National Electrical Manufacturers Association

The association of electrical equipment
and medical imaging manufacturers
www.nema.org

June 13, 2022

Ms. Carrie Cobb
Department of Energy
Office of Grid Deployment
1000 Independence Ave., SW
Washington, DC 20585

RE: Notice of Intent and Request for Information regarding establishment of a Transmission Facilitation Program [6450-01-P]

Submitted via transmissionfacilitation@hq.doe.gov

Dear Ms. Cobb:

The National Electrical Manufacturers Association (NEMA) is the leading U.S. trade group representing nearly 325 electrical equipment and medical imaging manufacturers that are at the forefront of helping the nation successfully transition to an electrified, connected, and cleaner economy. Specifically, a robust collection of our member companies domestically manufacture virtually all hardware products, advanced technologies, and integrated systems and controls used in transmission construction and upgrade projects. Due to the direct role the electroindustry has in supporting transmission infrastructure, NEMA is pleased to submit comments to the request for information (RFI) on the establishment of a Transmission Facilitation Program (TFP), as directed by the Infrastructure Investment and Jobs Act (IIJA).

In part three of the notice of intent (NOI), *Summary of TFP Features*, defined are the four central terms related to this IIJA provision, including "eligible entity" and "eligible project.[1]" Eligible entities include investor-owned utilities, not-for-profit electric utilities, independent transmission project developers, and states, tribes, and other governmental entities. However, the IIJA grants DOE the authority to "*participate with an eligible entity in the designing, developing, constructing, operating, maintaining, or owning an eligible project.*" Through this clause, **NEMA believes DOE should invite transmission product manufacturers to be a part of the facilitation and strategic planning process of the TFP**.

Direct manufacturer involvement in the strategic planning of transmission projects is critical to its success and helps the DOE achieve its policy goals. The prioritization mandates contained in this IIJA provision also encourage their direct involvement. A collaborative dialogue with manufacturers can identify opportunities early in the planning process, and thereby allow eligible projects to have a greater impact. Manufacturers can also locate and detect product compatibility issues, especially if projects involve the upgrading of legacy equipment or the installation of modern technologies. Recognizing such variables will also help factor in other planning considerations, including the types of human expertise and labor needed, equipment production lead-times, supply chain complications, and siting and permitting requirements.

Below are NEMA's comments to specific questions contained within the NOI's RFI:

General (1): What are the potential positive and negative impacts of limiting the initial solicitation to capacity contracts for projects that can be completed by December 31, 2027?

The IIJA mandates that DOE prioritize eligible projects which improve grid resilience and reliability, facilitate inter-regional electricity transfers, lower greenhouse gas emissions by the electric sector, and use technologies to strengthen the grid overall[2]. The addition of a project completion deadline for initial capacity projects further narrows the scope, builds upon these selection criteria, and helps clarify what projects the DOE will consider. A completion deadline December 31, 2027 reflects a desire to swiftly upgrade grid capacity so that the aggregate benefits electrification offers can be experienced sooner. This also helps keep the nation on track to achieve the administration's decarbonization goals established through Executive Order[3].

The establishment of a completion deadline is a signal to industry stakeholders what products and technologies will be desired by eligible entities in the short-term. This gives manufacturers insight on future market demand and, therefore, the ability to scale up production of various transmission-related products. This is especially important for tangible components, including but not limited to cable varieties (fiber optic, feeder, hybrid, AISG, outdoor jumper), surge arrestors, and phasing harnesses. Scaling production of products may also help reduce inflationary pressures and make these components more affordable, allowing IIJA investment dollars to stretch further and have a greater impact.

Given current supply chain complications, which have greatly expanded lead-times for the production for a variety of grid modernization products[4], the deadline could help utilities develop eligible projects using goods more readily available. The availability and supply of products may fluctuate in price from the time they are quoted to the time they ship due to commodity market movement. The change could be positive or negative, especially due to long lead times. Furthermore, forecasting and visibility into product supply chains is the best way to minimize the financial impact of commodity fluctuations.

A deadline will also encourage the adoption of advanced technologies and materials which can better manage transmission load capacity and help achieve upgrade and construction requirements set by the IIJA. Applying sensor and software solutions to transmission control centers, protection systems, and sensing and metering tools, among others, can improve upon a system's short-term operational outlook. These advanced technologies and materials can increase the efficiency and effectiveness of the transmission network and, generally, be implemented quickly while improving long-term resilience and reliability.

General (2): How should DOE evaluate eligible projects that included benefits that may vary across the set of preferred impacts?

