under the DOE Office of Nuclear Energy. This would appear to be a decision affecting the commercial uranium market, and one for which the Department does not have authorization. I am interested to know more specifics about this proposal.

Can you provide more information on the nature of this proposed reserve, including what form of uranium would be stored, amounts, assay level or level(s), and origin (domestic/foreign)?

A2. The Uranium Reserve, for which $150 million is requested in the Department's 2021 budget request for Nuclear Energy, would support strategic U.S. fuel cycle capabilities and provide assurance of availability of uranium in the event of a market disruption. Creation of the Uranium Reserve would address near-term challenges to the production and conversion of domestic uranium, where the risks of closure are most immediate.

If funded, initial actions in Fiscal Year 2021 would include development of the acquisition strategy for the Uranium Reserve. The Department plans to implement a competitive procurement process that will result in the acquisition of domestically-produced uranium and services to best meet program goals while ensuring the best use of taxpayer dollars. The Department plans to engage industry and other stakeholders through a Request for Information (RFI). The comments received from the RFI will be considered in the formulation of that strategy. While precise quantities of domestic uranium and conversion services to be purchased are not known at this time, it is expected that purchases for the reserve will support the operation of two or more uranium mines and help support the U.S. uranium conversion capability.

The Uranium Reserve would serve as a backstop mechanism to be available if a market disruption prevents utilities from acquiring fuel in the markets. The uranium would be stored as natural uranium hexafluoride (UF_6). The Uranium Reserve is not designed to

replace or disrupt market mechanisms. All of these activities are subject to appropriations. The Department has authority under the Atomic Energy Act of 1954, as amended, and the Department of Energy Organization Act to acquire, store and sell or transfer uranium. Any sale or transfer of uranium, however, must be undertaken in a manner consistent with any applicable conditions set forth in Section 3112 of the Atomic Energy Act.

Q3. The Department is requesting $40M to complete a High-Assay Low-Enriched Uranium Demonstration Program. I understand that this is a pilot-scale enrichment capability. This request would appear very similar to the defense-related budget request being made to support an enrichment capability for the National Nuclear Security Administration. At first blush, it would seem like the left hand is not talking to the right hand at DOE.

Can you provide information on how these requests are distinct, including technical details of how they differ, and what capabilities would be built out if this request is funded at the amount proposed?

A3. The three-year, $115 million High Assay Low Enriched Uranium (HALEU) Demonstration Program being funded through the Office of Nuclear Energy (NE) has a focus to demonstrate the capability to enrich uranium to a nominal 19.75% U-235 using a commercial technology known as the AC-100M centrifuge. This level of enrichment would be sufficient for HALEU fuels. Once the HALEU Demonstration Program is complete (by June 1, 2022), the commercial sector would be expected to support any ongoing HALEU enrichment capability. Commercial HALEU enrichment vendors would size the enrichment capacity to meet the expected near-term market demand.

Separate from the NE Demonstration Program, the National Nuclear Security Administration (NNSA) is executing a strategy to re-establish a domestic uranium enrichment capability for national security needs. NNSA's nearest-term need for a domestic uranium enrichment capability is low-enriched uranium to fuel the production of tritium for nuclear weapons beginning in the early 2040s. Since 2016, NNSA has funded the development of a small centrifuge technology at Oak Ridge National Laboratory (ORNL) as a potential alternative technology to the AC-100M centrifuge. NNSA is currently executing a thorough Analysis of Alternatives to evaluate the best

solution to meet its needs, which includes a broad range of options including the ORNL small centrifuge, the AC-100M centrifuge, other enrichment technologies, as well as non-construction alternatives.

NE and NNSA are working, and will continue to work together for the collective uranium enrichment objectives of the Department.

Q4. The Department is requesting 64% less funding than in FY 2020 for its efforts to install energy infrastructure in Indian Country. Given the relatively small scale ($22M in FY 2020) and large impact of these projects by saving tribes money over the life of equipment installed, I'm interested to know the effects of such a low figure on program delivery. A paltry $8M as indicated in the request is a let-down to tribal governments that depend on these programs to keep the lights on and costs low in their communities.

Can you explain the rationale behind such a low request for such a high-impact program, and explain what programs, if any will serve the electrical and power needs of underrepresented tribal communities?

A4. The President's FY 2021 budget request of $8 million is consistent with the FY2020 budget request. A reduction of $14 million will result in a slight decrease to program direction and will have minimal impact on the Office's efforts to install energy infrastructure in Indian Country. The Office of Indian Energy will, to the maximum extent practical, utilize the amount of appropriated funding to assist Indian tribes and tribal entities for the deployment of energy infrastructure.

Funds for related activities are provided through the Department of Interior (DOI) Indian Loan Guarantee Program, which provides planning and technical assistance, as well as the U.S. Department of Agriculture, which provides grants, loans, and loan guarantees. Additionally, the U.S. Department of Commerce's Comprehensive Economic Development Strategy (CEDS) provides funding and can assist with energy related economic development activities.

Q5. The Department is requesting $55M more this year ($546M) for Coal Energy Systems and carbon capture. Despite market forces overwhelmingly pushing electricity generation away from coal and more toward comparatively cleaner and more cost-

efficient gas-fired generation, it is concerning that we might spend even more scarce research money on a commodity that is being phased out nationwide.

Can you specify the types of systems (both mitigation and capture) that the Department intends to pursue with this program? And can you provide information specifically on how and whether such technologies can be back-fit into existing coal-fired generating facilities?

A5. Coal FIRST is the DOE flagship program that will develop a coal-fired power plant, with zero/near-zero emissions that meets the demands of the 21st century U.S. electricity grid. The International Energy Agency (IEA) projects that coal will be one of the largest sources of electricity production in the world by 2040. Worldwide coal production is projected to increase from 8 billion tons a year currently, to an estimated 9 billion tons by the year 2050. The IEA has also concluded that any solution for CO_2 emissions must include carbon capture, one of the key traits for a Coal FIRST power plant.

The United States is the only country developing the next-generation of coal plants, and there is an opportunity for the United States to reclaim global leadership from China and sell these technologies to developing economies that will continue to use coal for decades to come.

Coal FIRST plants will meet the growing need for dispatchable generation, critical ancillary services, and grid reliability on an evolving grid with increasing amounts of intermittent renewables.

Extreme weather is precisely the time when renewables (wind & solar) are most vulnerable, a situation seen in the Midwest, Northeast, Puerto Rico, and Texas. In addition, these Coal FIRST technologies will provide power producers with a fuel-resilient alternative to natural gas as the aging coal and nuclear fleet continues to retire.

