



**SUBCOMMITTEE ON ENERGY AND  
SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT**

**HEARING CHARTER**

*“Return on Unprecedented Investment: An Analysis of the Department of Energy’s  
Implementation of the IIJA, the IRA, and the CHIPS and Science Act”*

**Wednesday, May 10, 2023  
2:00 p.m.  
2318 Rayburn House Office Building**

**Purpose**

The purpose of this hearing is to examine the status of the Department of Energy (DOE)’s implementation of recently passed R&D legislation, including the Infrastructure Investment and Jobs Act (IIJA), the Inflation Reduction Act (IRA), and the CHIPS and Science Act. This hearing will also focus on DOE’s recent reorganization, exploring its impact on the implementation of these laws and on DOE’s civilian research, development, demonstration, and commercial application programs in general.

**Witnesses**

- **Dr. Geraldine Richmond**, Under Secretary for Science and Innovation, U.S. Department of Energy
- **Dr. Kathleen Hogan**, Principal Deputy Under Secretary and Acting Under Secretary for Infrastructure, U.S. Department of Energy

**Overarching Questions**

- What is the overall status of DOE’s implementation of the IIJA, IRA, and the CHIPS and Science Act?
- With the rapid expansion of DOE programs and nearly \$100 billion dollars in additional IIJA and IRA appropriations for these in the coming fiscal years, how is DOE ensuring adequate oversight of these new and existing programs?
- How are the DOE Under Secretaries coordinating activities that overlap between them? What steps are being taken to avoid duplication across the Department?
- What protections does DOE have in place to prevent these research dollars from benefiting our competitors?

## Background

Over the past two years, through the Infrastructure Investment and Jobs Act (IIJA), the Inflation Reduction Act (IRA), and the CHIPS and Science Act, Congress has provided the U.S. Department of Energy (DOE) with comprehensive long-term guidance and unprecedented funding for much of its civilian research, development, demonstration, and commercial application programs. This Congress, the House Science Committee has an unprecedented responsibility to conduct active oversight of DOE's implementation of these laws to ensure the maximum return on investment of taxpayer dollars.

Last month, the Committee held an Oversight and Investigations Subcommittee hearing which highlighted serious concerns held by DOE's Inspector General (IG) over the sheer magnitude of IIJA and IRA funding and the speed at which these dollars are being allocated for new DOE programs. As DOE's IG noted in her testimony: "*History has taught us that the Federal Government has often balanced the 'need for speed' against the need for thoughtful internal controls in a manner that has resulted in the loss of billions of dollars to fraud, waste, and abuse,*" and referencing the billions misappropriated in recent Federal pandemic relief efforts she added, "*These staggering losses should give all of us pause.*"<sup>1</sup>

This hearing will provide Science Committee members an opportunity to review DOE's progress in carrying out recently established program direction from Congress and to receive an update on the additional \$45 billion in appropriations DOE received for program funding, infrastructure investments, and loan guarantees, as well as expanded loan authority, within the Committee's jurisdiction.

### The Infrastructure Investment and Jobs Act (IIJA)

The IIJA, which was enacted on November 15, 2021, appropriated more than \$62 billion to the Department of Energy in the coming fiscal years and created 60 new programs, including the Office of Clean Energy Demonstrations (OCED). Approximately \$39 billion of these appropriated funds fall under the Science Committee's jurisdiction, along with a corresponding \$39 billion in program authorizations. The IIJA provides the Department with substantial appropriations for applied energy R&D activities, including but not limited to clean hydrogen initiatives, carbon capture, utilization, and storage (CCUS) R&D, grid security and resiliency programs, and battery R&D. In addition, the IIJA authorized appropriations for various programs first authorized in the Energy Act of 2020, including the Advanced Reactor Demonstration Program and the Energy Storage Demonstration and Pilot Grant Program.<sup>2</sup>

Today, approximately \$10 billion of the \$62 billion in IIJA appropriations has been awarded. Some of these awards include the Civil Nuclear Credit Program, the Electric Drive Vehicle Battery Recycling and Second Life Applications Program, and the Battery Material Processing and Battery Manufacturing and Recycling Grants. Last month, DOE received final applications for the IIJA's high-profile \$8 billion Regional Clean Hydrogen Hubs funding opportunity announcement. Some of

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<sup>1</sup> Protecting American Taxpayers: Highlighting Efforts to Protect Against Federal Waste, Fraud, and Mismanagement, 118th Cong. 5 (2023) (testimony of Teri Donaldson)

<sup>2</sup> "H.R.3684 - 117th Congress (2021-2022): Infrastructure Investment and Jobs Act." *Congress.gov*, Library of Congress, 15 November 2021, <https://www.congress.gov/bill/117th-congress/house-bill/3684>.

these activities, namely the Battery Material Processing and Battery Manufacturing and Recycling Grants, have recently come under scrutiny as the Administration has publicized a \$200 million award to a company with known links to the Chinese Communist Party.<sup>3</sup>

### The Inflation Reduction Act (IRA)

The IRA, which was enacted on August 16, 2022, appropriated \$35 billion to the Department of Energy in the coming fiscal years. Approximately \$6.3 billion of these funds fall under the Science Committee's jurisdiction. The IRA created 15 new DOE programs and provided funding for five existing DOE programs such as the Office of Nuclear Energy's High-Assay Low-Enriched Uranium (HALEU) Availability Program and the Title 17 Loan Program Office.

