[6450-01-P]

DEPARTMENT OF ENERGY

Accelerating Speed to Power/Winning the Artificial Intelligence Race: Federal Action to Rapidly Expand Grid Capacity and Enable Electricity Demand Growth

AGENCY: Grid Deployment Office, Department of Energy.

ACTION: Request for information.

SUMMARY: Projected electricity demand growth from data centers, advanced manufacturing facilities, semiconductor fabrication plants, and other large energy users is outpacing the capacity of the existing electric grid. The Department of Energy (DOE) is inviting public input and seeking detailed information via this request for information (RFI) from state energy offices, public utility commissions, electric utilities, regional transmission organizations and independent system operators, transmission and generation developers, large energy users, and other stakeholders on large-scale generation, transmission, and grid infrastructure projects that can accelerate speed to power to support manufacturing, industrial, and artificial intelligence/data center electricity demand growth. In addition, DOE is requesting stakeholder input on how to best utilize its funding programs and authorities to rapidly expand energy generation and transmission grid capacity to meet electricity demand growth across the country in a reliable and affordable manner.

DATES: Responses to the RFI must be received by 5:00pm (ET) on November 21, 2025.

ADDRESSES: Responses must be submitted electronically to *SpeedtoPowerRFI@hq.doe.gov* with the subject line: "RFI Response – Accelerating Speed to Power".

FOR FURTHER INFORMATION CONTACT: David Parsons, (240) 474-2279, *SpeedtoPowerRFI@hq.doe.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

Large-scale electricity demand growth is occurring at a pace and scale that presents significant challenges to the U.S. electric grid. In several regions, planned and proposed data centers, semiconductor fabrication plants, manufacturing facilities, and other large loads are driving multi-gigawatt increases in electric demand. Many of these new loads are highly location-specific, have accelerated timelines, and depend on rapid interconnection of reliable electricity supply.

This growth has exposed gaps in existing infrastructure, including limited transmission capacity, grid congestion, aging grid infrastructure, and delays in interconnection processes for both load and new generation. Long-lead times for transmission and generation development, along with regulatory, permitting, planning, and operational challenges, are threatening the ability of critical projects to meet demand.

President Trump has issued several executive orders related to energy dominance and AI, aiming to establish American leadership on these issues:

- Executive Order 14154: *Unleashing American Energy* (Jan. 20, 2025): This order establishes a policy to protect the United States's economic and national security and military preparedness by ensuring that an abundant supply of reliable energy is readily accessible in every state and territory of the Nation.

- Executive Order 14179: *Removing Barriers to American Leadership in Artificial Intelligence* (Jan. 23, 2025): This order establishes a policy of the United States to sustain and enhance America's global artificial intelligence (AI) dominance in order to promote human flourishing, economic competitiveness, and national security.
- Executive Order 14262: *Strengthening the Reliability and Security of the United States Electric Grid* (April 8, 2025): This order focuses on strengthening the reliability and security of the U.S. electric grid to meet growing electricity demand.
- Executive Order 14302: *Reinvigorating America's Nuclear Industrial Base* (May 23, 2025): This order establishes a policy of the United States to expedite and promote to the fullest possible extent the production and operation of nuclear energy to provide affordable, reliable, safe, and secure energy to the American people.

In support of these policies, DOE is considering actions to strengthen the Federal role in accelerating critical generation and transmission projects to ensure the electric grid can accommodate and enable this growth.

Infrastructure Projects

DOE seeks to identify large-scale generation, transmission, and grid infrastructure projects that can accelerate speed to power to support manufacturing, industrial, and AI/data center electricity demand growth and would benefit from DOE coordination, technical assistance, and financial support. Specifically, DOE is seeking to identify projects that:

- Enable a minimum incremental load of 3 gigawatt (GW).
- Support up to 20 GW of incremental load.
- Include, but are not limited to:

- New inter-regional transmission to support incremental load serving capability (must be at least 1,000 MVA);
- Reconductoring of existing lines to support incremental load serving capability (must be at least 500 MVA);
- Bringing retired thermal generation facilities back into service or otherwise using the existing interconnection capacity to provide reliable power generation; and
- Construction of new generation or portfolios of new generation assets.