In 2018, the Office of Fossil Energy released a Request for Information (RFI) seeking input on the coal-fired power plant of the future. Over 30 responses were received, indicating a great interest in working with DOE to develop such a plant. A 21st century coal plant that would employ advanced manufacturing (versus stick built construction)

and advanced monitoring and control systems that provide the ability to co-fire multiple fuels. The responses came from a variety of stakeholders, including power producers, a coal company, technology developers, equipment suppliers and coal-producing states. In addition, DOE executives had consultations with coal State Governors and industry leaders to gain insight into the structuring and need for the Coal FIRST program.

Coal FIRST attributes: **Flexible**: quick to adjust to the changing needs of the grid; **Innovative**: cleaner, more agile, and more efficient through cutting-edge technology; **Resilient**: able to recover rapidly from severe weather and other events; **Small**: compact relative to today's conventional utility-scale coal plants; **Transformative**: fundamentally re-designed to meet emerging and future grid needs. The research and development (R&D) activities pursued under this program will improve the efficiency of new and existing coal-fired power plants, which reduces (i.e., mitigates) emissions, and also captures and stores carbon dioxide (CO_2) emissions.

Coal with Carbon Capture and Storage has also been shown to be an excellent and economical feedstock for hydrogen; combining coal with biomass or petroleum product waste (e.g., plastics) as the feedstock with carbon capture and storage can produce "green" hydrogen that in turn can be used for green energy storage, transportation, or power generation.

Also, many of the technologies that are being developed by the program will also have the ability to be retrofitted onto existing coal-fired generation facilities. For example, the program awarded nine front-end engineering design (FEED) studies in September 2019—five on coal-fired generation and four on natural gas generation. The five on coal-fired generation are all retrofits and include first-generation and second-generation carbon capture technologies that were developed by the program.

Additionally, technologies developed for coal-fired generation have applicability for other sources of carbon dioxide (CO_2), such as natural gas-fired generation, industrial

facilities, and even removing CO_2 from the atmosphere (i.e., direct air capture (DAC)). The funding request for carbon capture also includes these other applications.

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Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTIONS FROM SENATOR JAMES E. RISCH

Q1. Secretary Brouillette, the intelligence agencies have made it clear that Chinese and Russian's pose a serious cyber threat to U.S. critical infrastructure. The Idaho National Lab, which in addition to being our nation's nuclear research laboratory, is also a leader in critical infrastructure protection, including the grid. How are the Department of Energy and national labs working to respond to this challenge? In your opinion, what else can the Department of Energy and national labs be doing?

A1. The Department of Energy is home to some of the most cutting-edge computing and information technologies in use in the world. DOE's National Laboratories are the "crown jewels" of the Federal government's national research infrastructure. The National Labs regularly collaborate with Federal agencies, providing them with the scientific and technical support they need to fulfill their missions.

One such mission is enhancing the security and resilience of the Nation's critical energy infrastructure, which is led by DOE's Office of Cybersecurity, Energy Security, and Emergency Response (CESER) and conducted in close collaboration with government and private sector partners. It is a complicated and significant mission.

The former Director of National Intelligence, along with several heads of the Administration's Intelligence Community agencies, has stated that "China has the ability to launch cyberattacks that cause localized, temporary disruptive effects on critical infrastructure—such as disruption of a natural gas pipeline for days to weeks."[1] Russia has similar abilities with the capability to disrupt "an electrical distribution network for at least a few hours—similar to those demonstrated in Ukraine in 2015 and 2016."[2]

To address the role of the Idaho National Laboratory (INL) specifically, INL cybersecurity researchers leverage the methods and ideologies that cyber adversaries possess in order to inform and instruct users on how to better ensure efficient, reliable,

[1] https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf
[2] https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf

and secure control systems and network operations through a variety of programs and initiatives.

As a general matter, DOE's collaborative approach with the energy sector is proactive with regard to coordination, information sharing, education, and training exercises. That collaborative approach extends to its work with the National Laboratories and informs its investments for research and development (R&D), designed to achieve energy sector situational awareness and address the challenges facing the operational technology (OT) systems that drive much of the sector's energy generation and transmission.

Through focused, early-stage R&D, CESER's Cybersecurity for Energy Delivery Systems (CEDS) program is designed to assist energy sector asset owners by supporting the development of cybersecurity solutions for energy delivery systems. CESER co-funds industry-led, National Laboratory-led, and university-led projects with State, local, tribal, territorial, and industry partners to advance cybersecurity capabilities for energy delivery systems. These research partnerships are essential for helping to detect, prevent, and mitigate the consequences of cyber incidents in current and future energy delivery systems.

CESER's Infrastructure Security and Energy Restoration (ISER) division works with the energy sector and National Laboratories to fund R&D focused on analyzing critical infrastructure vulnerabilities and recommends or develops preventative measures. ISER's R&D work, though related to the CEDS portfolio, is focused on leveraging DOE's technical expertise, ensuring the security, resiliency and survivability of key energy assets and critical energy infrastructure at home and abroad.

One example that spans the CEDS and ISER portfolios is OT systems. The cybersecurity challenges presented by the OT systems used in energy infrastructure differ from those presented by typical Information Technology (IT) systems. OT power systems must operate continuously with high integrity and availability. Many assets are in publicly-accessible areas, where they can be subject to physical tampering. Real-time operations

are imperative, and latency is unacceptable. The complex R&D conducted at DOE's National Laboratories is instrumental to advancing the work to protect our nation's energy assets, particularly for OT systems.

Examples of projects that have been competitively awarded and are currently underway that are expected to yield significant positive benefits as we work to secure our Nation's critical energy infrastructure include:

- The Automated System Research and Development initiative, which is a response to the increasing speed of cyberattacks. The initiative will prioritize energy sector defenses against high-consequence cyber events, isolate automated systems, and remove vulnerabilities. The concept behind the initiative is called consequence-driven, cyber-informed engineering. This project is supported by Pacific Northwest National Laboratory.
- The Cyber Analytic Tools and Techniques (CATT™ 2.0) project, which is developing capabilities to improve sector-wide cyber threat awareness through rapid, early discovery and mitigation of advanced cyber threats to critical energy infrastructure. A key component of this project is the analysis of voluntarily provided IT and OT data, which is enriched with classified threat information and analytics by the U.S. Government. This project is supported by Idaho National Laboratory.
- The Cybersecurity for Operational Technology Environments (CyOTE™) program, which is developing analytic tools and procedures to receive, store, and analyze partner utility data to identify anomalous behavior on OT networks that indicate potential threats and system vulnerabilities. This project is supported by Idaho National Laboratory.
- The Cyber Testing for Resilience of Industrial Control Systems (CyTRICS™) initiative, which is developing a testing program to support the identification and mitigation of supply chain vulnerabilities in industrial control systems by leveraging the engineering and security expertise resident in government,

National Laboratories, and industry. This project is supported by Idaho National Laboratory, Pacific Northwest National Laboratory, Sandia National Laboratories, National Energy Technology Laboratory, and Lawrence Livermore National Laboratory.