Despite the IRA's primary focus on DOE's applied R&D programs, it also includes \$1.5 billion for science laboratory infrastructure improvements at the DOE National Laboratories. As of last year, these funds have already been distributed to 52 projects and facilities.<sup>4</sup> However, in general, the Department of Energy is still in the early stages of awarding funding for most IRA programs and activities. Most recently, the Department issued a funding opportunity announcement (FOA) for the DOE Heat Pump Defense Production Act Program and a notice of intent (NOI) for the Technical Assistance for the Latest and Zero Building Energy Code Adoption.<sup>5,6</sup>

### The CHIPS and Science Act of 2022

The CHIPS and Science Act, which was enacted on August 9, 2022, authorized over \$67 billion for DOE research and development programs within the Science Committee's jurisdiction, including \$49.8 billion for the DOE Office of Science.<sup>7</sup> More specifically, in Title I of Division B, this law provides the first ever comprehensive authorization of the DOE Office of Science, prioritizing fundamental and basic research in fusion energy sciences, high energy physics, biological and environmental sciences, advanced scientific computing, basic energy sciences, isotopes, and nuclear physics. It also includes robust funding profiles for large scale research experiments such as the Deep Underground Neutrino Experiment (DUNE) at the Long Baseline Neutrino Facility (LBNF) and the International Thermonuclear Experimental Reactor (ITER) as well as the construction of and upgrades to essential Office of Science user facilities and projects. In addition, the CHIPS and

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<sup>3</sup> *Bipartisan Infrastructure Law: Battery Materials Processing and Battery Manufacturing Recycling Selections*. Department of Energy, 19 Oct. 2022, [https://www.energy.gov/sites/default/files/2022-10/DOE%20BIL%20Battery%20FOA-2678%20Selectee%20Fact%20Sheets%20-%201\\_2.pdf](https://www.energy.gov/sites/default/files/2022-10/DOE%20BIL%20Battery%20FOA-2678%20Selectee%20Fact%20Sheets%20-%201_2.pdf). Accessed 5 May 2023.

<sup>4</sup> Thomas, Will. "DOE Projects Putting Inflation Reduction Act Funds to Work." *American Institute of Physics*, American Institute of Physics, 1 Dec. 2022, <https://www.aip.org/fyi/2022/doe-projects-putting-inflation-reduction-act-funds-work>.

<sup>5</sup> "Biden-Harris Administration Announces \$250 Million to Accelerate Electric Heat Pump Manufacturing Across America." *Energy.gov*, 18 Apr. 2023, <https://www.energy.gov/articles/biden-harris-administration-announces-250-million-accelerate-electric-heat-pump>.

<sup>6</sup> "Request for Information & Notice of Intent Released for Technical Assistance for the Adoption of Building Energy Codes." *Energy.gov*, 3 Apr. 2023, <https://www.energy.gov/scep/articles/request-information-notice-intent-released-technical-assistance-adoption-building#:~:text=Today%20the%20U.S.%20Department%20of%20Energy%20%28DOE%29%20released,in%20state%20and%20local%20governments%20with%20code-making%20authority>.

<sup>7</sup> "H.R.4346 - 117th Congress (2021-2022): Chips and Science Act." *Congress.gov*, Library of Congress, 9 August 2022, <https://www.congress.gov/bill/117th-congress/house-bill/4346>.

Science Act created several new DOE programs focused on research and development in emerging technology areas such as microelectronics and steel emissions reduction methods.<sup>8</sup>

It is important to note that despite this historic authorization of the Office of Science, the CHIPS and Science Act does not include appropriations for this office. In addition, while the Office of Science accounts for nearly 20 percent of DOE's annual funding profile, it received less than 2 percent of the sum of DOE's total IJA and IRA appropriations.<sup>9</sup>