DOE Funding Programs and Authorities

In addition, DOE administers a number of funding programs and authorities that may be leveraged to support grid infrastructure, power system investments, and expansion of generation, transmission, and distribution capacity to serve large electric loads.

These programs and authorities include:

- **Transmission Facilitation Program (TFP)**: The Grid Deployment Office administers borrowing authority to support the build out of new interregional transmission lines across the country, authorized by 42 U.S.C. 18713. Through this program, DOE serves as an "anchor customer" by entering into capacity contracts for new, upgraded, or expanded transmission lines. Through the TFP, DOE takes long-term financial positions in transmission capacity to de-risk large transmission projects and help overcome the financial hurdles in the development of large-scale new transmission lines and upgrading existing transmission.
- **Grid Resilience and Innovation Partnerships (GRIP) Program**: GRIP provides funding to enhance optimization and accelerate the deployment

of transformative projects that strengthen the reliability and resilience of power system infrastructure, authorized by 42 U.S.C. 17386,18711, and 18712. DOE offers competitive funding to support transmission projects, improve system optimization, and deploy advanced grid technologies. Eligible activities include substation upgrades, grid hardening, advanced control systems, and innovative approaches to enhance reliability and improve transmission, storage, and other regional energy infrastructure.

- **Loans and Loan Guarantees:** DOE's Loan Programs Office (LPO) administers a portfolio of energy projects and advanced technology facilities across the country through Title 17 and other authorities supporting grid infrastructure and electricity generation projects, including high-voltage transmission, generation, grid upgrades, and integrated systems that support load growth.
- **Technical Assistance:** DOE also provides key decision-makers and electric industry stakeholders with technical assistance and access to advanced modeling and analytical capabilities of the DOE National Laboratories to address grid modernization and infrastructure investment challenges.

Through this RFI, DOE seeks to develop and refine Federal funding and technical assistance programs to help state and local governments, utilities, grid operators, large load customers, and other stakeholders address grid infrastructure constraints and meet new demand in a timely and efficient manner.

II. RFI Questions

DOE requests the interested parties provide the requested information and answers to the questions below. DOE also encourages respondents to submit

data, case studies, or other available materials that provide actionable insight to support this RFI.

1. **Large-Scale Generation and Transmission Projects to Enable Load Growth**

    a. Please identify any specific large-scale generation, transmission, and grid infrastructure proposed projects (under development, in planning, or construction-ready) that should be considered and prioritized by DOE for siting and permitting support, technical assistance, and/or Federal funding (see Section V of this document, "Confidential Business Information," regarding protection of information and how to submit confidential or proprietary information). Please include detailed project information for each project, including but not limited to:

        i. Project region, name, geographical location, and description, including detailed maps or geospatial data of the project, if available

        ii. Project type and size (*e.g.*, 100-mile 500 kV transmission line, 1.1 GW nuclear plant, 20 GW data center/grid corridor, etc.)

        iii. Current development stage (*e.g.*, conceptual, environmental planning and permitting, financing, construction-ready)

        iv. A description of how the project is critical to meeting confirmed or anticipated large electric loads

        v. A description of how DOE financial assistance, loan guarantees, or technical assistance could support the project

        vi. Estimated cost and project timeline

        vii. Any prior tribal engagements (if applicable)

viii. Size and characteristics of the load(s) the project is intended to serve

ix. Likely clients/project partners

x. Amount of funding/capital raised

xi. Siting and permitting status

xii. Interconnection status

xiii. A description of any Federal, state, or local barriers or dependences to project completion

xiv. A description of whether the project has engaged with any DOE programs (*e.g.*, LPO financing, GRIP, TFP, etc.)