- The Cybersecurity via Inverter-Grid Automatic Reconfiguration (CIGAR) project, which is developing technology to identify compromised grid sensors—such as inverter controllers for solar panels or energy storage systems—and adjust the settings of the sensors so that they remain trustworthy, while simultaneously ignoring data from compromised sensors, so the power grid sustains critical functions while cyber-incident response actions proceed. This project is supported by Lawrence Berkeley National Laboratory.

CESER is also working closely with other applied program offices within DOE through the Grid Modernization Initiative (GMI). For example, currently CESER is developing several projects with these applied offices and the National Laboratories to use machine learning to predict evolutions in malware and detect unexpected changes in device firmware. With regard to the selection of cybersecurity R&D projects, DOE is constantly examining the threat landscape and coordinating with partners, such as DHS, to identify the areas where its work can provide the most impact to the energy sector while minimizing overlap with existing projects.

Q2. Senator King and I recently had our *Securing Energy Infrastructure Act* signed into law. Can you provide us an update on the status of implementing those provisions at DOE, and do you believe that the department is properly resourced to carry it out?

A2. DOE's efforts to carry out the intent of Securing Energy Infrastructure Act (SEIA) are well underway. Currently, DOE, through its Office of Cybersecurity, Energy Security, and Emergency Response (CESER), is pursuing several lines of effort, which are in line with SEIA's, including, the Cyber Testing for Resilient Industrial Control Systems (CyTRICS™) program, under which DOE's National Laboratories will test industrial control systems to identify cybersecurity and reliability vulnerabilities, providing valuable information to identify systemic and supply chain risks and vulnerabilities to the

sector by linking timely threat information with supply chain information and enriching it with other data sources and methods. SEIA strengthens CESER's efforts for the CyTRICS program in coordination with the energy sector Section 9 entities and expands the means in which DOE will work more closely with Section 9 entities.

Furthermore, CESER is currently examining how to best leverage or modify its existing agreements with the National Laboratories and partners to execute the pilot program created by SEIA and is determining whether additional agreements will be necessary to expand the scope of the program in order to meet the requirements set forth in SEIA and apply the liability protections set forth in the legislation—which we expect will encourage even greater participation by manufacturers and vendors.

DOE's Office of Electricity (OE) is also working with CESER to review ongoing research activities in its portfolio that may be helpful to identify, test, and pilot long-term solutions before they are widely deployed in the electric subsector or at the Power Marketing Administrations.

Some of DOE's initiatives with the National Laboratories that will support its implementation of SEIA include:

1. CESER's cyber R&D program, which currently has 24 active research and development, projects—including the CyTRICS program—that aim to adapt energy delivery systems to survive sophisticated cyberattacks.
2. OE Permissive Communications for Protective Relaying and Fault Detection program, a pilot program led by Idaho National Laboratory (INL) for two technologies that would limit or eliminate the use of digital control technologies.
3. OE DarkNet, which leverages work by Oak Ridge National Laboratory to use non-public optical fiber for communications. The lab's scientists are focused on a new architecture for transferring the grid's data using "dark," or underutilized, optical fiber to build a private, secure communications network. Combining a secure, fast, fiber optic-based communications network with sensors and other

protective elements is the backbone of the DarkNet project.

4. DOE's FY 2019 Grid Modernization Laboratory Consortium research program awards include machine learning/artificial intelligence research, ensuring the bulk power system, including protective relays and associated substation and control center systems, can perform intrusion tolerant operations. These novel architecture and software advancements will also detect compromised systems.

Finally, with the goal of obtaining a more thorough situational awareness, DOE is examining the expansion of its existing Section 9 supply chain working group—which includes Section 9 entities, interagency partners such as DHS, the Department of Justice (DOJ) through the Federal Bureau of Investigations (FBI), and the Department of Defense (DoD), along with representatives from the Electricity Subsector Coordinating Council (ESCC) and the North American Electric Reliability Corporation (NERC)'s Electricity Information Sharing and Analysis Center (E-ISAC)—to include representation from: the Nuclear Regulatory Commission; the Office of the Director of National Intelligence; State or regional energy agencies; and national research bodies or academic institutions, as set forth in SEIA.

Q3. Secretary Brouillette, I believe DOE's ongoing support for developing SMRs is key to helping the United States regain its leadership role in nuclear energy. As you know, NuScale power is working with UAMPS to site the first SMR at the Idaho National Lab by 2026. Before that is possible, much more research and development is needed, and DOE's cost-shared funding is helping to accelerate that process. Would you explain why you think SMR research and development funding is important? What are the overall benefits to the country and our national security for the US to regain its leadership position on advanced commercial nuclear technologies like SMR's?

A3. The Department believes that emerging domestic small modular reactor (SMR) designs have the potential to contribute significantly to the revitalization of the domestic nuclear industry due to the improved resilience, flexibility, affordability, safety, and siting options that they offer. The development and deployment of advanced reactor designs is key to the U.S. maintaining a technological leadership role in the global nuclear industry, as well as improving our domestic economy, environment, and national energy security

posture. As advanced SMR designs, mature a great deal of technical and regulatory uncertainty remains, which requires continued investment on the part of the designer. If deployed, SMRs have the potential to provide a resilient, emission-free power source that can support mission-critical power needs and develop a robust domestic manufacturing enterprise with stable, high-paying jobs. If US-technology advanced reactors are deployed in overseas markets, there will be additional benefits to the U.S. economy as well as to our strategic interests by developing long-term relationships with nations through civil nuclear cooperation. In addition, the presence of U.S. designs in other countries will assure these countries are meeting high standards of safety, security and nonproliferation.

U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTIONS FROM SENATOR MARIA CANTWELL

Q1. Over 80% of the land area of Richland School District, located in Benton County, Washington, is owned by the Department of Energy. Over 10,000 employees under contract to the Department of Energy work at these federal facilities that do not pay school property taxes. Children of those employees attend school in Richland School District, where untaxed federal property leads to higher private property school tax rates but with lower school tax revenue. Can you explain the timeline on which the Department of Energy makes the Payment in Lieu of Taxes payments to Benton County?

A1. Benton County's PILT requests specify that in any given year the payment be made in two equal payments. The first half of the PILT payment is due by April 30th, and the second half due by October 31st. The Department strives to make the payments on the requested schedule when funds are available to do so and once all required information to support the request has been received.

Q2. The Benton County Assessor invoices all tax payers in the county twice a year as they do the Department of Energy (treating the Department as they do any local taxpayer). It doesn't appear, based on information my office received from Richland school officials, that the Richland School District is receiving their payments from the Department in a timely and reliable manner. Can you explain the delay and is the Department looking into the matter of ensuring that two PILT payments will be made in the future, both in October and April?