In part, DOE's implementation of the CHIPS and Science Act can be measured by the President's fiscal year 2024 budget request. This request includes some promising updates, including funding for several Office of Science construction projects and facility upgrades consistent with the levels authorized in the CHIPS and Science Act – such as LBNF/DUNE.<sup>10</sup> The request also includes support for Microelectronics Science Research Centers consistent with the Micro Act provisions in CHIPS and Science.<sup>11</sup> In addition, DOE has recently issued a request for information (RFI) for Preparing a Future Workforce in Quantum Information Science (QIS) and an RFI on DOE's National Labs as Catalysts of Regional Innovation, consistent with CHIPS and Science direction.<sup>12,13</sup>

Despite this progress, many questions about DOE's commitment to implementing this law remain unanswered. For instance, the President's FY24 budget request does not provide CHIPS and Science level support for the Office of Science topline or for core research funding across the major Office of Science programs in areas like materials science, particle physics, nuclear physics, and plasma science. It also proposes a reduction in funding for quantum information science and technology – a decision that could directly prevent the full implementation of key CHIPS and Science provisions like the Quantum Network Infrastructure Program and the Quantum User Expansion for Science and Technology (QUEST) Program.<sup>14</sup>

The Committee is also particularly interested in receiving a status update on several CHIPS and Science-mandated reports that were due 180 days after the law was enacted, a deadline which passed in February. These reports, like the Quantum Network Infrastructure Research and Development Program Report, were designed to inform this Committee on the progress the Department is making on these high-priority activities.<sup>15</sup>

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<sup>8</sup> "H.R.4346 - 117th Congress (2021-2022): Chips and Science Act." *Congress.gov*, Library of Congress, 9 August 2022, <https://www.congress.gov/bill/117th-congress/house-bill/4346>.

<sup>9</sup> "H.R.5376 - 117th Congress (2021-2022): Inflation Reduction Act of 2022." *Congress.gov*, Library of Congress, 16 August 2022, <https://www.congress.gov/bill/117th-congress/house-bill/5376>.

<sup>10</sup> Department of Energy. Fiscal Year 2024 Budget Request: Science. Volume 5, March 13, 2023. <https://www.energy.gov/sites/default/files/2023-03/doe-fy-2024-budget-vol-5-science-v3.pdf>

<sup>11</sup> *Id.*

<sup>12</sup> "Request for Information to Prepare a Future Quantum Workforce." *Energy.gov*, 27 Mar. 2023, <https://www.energy.gov/science/request-information-prepare-future-quantum-workforce#:~:text=This%20RFI%20requests%20input%20from%20all%20higher%20education,training%20the%20future%20scientific%20and%20technological%20QIS%20workforce.>

<sup>13</sup> "DOE Announces a Request for Information to Strengthen and Catalyze Place-Based Regional Innovation." *Energy.gov*, 27 Jan. 2023, [https://www.energy.gov/technologytransitions/articles/doe-announces-request-information-strengthen-and-catalyze-place.](https://www.energy.gov/technologytransitions/articles/doe-announces-request-information-strengthen-and-catalyze-place)

<sup>14</sup> Department of Energy. Fiscal Year 2024 Budget Request: Science. Volume 5, March 13, 2023. <https://www.energy.gov/sites/default/files/2023-03/doe-fy-2024-budget-vol-5-science-v3.pdf>

<sup>15</sup> "H.R.4346 - 117th Congress (2021-2022): Chips and Science Act." *Congress.gov*, Library of Congress, 9 August 2022, <https://www.congress.gov/bill/117th-congress/house-bill/4346>.

## DOE Organizational Structure

Committee members will have an opportunity to receive updates on the implementation of these various laws from two DOE representatives: Dr. Geraldine Richmond, the Under Secretary for Science and Innovation and Dr. Kathleen Hogan, the Principal Deputy Under Secretary and Acting Under Secretary for Infrastructure.

This hearing will also examine DOE's recent Department-wide reorganization and its effects on its research, development, demonstration, and commercial application activities. Early last year, to carry out the IJA, the Biden Administration instituted a major restructuring of the Department, standing up various new program offices and placing them under the authority of the Office of the Undersecretary for Infrastructure.

Under Secretary Richmond oversees the following DOE offices:

- Office of Science (SC)
- Office of Energy Efficiency and Renewable Energy (EERE)
- Office of Fossil Energy and Carbon Management (FECM)
- Office of Nuclear Energy (NE)
- Office of Electricity (OE)
- Arctic Energy Office (AE)
- Artificial Intelligence and Technology Office (AI)

The Under Secretary for Infrastructure will oversee the following offices (among others):

- Office of Cybersecurity Energy Security and Emergency Response (CESER)
- (new) Office of Clean Energy Demonstrations (OCED)
- (new) Grid Deployment Office (GDO)
- Loan Program Office (LPO)
- (new) Office of Manufacturing and Energy Supply Chains (MESC)

Dr. David Crane has been nominated for the position of Under Secretary for Infrastructure and is awaiting confirmation by the Senate.<sup>16</sup> During this hearing, members will instead hear from Dr. Kathleen Hogan, the Acting Under Secretary for Infrastructure.