2. High-Priority Geographic Areas for Targeted DOE Investment

DOE is interested in identifying geographic areas or zones where targeted Federal investment in transmission, generation, or grid infrastructure could unlock or accelerate large-scale economic activity tied to electric load growth. These may include regions experiencing substantial near-term demand from data centers, manufacturing, or other large load users, as well as areas with untapped development potential constrained by inadequate grid infrastructure.

a. Are there specific geographic areas or high-priority zones (*e.g.*, data center corridors, semiconductor clusters, industrial parks, port complexes, etc.) where:

i. Major electric loads are expected or already committed?

ii. Grid constraints (transmission, generation, or other grid infrastructure) are limiting or delaying economic development?

iii. DOE investment (financial assistance, loan guarantees, siting and permitting support, technical assistance, etc.) could be targeted to unlock high-value or private investment?

b. For each specific high-priority zone, please identify the characteristics of the geographic area that support prioritization by DOE, including:

i. Amount of confirmed or anticipated electric load

ii. Availability of energy supply and electricity generation capacity

iii. Generation, transmission, or grid infrastructure projects in development that could serve large electric loads

iv. Grid constraints that may be alleviated with DOE investment and technical assistance

v. Existence of other infrastructure to support build out (*e.g.*, water resources, telecommunications, etc.)

vi. Any existing planning efforts by states, local jurisdictions, electric utilities, grid operators to identify and designate investment zones or corridors

3. Use of DOE Funding, Financing, and Technical Assistance

a. In what specific ways can DOE support the development and deployment of large-scale generation and transmission projects? Please provide concrete examples and suggestions in areas such as:

i. Financial incentives (*e.g.*, grants, loans, tax credits, etc.)

ii. Technical assistance and expertise

iii. Research and development

iv. Streamlining environmental review and permitting processes

v. Facilitating stakeholder collaboration

vi. Addressing supply chain and workforce vulnerabilities

b. What specific authorities, programs, or initiatives within DOE are best positioned to provide this support?
c. How should DOE prioritize or structure its financial and technical support to advance high-impact generation, transmission, and grid infrastructure projects to serve large electric loads?
    i. How can Federal support best de-risk early-stage infrastructure investment to attract private or other public capital?
d. Are there gaps in capital availability (*e.g.*, for utilities, project developers, or certain types of infrastructure) that DOE funding could help bridge?
e. What forms of technical assistance or planning support (*e.g.*, power flow modeling, capacity expansion planning, load forecasting, interconnection studies, technology operational assessments, technology implementation roadmaps, etc.) would help states, utilities, and project developers more effectively use Federal funding to meet demand?
f. How should DOE coordinate funding across its offices to support large-scale electric load growth?
g. What additional coordination is needed between DOE and other Federal agencies (*e.g.*, U.S. Department of Agriculture, Department of Commerce, Department of Interior, Environmental Protection Agency, the Department of Defense, Department of the Treasury, Department of Transportation, the Federal Energy Regulatory Commission, etc.) to align funding, permitting, or policy with emerging electric load challenges?

i. Are there successful examples of interagency coordination that should be expanded to address grid capacity and load growth?

h. How can DOE effectively leverage public-private partnerships to accelerate the development of these projects?

i. What are the most critical data gaps or information needs that DOE should address to better understand and support these projects?

4. Load Growth Trends

a. What types of new electric load are driving demand increases in your service area or region?

b. Please provide any available projections or forecasts of the scale, timing, and location of this expected growth.

5. Grid Infrastructure Constraints

a. What generation, transmission, or distribution constraints are limiting the ability to serve this demand?

b. What are the primary challenges and barriers to expanding infrastructure and deploying large-scale generation and transmission projects? Please consider factors such as:

i. Siting and permitting

ii. Financing and investment

iii. Construction timelines

iv. Supply chain constraints

v. Workforce availability

vi. Interconnection queues

vii. State and Federal regulatory and policy uncertainty

viii. Technology integration

ix. Community engagement and acceptance

6. **Additional Comments**

   Please share any further insights, recommendations, or examples of effective practices related to grid infrastructure expansion to support large electric loads.