A2. The Department makes PILT payments to Benton County. The Department does not make payments to the local school districts; that is done by the county. For Fiscal Year 2020, the Hanford Department of Energy has funds to pay PILT per the requested due dates.

Q3 .I understand that your Department has a long history of providing radioisotopes, specifically Plutonium-238, to NASA for missions in which solar power alone is infeasible. Given the scarcity of Pu-238 and the need for resilient power for funded missions such as the Artemis Program, is DOE currently working to make other isotopes available for use in radioisotope power systems?

A3. The Department of Energy DOE and the National Aeronautics Space Administration (NASA) efforts are focused on ensuring a robust, domestic supply of plutonium-238 (Pu-238) fuel (known as heat-source plutonium oxide) to support the Nation's space

exploration needs. In Fiscal Year 2018, DOE and NASA established a Constant Rate Production Program focused on increasing Pu-238 fuel production to support NASA mission demands. To date, DOE has produced over half a kilogram of new Pu-238 fuel and made significant investments to modernize supply chain infrastructure within the DOE complex on a full cost recovery basis. Additionally, DOE and NASA used a small portion of this new fuel supply to power the Mars Perseverance Rover, which launched in July 2020, to demonstrate the viability of the Nation's Pu-238 domestic supply chain. Based on this progress, NASA lifted the ban on missions proposing radioisotope power system missions for the Discovery 2026 program.

DOE and NASA will continue to increase Pu-238 fuel production to 1.5 kilograms/year on average by 2026 to meet future space exploration needs. At this time, DOE and NASA do not foresee a shortage of Pu-238 that would necessitate evaluation of other isotopes for use in radioisotope power systems.

U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTIONS FROM SENATOR STEVE DAINES

Q1. As was discussed during the hearing, an important component of commercializing and getting to market carbon capture, utilization, and storage (CCUS) technology is the 45Q tax credit. Unfortunately, many industry stakeholders are waiting for the Internal Revenue Service (IRS) to issue regulations to allow for more uses of carbon storage, including through Enhanced Oil Recovery and Secure Geological Storage. This will not only help reduce the cost of CCUS, but it will also help increase the responsible development of oil and gas resources. Senator Hoeven and I introduced the CO2 Regulatory Certainty Act, which would accomplish this.

Mr. Secretary, will you commit to raising this issue with IRS and urge them to address it in a way that, consistent with congressional intent, encourages broad adoption and provides the necessary certainty for carbon capture projects to commence?

A1. I share your concern regarding the need for clear regulations regarding secure geologic storage for enhanced oil recovery operations and geologic storage. During his tenure, Secretary Perry sent two memos to Secretary Mnuchin, urging action on this issue (December 2018 and November 2019). DOE staff have made themselves available to IRS staff for technical assistance. In March 2020, IRS issued guidance that establishes a safe harbor for partnerships (Rev. Proc. 2020-12) and a notice that clarified the definition for beginning of construction (Notice 2020-12). In May 2020 IRS released the Notice of Proposed Rulemaking addressing secure geologic storage and other issues. This NPRM, combined with the already-issued guidance on partnerships and beginning of construction should provide the necessary certainty for carbon capture projects to commence.

Q2. In recent years, the Western Area Power Administration, the Southwestern Power Administration, and the Southeastern Power Administration have retained unobligated balances to manage Purchased Power and Wheeling activities. What is the Department's position on that and how their unobligated balances must be used?

A2. The Power Marketing Administration (PMA)'s purchase, power, and wheeling (PPW) program provides the funding for the PMAs to purchase additional power to meet contractual requirements for power delivery when not enough Federal hydropower is generated. Consistent with legislative authorities, unobligated balances as a contingency reserve are intended to provide greater funding certainty for the highly variable PPW program requirements. That certainty strengthens the PMAs' ability to meet their

fundamental mission: the delivery of the Federal hydropower resource relied on by tens of millions of Americans, including many critical DOE, Defense, and other Federal agency facilities.

The PMA PPW program is affected by energy market conditions, generation and transmission system constraints, reservoir storage levels, and drought conditions. In addition, power generation can be constrained by downstream flow restrictions resulting from many different events including icing, flooding, environmental activities, health and safety, recreation, irrigation, and navigation requirements. The PPW reserves provide the flexibility needed to deliver on contractual power commitments to customers during these unanticipated adverse conditions, such as the long-term drought in the Pick-Sloan Missouri Basin experienced from 2001 through 2008, and the sudden severe droughts that can occur in the central Great Plains and southern regions of the United States, as experienced from 2005 through 2006 and again from 2011 through 2013.

U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTION FROM SENATOR DEBBIE STABENOW

Q1. The Facility for Rare Isotope Beams (FRIB), located in my home state of Michigan, represents a game-changer for science and for the Michigan economy. Once built, this facility – which is on time and on budget – will be the world's most powerful radioactive beam facility providing more than 1,000 new rare isotopes for research and approximately $187 million in new tax revenues and $4 billion in statewide transactions. I am pleased to see the Department of Energy's FY21 budget request includes money for the final year of construction and for a FRIB isotope harvesting project that will provide new isotopes for cancer treatment approaches. However, I am disappointed the DOE budget request for operations and maintenance is less than half the amount defined by the DOE-MSU cooperative agreement. I understand this would delay the start of FRIB's cutting-edge research by as much as a year. Would you please provide me with an overview of the Office of Science's plans for research and operations at FRIB to ensure it continues on its trajectory of being on time and on budget?

A1. The Facility for Rare Isotope Beams (FRIB), which will provide world-leading capabilities for nuclear structure and nuclear astrophysics, continues to be a Department priority. Construction is over 93 percent complete, and the FY 2021 President's Request provides the final year of project funding according to the baselined profile. The Department is committed to providing funding to retain the most critical operations and research staff in advance of the first year of operations in FY 2022. The Office of Science prizes the incredible scientific potential of FRIB and continues to develop plans on how to best reap the rewards of this exciting new facility.

U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTIONS FROM SENATOR MARTIN HEINRICH

Q1. I continue to hear from New Mexicans with concerns that DOE's new Order 140.1 has impeded DNFSB's ability to oversee worker and public health and safety at defense nuclear facilities, including Los Alamos and Sandia National Laboratories and WIPP. To ensure DNFSB continues to have full access to the information and the nuclear facilities it needs to do its job, we made legislative changes to DNFSB's statute in sec. 3202 of the FY20 NDAA. How is your department responding to the FY20 NDAA changes and ensuring that DNFSB again has the access it needs?

A1. In accordance with the new FY2020 NDAA requirements, on February 26, 2020, DOE submitted our Report to Congress entitled, *DOE's Response to Information Requested by the Defense Nuclear Facilities Safety Board, Report Period: July 1 – December 31, 2019*. The Department has also completed a draft revision to Order 140.1 to reflect the requirements in the FY2020 NDAA.