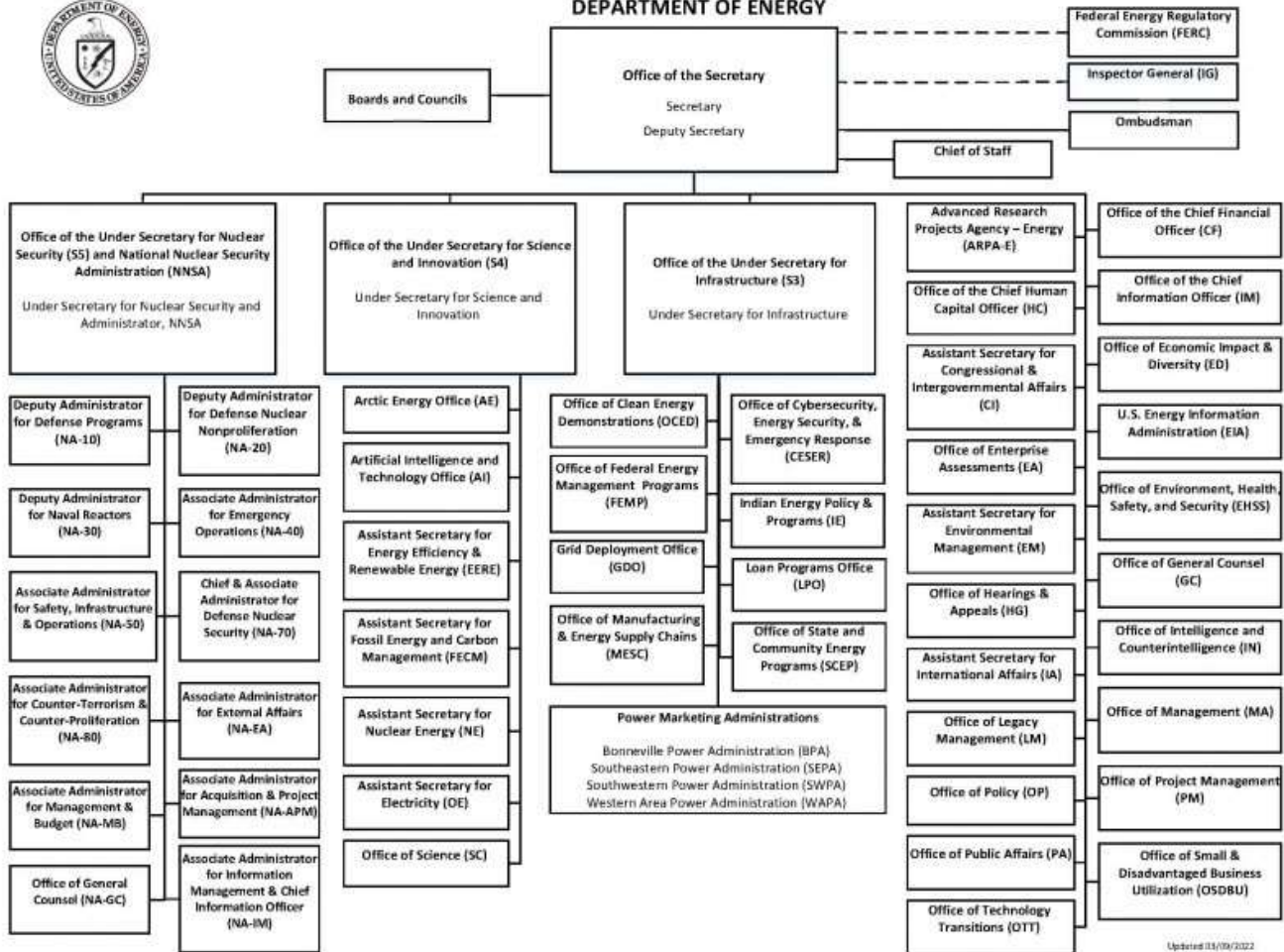
Oversight of coordination between these two Under Secretaries will be particularly important when it comes to understanding the role of OCED in the management of demonstration activities carried out under or informed by EERE, FECM, OE, and NE. Coordination will also play a significant role in the success of the Department's high-priority grid activities, which will be carried out through OE, CESER, and the GDO among others.

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<sup>16</sup> "PN18 - Nomination of David Crane for Department of Energy, 118th Congress (2023-2024)." *Congress.gov*, Library of Congress, 3 January 2023, <https://www.congress.gov/nomination/118th-congress/18>.



## DEPARTMENT OF ENERGY



Updated 11/19/2022

Figure 1. Current Department of Energy Organization Chart