III. RFI Response Guidelines

Responses to this RFI must be submitted electronically to *SpeedtoPowerRFI@hq.doe.gov* no later than 5:00pm (ET) on November 21, 2025. Responses must be provided as Portable Document Format (PDF) file attachments to an email. It is recommended that attachments with file sizes exceeding 25 MB be compressed (*i.e.*, zipped) to ensure message delivery. PDF file attachments should be no more than 15 pages in length. Only electronic responses will be accepted.

Please identify your answers by responding to a specific question or topic if applicable. Respondents may respond to as many or as few questions or topics as they wish. DOE will not respond to individual submissions or publish publicly a compendium of responses. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed.

Respondents must provide the following information at the start of their response to this RFI:

- Company / institution name;
- Company / institution point of contact;
- Contact's address, phone number, and e-mail address
- Company / institution's primary area of expertise or focus relevant to this RFI (*e.g.*, electricity generation, transmission, state energy policy, project development, etc.)

IV. Disclaimer

This is a request for information only. This RFI does not constitute a funding opportunity, grant program, or regulatory proposal. This RFI is not accepting applications for financial assistance or financial incentives. DOE may or may not issue a Notice of Funding Opportunity (NOFO) based on consideration of the input received from this RFI.

This RFI is not a NOFO; therefore, DOE is not accepting applications at this time. DOE may issue a NOFO in the future based on or related to the content and responses to this RFI; however, DOE may also elect not to issue a NOFO. There is no guarantee that a NOFO will be issued as a result of this RFI. Responding to this RFI does not provide any advantage or disadvantage to potential applicants if DOE chooses to issue a NOFO regarding the subject matter. Final details, including the anticipated award size, quantity, and timing of DOE funded awards, will be subject to Congressional appropriations and direction.

Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development; this RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as information only. DOE will review and consider all responses in its formulation of program strategies for the identified materials of interest that are the subject of this request. DOE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that DOE is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI. Responses to this RFI do not bind DOE to any further actions related to this topic.

V. Confidential Business Information

Because information received in response to this RFI may be used to structure future programs and NOFOs and/or otherwise be made available to the public, respondents are strongly advised to NOT include any information in their responses that might be considered business sensitive, proprietary, or otherwise confidential. If, however, a respondent chooses to submit business sensitive, proprietary, or otherwise confidential information, it must be clearly and conspicuously marked as such in the response.

Responses containing confidential, proprietary, or privileged information must be conspicuously marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Federal Government is not liable for the disclosure or use of unmarked information and may use or disclose such information for any purpose.

If your response contains confidential, proprietary, or privileged information, you must include a cover sheet marked as follows identifying the specific pages containing confidential, proprietary, or privileged information:

> ***Notice of Restriction on Disclosure and Use of Data:***
>
> *Pages [List Applicable Pages] of this response may contain confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for the purposes described in this RFI [Enter RFI Number]. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.*

In addition, (1) the header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: “Contains Confidential, Proprietary, or Privileged Information Exempt from Public

Disclosure" and (2) every line and paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.

VI. Evaluation and Administration by Federal and Non-Federal Personnel

Federal employees are subject to the non-disclosure requirements of a criminal statute, the Trade Secrets Act, 18 U.S.C. 1905. The Government may seek the advice of qualified non-Federal personnel. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The respondents, by submitting their response, consent to DOE providing their response to non-Federal parties. Non-Federal parties given access to responses must be subject to an appropriate obligation of confidentiality prior to being given the access. Submissions may be reviewed by support contractors and private consultants.

Signing Authority

This document of the Department of Energy was signed on July 01, 2025, by Chris Wright, Secretary of Energy, U.S. Department of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in *the Federal Register*.

Signed in Washington, DC on September 16, 2025.

Treena V. Garrett,
Federal Register Liaison Officer,

U.S. Department of Energy.

[FR Doc. 2025-18058 Filed: 9/17/2025 8:45 am; Publication Date: 9/18/2025]