Q1a. If a revised version of Order 140.1 is prepared, will you share a draft of it with the members of DNFSB before it is finalized?

A1a. Yes. On February 26, 2020, DOE provided a draft revised Order 140.1 to the DNFSB and solicited their input. On February 28, 2020, the DNFSB issued a letter (see attachment below) to the Secretary stating that DOE's draft revision of Order 140.1 satisfactorily addresses the statutory concerns previously expressed by the DNFSB.

DNFSB Letter Feb 28 2020

Q1b. Because of the direct impact on public health and safety, will you release a draft of a revised order for public comment before it is finalized?

A1b. No. The revised Order 140.1 is an internal DOE management directive that only applies to DOE and its contractors. Furthermore, revised Order 140.1 does not impact long-standing departmental requirements governing public and worker health and safety programs, which are implemented and monitored in accordance with established laws, regulations/rules, policies, directives, and technical standards. DOE's public and worker

health and safety regulations (i.e., 10 C.F.R. Part 835, *Occupational Radiation Protection Program,* 10 C.F.R. Part 830, *Nuclear Safety Management, and 10 C.F.R. Part 851, Worker Safety and Health Program*) are subjected to public review and comment in accordance with the Administrative Procedure Act (Public Law 79-404).

DOE's directive's process is similarly aligned with the DNFSB's policy statement review process, whereby, the DNFSB does not solicit public comment on its internal directives.

Q1c. Is DOE planning any additional changes to Order 140.1 that could limit DNFSB's ability to access information or defense nuclear facilities, such as restricting the type of information it provides to DNFSB or who at DNFSB will be granted access to information or facilities?

A1c. No.

Q1d. With regard to the FY20 NDAA and the changes it made to the DNFSB's statute, are there any areas where the Department was uncertain or would benefit from further clarification of Congressional intent?

A1d. DOE would benefit from further clarification on:

- The new requirements for "prompt and unfettered access."
- The inclusion of "employees and contractors" at defense nuclear facilities. It would appear the intent of the language is to expand its coverage to the health and safety of workers at such facilities for conduct that is subject to the provisions of 10 Code of Federal Regulations Part 830, the area in which the DNFSB has expertise, not to cover worker health and safety, similar to that covered by the Occupational Safety and Health Administration and regulated by 10 CFR 851, *Worker Health and Safety*, in which the DNFSB has limited expertise.

Q1e. Is DOE working with DNFSB to develop a bilateral MOU/MOA to address other operational or staff interface issues that are not addressed by a revised Order 140.1?

A1e. The Department remains open to engaging the DNFSB in mutually addressing continuous improvement opportunities regarding agency-to-agency transparency and operational/interface communications. The DNFSB described a bilateral MOA in their

February 28, 2020, letter. The DOE will provide the DNFSB with any comments we may have once it is provided for review and coordination.

Q2. Your FY21 budget request for environmental cleanup work at Los Alamos implies the pace of cleanup work will not be reduced below the current year, even though the request is nearly half the FY20 level. Please provide a table that compares the current expected spending rates for fiscal years 2020 and 2021 and the available carryover (if any), that shows that the pace of cleanup work will be unchanged.

A2. At the beginning of FY 2020, Environmental Management (EM)-Los Alamos had $140 million in uncosted prior year funds. The Fiscal Year 2020 enacted budget of $220 million plus the proposed FY21 request of $120 million provides $480 million for this year and next. We are currently reviewing the costs for the first part of FY20, and the remaining work plans for the year to ensure that this year's milestones for the 2016 Consent Order will be achieved.

EM Los Alamos Budget/Spending Chart Millions of dollars			
Year	FY19	FY20	FY21
Appropriated	220	220	120[3]
Obligated[1]	364	360	250
Spend rate	224	230[2]	220[4]
Carryover	140	130	30

[1] Includes prior year funds

[2] Planned spend rate for FY20

[3] Assumes FY21 at the Request Level

[4] Assumed spend rate for FY21

Q3. There are two pending applications with the NRC to site a consolidated temporary storage facility for commercial spent nuclear fuel. One of the proposed sites is in New Mexico. I continue to be concerned that without an approved site for permanent geologic disposal, any proposed "temporary" storage facility could easily turn out to be de facto "permanent" storage.

Does DOE currently have or plan to request statutory authority to fund or contract with a private company for storage of spent nuclear fuel?

Do you support the recommendation of the Blue Ribbon Commission to require state approval of any temporary consolidated storage facility for spent nuclear fuel and high-level waste?

A3. The Administration believes progress on managing the nation's spent nuclear fuel and high-level waste is critical and the standstill has gone on too long and is committed to fulfilling the Federal Government's legal and moral obligations to properly manage and dispose of the nation's spent nuclear fuel and high-level waste. The Administration supports developing a durable, predictable yet flexible plan that addresses more efficiently storing waste temporarily in the near term, followed by permanent disposal and supports establishing an interagency working group to develop this plan in consultation with States. The FY 2021 Budget Request prioritizes research, development, and evaluation of alternative technologies and pathways for the storage, transportation, and disposal of the nation's nuclear waste, with a focus on solutions deployable where there is a willingness to host. Fulfilling the legal and moral nuclear waste management obligations will continue to be an Administration priority, including development and deployment of a robust interim storage program and permanent disposal pathway.

U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTION FROM SENATOR MAZIE K. HIRONO

Q1. Congress has repeatedly rejected the administration's proposals to cut funding for the Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), but the administration has again proposed a 74 percent cut to EERE. The proposed cuts would have a wide-ranging effect on the ability of EERE to fulfil its mission of helping the country transition to a clean energy economy, and the Department of Energy's ability to assist states like Hawaii in meeting their clean energy targets.

I understand from the Department of Energy's Senate budget briefing on February 12, 2020 that EERE currently has about 550 full time employees, and that the department is planning to increase EERE staff up to 675-700 full time employees. What internal deadlines is the Department setting to meet those staffing goals so that DOE can carry out Congress' vision for EERE?

A1. On March 20, 2020, EERE and the Department's Office of Human Capital (DOE-HC) jointly briefed the SEWD/HEWD committee staff on EERE's plan and joint strategy with DOE-HC to reach an FTE level of 675.

U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTION FROM SENATOR ANGUS S. KING, JR.

Q1. As you are aware, the President's FY 2021 budget for the Department of Energy proposes massive cuts to R&D activities, specifically in renewable energy and energy efficient technologies. This includes an 81 percent cut from vehicle technologies, 76 percent from solar, almost 79 percent form wind, 76 percent from geothermal, another 76 percent from advanced manufacturing, and we could go on. The total budget for the Office of Energy Efficiency and Renewable Energy would be cut by 74.1 percent under this proposal. These programs represent our energy future, and I find these cuts unacceptable.

In your response to my question regarding these deep cuts at EERE and many other areas of the Department's FY 2021 budget proposal, you stated that a number of these cuts were not necessarily as they seem, but are actually offset by increases in other areas like at the Office of Science or the National Laboratories. Please supply the detailed figures showing the cuts and the offsetting increases to which you referred in the hearing.

A1. The FY 2021 Budget Request prioritizes early-stage research across basic and applied research programs where the federal role is the strongest. Through this approach, the Budget Request emphasizes funding for a number of coordinated department-wide priority areas, including research of technologies that cut across Program Offices for:

- Energy Storage ($213.6M),
- Critical Minerals ($130.6M),
- Harsh Environment Materials ($58.5M),
- Artificial Intelligence and Machine Learning ($258.0M)
- Advanced Manufacturing ($228.5M),
- Advanced Microelectronics ($175.8M),
- Exascale Computing ($710.1M), and
- Quantum Information Sciences ($248.8M).

These priority areas support the Administration's emphasis on the Industries of the Future and other scientific priorities and represent new and increased emphasis areas to meet today and tomorrow's challenges by promoting energy independence, progressing scientific research, and protecting the Nation. EERE accounts for only a portion of the

programs above, but, improves its potential impact when combined with other offices' focused research.

The Request also prioritizes sustaining mission-ready infrastructure and safe and environmentally responsible operations at the National Laboratories by providing funding for the infrastructure necessary to support leading edge research. This includes infrastructure projects that will address inadequate core infrastructure and utility needs, as well as funding for three new construction projects, and continuation of 15 ongoing construction projects across the 10 National Laboratories that the Office of Science stewards on behalf of the Department.

U.S. Senate Committee on Energy and Natural Resources
March 3, 2020 Hearing
The President's Budget Request for the Department of Energy for Fiscal Year 2021
Questions for the Record Submitted to the Honorable Dan Brouillette

QUESTIONS FROM SENATOR CATHERINE CORTEZ MASTO

Q1. The FY 2021 Congressional Budget Justification requests $20,000,000 to establish a new program for Interim Storage.

Q1a. How was the $20,000,000 amount determined?

A1a. Of the $27.5 million requested for this effort, approximately $20 million will be allocated to the initiation of interim storage activities. This amount is sufficient to initiate interim storage activities.

Q1b. How many of the 26 new full time employees (FTEs) requested are for the Interim Storage program?

A1b. No new FTE's are being added at this time, these are existing employees that currently reside within the Office of Spent Fuel and Waste Disposition within the Office of Nuclear Energy (NE-8), the Office of the General Counsel (GC), the Energy Information Administration (EIA), and are all currently funded within NE R&D Program Direction.

Q1c. Please provide a breakdown for the Interim Storage program new dollars requested and the new FTEs requested for the three locations identified in the Laboratory and State Tables documents: DOE Washington Headquarters, DOE Idaho Operations Office, and DOE Nevada Field Office.

A1c. These figures represent the whole of the Interim Storage and Nuclear Waste Fund Oversight Programs combined.

Location	Funding Amount	FTEs
Washington D.C.	$7,500,000	26
Nevada Field Office	2,500,000	0
Idaho Operations Office	$10,000,000	0

Q2. The FY 2021 Congressional Budget Justification requests $7,500,000 to establish a new program for Nuclear Waste Fund Oversight.

Q2a. How was the $7,500,000 amount determined?

A2a. The $7.5 million requested supports DOE's requirements to secure and manage the environmental obligations for the Yucca Mountain site and support DOE's ongoing program to oversee management and execution of the Nuclear Waste Fund, and other fiduciary responsibilities.

Q2b. How many of the 26 new FTEs requested are for the Nuclear Waste Fund Oversight program?

A2b. No new FTE's are being added at this time, these are existing employees that currently reside within the Office of Nuclear Energy (NE-8), the Office of the General Counsel (GC), the Energy Information Administration (EIA), and the Office of Spent Fuel and Waste Disposition, and are all currently funded out of NE Program Direction.

Q2c. Please provide a breakdown for the Nuclear Waste Fund Oversight program new dollars requested and the new FTEs requested for the three locations identified in the Laboratory and State Tables documents: DOE Washington Headquarters, DOE Idaho Operations Office, and DOE Nevada Field Office.

A2c. These figures represent the whole of the Interim Storage and Nuclear Waste Fund Oversight Programs combined.

Location	Funding Amount	FTEs
Washington D.C.	7,500,000	26
Nevada Field Office	$0	0
Idaho Operations Office	$0	0

Q3. The FY 2021 Congressional Budget Justification State Table includes a new request for $2,500,000 for Interim Storage and Nuclear Waste Fund Oversight at the Nevada Field Office.

Q3a. How was this amount determined?

A3a. This estimate is based upon prior year expenditures. $2 million of these funds are to support hosting historic electronic records in an up-to-date cloud environment, which is an annual requirement starting in FY 2021.

Q3b. Is this amount for activities not previously conducted in Nevada?

A3b. No.

Q3c. If these activities were previously conducted in Nevada, what were the expenditures in FY 2017, FY 2018, and FY 2019?

A3c. The table below contains actual costs for site security at the Yucca Mountain site. They may not be inclusive of all site and security costs as some of those services are not tracked separately by activity.

FY 2017	FY 2018	FY 2019
$374,869	$356,840	$329,965

Q4. The FY 2021 Congressional Budget Justification Overview states, "The Department recognizes that legislative changes are needed to implement elements of the proposed approach, and looks forward to working with Congress to implement a solution." A number of bills addressing spent nuclear fuel storage and high-level nuclear waste disposal have already been introduced in the 116th Congress, including H.R. 1544, H.R. 2699, H.R. 2995, H.R. 3136, S. 649, S. 721, S. 1234, and S. 2917.

Q4a. Please identify the bills that the Department has evaluated relative to the Interim Storage and Nuclear Waste Fund Oversight activities proposed in the CBJ.

A4a. DOE is familiar with the above proposed legislation.

Q4b. Does the Department intend to support any of these bills?

A4b. DOE looks forward to working with Congress on any of the above proposed legislation.

Q4c. Does the Department intend to work with Congress on new legislation?

A4c. Absolutely, DOE is committed to working with Congress to make it possible to provide for both the interim storage of spent nuclear fuel as well as the permanent disposal of both spent nuclear fuel and high-level radioactive waste.

Q5. The FY 2020 Appropriations Act, enacted December 20, 2019, directed DOE "to provide to the Committees on Appropriations of both House of Congress not later than 90 days after enactment of this Act a report on innovative options for disposition of high-level waste and spent nuclear fuel management. Priority should be given to technological

options that are cost effective, are able to be implemented in the short term, and consider siting stakeholder engagement."

Q5a. What is the status of this report?

A5a. The report is in draft form and is undergoing internal DOE review.

Q5b. Will this report address consent-based siting of nuclear waste storage and disposal facilities?

A5b. The report is in draft form and is undergoing internal DOE review.

Q5c. Will this report address geologic repository programs in countries other than the United States?

A5c. The report is in draft form and is undergoing internal DOE review.

Q5d. Will this report address alternative geologic disposal technologies, such as deep borehole disposal of nuclear waste?

A5d. The report is in draft form and is undergoing internal DOE review.

Q6. The FY 2020 Appropriations Act, enacted December 20, 2019, directed DOE "to contract with the National Academy of Sciences (NAS) not later than 60 days after enactment of this Act to conduct a comprehensive, independent study on the waste aspects of advanced reactors."

Q6a. What is the status of contracting for the NAS report on waste aspects of advanced reactors?

A6a. The contract is being prepared by the National Academy of Sciences (NAS) and the Department of Energy (DOE).

Q7. At the end of FY 2019 (September 30, 2019), what were the unobligated balances in the Department's Defense Nuclear Waste Disposal and Nuclear Waste Disposal accounts? What were the Department's ending FY 2019 obligated but unspent funds in those accounts?

A7**.** The unobligated balances in the Department's Defense Nuclear Waste Disposal and Nuclear Waste Disposal accounts were $6,436,657 at the end of FY 2019. The Department's ending FY 2019 obligated but unspent funds in those accounts were $7,997,302.

Q8. During FY 2019, did the Department spend any funds from the Department's Defense Nuclear Waste Disposal and Nuclear Waste Disposal accounts for Yucca Mountain licensing activities?

A8. The Yucca Mountain licensing proceeding was suspended in 2011and the Department is not engaged in licensing activities for the Yucca Mountain site.

Q9. During FY 2019, did the Department spend any funds from the Department's Defense Nuclear Waste Disposal and Nuclear Waste Disposal accounts for security, maintenance, and environmental requirements at the Yucca Mountain site?

A9. Yes. Approximately $200K-$350K is spent annually for Yucca Mountain safety and security provided by Nevada National Security Site contractors. Some maintenance and environmental requirements costs may not be captured in these amounts as some of those services are not tracked separately by activity.

Q10. Please provide a breakdown of FY 2019 expenditures for pension fund obligations for retired Yucca Mountain workers and closeout of legacy accounts; administration of the Nuclear Waste Fund, financial audits, investment guidance, and other analyses; and maintenance of Yucca Mountain Project records and technical and scientific information, including preservation and security of the geologic samples.

A10.

Activity	Costs FY 2019
Pension fund obligations and closeout of legacy accounts	$136,296
Administration of the NWF, Financial Audits, etc.	$1,951,476
Maintenance of Yucca Mtn. Project records and technical and Scientific Info. (including preservation and security of geologic samples)	$952,322

Q11. The President has said that he will respect the voices of Nevadans and look for alternative nuclear waste storage solutions, rather than continue to force the unsafe and unworkable Yucca Mountain project.

Q11a. If the Administration does not intend to pursue the Yucca Mountain repository, will you explain why the Department is requesting $7.5 million for Nuclear Waste Fund oversight, including funding for the "security, maintenance, and environmental requirements" for the Yucca Mountain site?

A11a. The Nuclear Waste Fund is for all activities authorized by the Nuclear Waste Policy Act of 1982, and DOE has a legal responsibility to oversee the use of the fund. Because there is still DOE property at the site, DOE supports several activities to ensure that the Yucca Mountain site is maintained in a safe and secure manner. For example, because the Yucca Mountain site is partially located on the Nevada National Security Site (NNSS), DOE funds a portion of the security costs of the NNSS. Additionally, DOE supports environmental activities to ensure that relevant portions of the NSSS land, air, and water resources are monitored and protected. DOE also funds activities related to accommodating, and ensuring safety during, official visits to the Yucca Mountain site, such as the one that Senator Cortez Masto participated in last year.

Q11b. Will the Department work with Congress to map out a consent-based, long-term nuclear waste storage solution that treats Nevada fairly and breaks free from the flawed process that led to the Yucca Mountain repository designation, decades of inaction, and billions of wasted taxpayer dollars?

A11b. The Department is committed to working with Congress to develop a flexible but durable solution for the storage, transportation, and disposal of the Nation's spent nuclear fuel and high-level radioactive waste.

Q12. Would the Department support a repeal of the 1987 amendment that designated Yucca Mountain as the nation's sole nuclear waste repository?

A12. The Department will work with Congress on possible legislative changes necessary to implement the program outlined in the FY21 Budget.

Q13. The President's Budget Request reads, "…the Budget supports the implementation of a robust interim storage program and R&D on alternative technologies for the storage, transportation, and disposal of the Nation's nuclear waste, with a focus on systems deployable where there is a willingness to host." Additionally, in Volume 3, Part 2 of the Budget Request, the Department lists that it will work with State, Tribal, and local governments as well as other affected federal agencies.

Q13a. Will the Department support a process consistent with the recommendations of the Blue Ribbon Commission on America's Nuclear Future to require that an agreement be reached between the Department and the governor, local governments, and affected tribes before pursuing an interim or long-term nuclear waste storage facility?

A13a. The Department has made it clear that any proposed solution must include working with states and local communities that may be interested in hosting an interim storage facility or a permanent repository.

Q14. Has the idea of using Yucca Mountain for an interim storage site ever been discussed within the Department?

A14. Under the terms of the Nuclear Waste Policy Act of 1982, as long as Yucca Mountain is named as the repository, designating Yucca Mountain as an interim storage site is not permitted.

Q15. The DOE shipped a half metric ton of plutonium to the Nevada National Security Site (NNSS) from the Savannah River Site in South Carolina in 2018. I secured an agreement with DOE, which you have agreed to honor, to begin removing the plutonium from NNSS in 2021 and complete removal by the end of 2026. The Budget Request includes a

more than 18 percent increase for the National Nuclear Securities Administration (NNSA).

Q15a. Will the Department still be able to meet its commitment to remove the plutonium from NNSS by 2026?

A15a. The Department of Energy remains committed to commencing removal of this material from Nevada beginning in calendar year 2021 and completing removal by the end of 2026.

Q16. The Budget Request includes a more than $230 million increase for the Nevada National Security Site.

Q16a. How much of the increase is related to the Savannah River Site (SRS) plutonium currently being stored at NNSS?

A16a. The requested funding increase in Fiscal Year 2021 supports strategic investments in facilities, infrastructure, and scientific capabilities at the Nevada National Security Site and is not tied to the plutonium from the Savannah River Site that is temporarily staged in Nevada.

Q16b. Is the increase in funding requested for stockpile stewardship activities at NNSS because DOE intends to make additional shipments of SRS plutonium to NNSS?

A16b. The Department of Energy does not plan to ship any additional plutonium from the Savannah River Site to the Nevada National Security Site.

Q17. The Budget Request includes $97 million for the Department's new Energy Storage Grand Challenge (ESGC). In the Budget in Brief, the ESGC vision "is to create and sustain global leadership in energy storage utilization and exports, with a secure domestic manufacturing supply chain that is independent of foreign sources of critical materials, by 2030."

Q17a. I understand that this program will be looking beyond existing lithium-ion technologies, but what role do you expect lithium to continue to play in ESGC research and development in battery and domestic critical mineral production?

A17a. Launched in January 2020, the Energy Storage Grand Challenge (ESGC) is a comprehensive program to accelerate the development, commercialization, and

utilization of next-generation energy storage technologies and sustain American global leadership in energy storage.

Through the Grand Challenge, DOE is prioritizing an integrated, comprehensive strategy focused on energy storage that brings together the relevant DOE offices and leverages all the tools at DOE's disposal. Lithium ion technologies are expected to be key part of the overall solution, along with other energy storage technologies such as flow batteries, chemical storage, hydro-storage, plus others coupled with flexible generation and loads.

The Department's FY21 Budget Request for lithium battery R&D will focus on exploring new battery materials and technologies to significantly reduce cost and enhancing performance of lithium batteries, with a focus on reducing or eliminating the need for critical materials. Establishing domestic supplies of critical battery materials such as lithium and nickel will also be an important effort. There are opportunities for producing raw materials, such as lithium and nickel here in the U.S. In addition, lithium battery recycling will play an important role for material supply in the future, including the recovery of cobalt from spent lithium batteries.

Q17b. Will there be opportunities for the Department to engage with Nevada, a domestic lithium producing state, in helping to increase our critical mineral security and make advancements in lithium-based battery technologies?

A17b. Securing raw materials for lithium ion batteries is a critical pathway to establishing the U.S. as a leader in this emerging market. Some materials, such as cobalt, do not have significant domestic reserves and are reliant on a robust recycling infrastructure or foreign sources of raw materials. The U.S. had a net import reliance of 78% for cobalt in 2019. There are opportunities for producing raw materials, such as lithium and nickel here in the U.S. In addition, lithium battery recycling will play an important role for material supply in the future, including the recovery of cobalt from spent lithium batteries.

The U.S. also lacks domestic materials processing capabilities in the lithium ion battery supply chain. Increasing raw materials production without increasing corresponding processing and manufacturing capabilities simply moves the source of economic and national security risk down the supply chain and creates dependence on foreign sources for these capabilities.

The Departments' Energy Efficiency and Renewable Energy Office supports an ongoing cross-office effort between the Geothermal, Advanced Manufacturing, and Vehicle Technologies Offices (GTO, AMO and VTO respectively) to understand how the U.S. can better establish a domestic lithium supply chain for materials as well as explore the potential for resource diversification. EERE is planning a workshop this summer with industry stakeholders including raw material suppliers, material processors, and battery manufacturers to identify R&D pathways to address domestic production and processing gaps.

Recognizing the importance of lithium-ion battery recycling, the Department established the Lithium Battery Recycling R&D Center (ReCell) and the Lithium-Ion Battery Recycling Prize in FY19 and will continue support for both activities in FY20 and in the FY21 Request, along with continued support for lithium battery recycling R&D with industry through cost-shared projects with the United States Advanced Battery Consortium (USABC).

Q18. The budget request, like previous requests, has proposed to eliminate the Weatherization Assistance Program and the State Energy Program. For decades, the weatherization program has helped Nevadans make their homes more energy efficient and reduced their energy costs. While the State Energy Program has supported the State of Nevada as it deploys electric vehicle infrastructure and works to expand renewable energy. Eliminating these programs hurts Nevadans and undercuts the progress being made across the country by innovative state energy offices.

Q18a. Can you explain why the Administration continues to propose the elimination these important programs?

A18a. To reduce federal intervention in state-level energy policy and implementation activities, the President's Budget request includes no funding for the Weatherization Assistance Program (WAP) and the State Energy Program (SEP). The Administration's focus for the Office of Energy Efficiency and Renewable Energy (EERE) is on early-stage applied research and development. DOE is focused on higher risk activities that are more appropriately performed by the federal government, versus those activities that are more appropriately left to the private sector, states, and local governments. DOE also understands congressional interest in these programs, and continues to manage them consistent with the statute and execute appropriated funds in an expeditious manner.

EERE invests in research and development (R&D) as part of the DOE broad portfolio approach to addressing our Nation's energy and environmental challenges. The President's Budget request focuses DOE resources toward these early-stage R&D activities and reflects an increased reliance on the private sector to fund later-stage research, development, and commercialization of energy technologies. It emphasizes energy technologies best positioned to support American energy independence and resilience in the near- to mid-term.

Q19. The Budget requests only $8 million, a 63.6 percent reduction in funding, for the Office of Indian Energy, which provides essential financial and technical assistance to tribal communities to promote energy development and increase efficiency. Additionally, the Budget also eliminates the Tribal Energy Loan Guarantee Program, despite tribal lands having significant potential for energy development, especially renewable energy development, which can help boost local economies and reduce emissions.

Q19a. Why is the Department slashing programs that have helped bring power to the most remote parts of Indian Country and improved tribes' access to reliable energy and resilient infrastructure?

A19a. The President's FY 2021 budget request of $8 million is consistent with the FY2020 budget request. A reduction of $14 million will result in a slight decrease to program direction and will have minimal impact on the Office's efforts to install energy infrastructure in Indian Country. The Office of Indian Energy will, to the maximum

extent practical, utilize the amount of appropriated funding to assist Indian tribes and tribal entities for the deployment of energy infrastructure.

Authority to administer the Tribal Energy Loan Guarantee Program (TELGP) was delegated to the Department's Loan Programs Office (LPO) in February 2018. LPO issued a draft solicitation in March 2018 and then a final solicitation in July 2018. Since the draft solicitation was issued, LPO has been actively reaching out to tribal nations and affiliated organizations to make them aware of TELGP as a financing option as they begin to plan for these projects that typically have multi-year development timelines.

The President's Fiscal Year (FY) 2021 budget request proposes to eliminate the TELGP.

Q20. Will you commit that the Department of Energy will not pursue the proposal to auction off Power Marketing Administration transmission infrastructure, including those operated by Western Area Power Administration?

A20. Under current law, DOE is responsible for the supervision of the PMAs. DOE has no authority to sell or otherwise divest PMA transmission assets. Any such action would require congressional authorization.