The IIJA investment of $2.5 billion through this provision will not fully address the nation's transmission and electrification needs. Since resources are finite, this serves as a prime opportunity for DOE to award funds to eligible projects that are proven, scalable, and that use technologies in creative ways. For example:

- Battery energy storage used in combination with renewables could provide energy resiliency to underserved communities faster and more economically than traditional utility expansions;
- Encouraging the repurposing of underutilized or operational rights-of-way, like railroads and highways, is a way eligible projects can amplify preferred impacts. The use of these rights-of-way

corridors can cut down on permitting times and avoid disputes in areas where local objections may make new construction difficult or impossible. This could allow more location-constrained renewable and clean-energy sources to be accessed by major power markets, thereby providing greater resiliency to high-demand communities and allowing for more power certainty for innovative, electrified product investment (i.e., electric vehicles and smart buildings).

General (12): What equity, energy and environmental justice concerns or priorities are most relevant for the TFP? How can these concerns or priorities be addressed in TFP implementation?

Neither the TFP nor the IIJA investment of this particular program alone will solve inequity concerns; rather, if implemented effectively through proper management and holistic planning, it can significantly enable processes which produce just and dignified outcomes. If a rising tide lifts all boats, then investments which create or increase transmission capacity will provide a multitude of benefits for all communities which are connected to those parts of the grid. NEMA encourages DOE to consider projects that will have the best opportunity to have the broadest impact. This includes, as mentioned above and detailed below, the consideration of local and societal benefits provided by the manufacturers of transmission products.

General (12): How might the TFP encourage greater employment, equity, environmental justice, and economic growth? What mechanisms are available to DOE and eligible transmission projects to encourage these outcomes? How should the results be measured?

President Biden's Executive Order, *Tackling the Climate Crisis at Home and Abroad*, includes the Justice40 Initiative. The electroindustry stands ready to help America transition to a cleaner and more equitable energy future by domestically producing many of the products required for this shift. NEMA companies continually invest in communities across the country, with several breaking ground on new manufacturing plants in low-income and disadvantaged communities in recent years. In addition to fulfilling *Buy America* and *Buy American* trade requirements established by the IIJA, ensuring that as much equipment is domestically produced can amplify equity benefits. When constructing their eligible projects, NEMA encourages eligible entities to consider economic investments made in low-income and disadvantaged communities.

NEMA's membership contains 85 companies that produce transmission, advanced technological equipment, and other utility components in 49 states. Within these states, goods are manufacturers in 311 counties. Based on 2019 data, the aggregate poverty rate of these specific counties is 12.51%[5]. The five most impoverished of these 311 counties include Hidalgo County, TX (29.7%); Clarke County, GA (29.6%); Cameron County, TX (28.9%); Adair County, OK (27.8 %); and Evans County, GA (26.9%). Table 1 below shows the aggregate poverty rate of all the counties where NEMA's utility-focused members have a facility.

Table 1: Aggregate County Poverty Rate Per Utility Facility

State	Number of Counties w/ NEMA Utility Member	Aggregate Poverty Rate (%)
WV	1	18.6
AR	11	18.1
OK	4	18.02
MT	1	17.4
LA	1	17.3
TX	13	16.99
MS	9	16.8
NM	1	16.7
MO	10	14.98
SC	9	14.95
NC	17	14.93
AL	7	14.92
IA	5	14.82
ID	2	14.45
IN	6	14.38
GA	12	13.97
CA	16	13.9
AZ	1	13.8
TN	11	13.53
FL	16	13.26
OR	2	13.25
KY	4	13.175
NE	4	13.05
MI	7	13.02
OH	19	12.7
VA	12	12.64
NV	2	12.5
VT	1	12.1
NY	15	12.08
IL	13	11.69
DE	1	11.4
WA	4	11.25
PA	15	10.9
WI	7	10.55
MA	5	10.48
RI	3	10.46
WY	1	9.9
MN	7	9.7
ND	2	9.4
UT	1	9.2
CT	6	9.1
ME	1	9
HI	1	8.3

CO	5	8.26
AK	3	8.2
MD	5	7.98
NJ	7	7.9
NH	4	7.87
KS	1	5.4

Methodology: Proprietary NEMA membership data cross referenced with provertyusa.org poverty map.
Column 3 results determined by averaging all counties where facilities are located in a given state.

As the economy continues to electrify there will be increased and continual demand for transmission. Support for grid transmission projects will employ domestically-sourced products and technologies made by electroindustry manufacturers within the disadvantaged counties listed above and within other communities. Strong, long-term demand will help ensure that we can continue investing in these communities and provide stable, long-term, and high-paying employment opportunities to local residents, as well as societal benefits through increased gross domestic product output and tax revenue, while achieving policy goals of decarbonization, grid resiliency, and social equity.

NEMA strongly encourages DOE to involve manufacturers as a collaborating partner in the strategic planning process for eligible projects. Eligible entities can then consider the disadvantaged communities who will benefit through the production of these products in addition to the benefits which will come through the actual increase of transmission capacity. And due to the Justice40 Initiative, some of these disadvantaged communities may receive and realize these equity benefits in tandem.

Microgrid Projects (17): Which forms of TFP support are expected to be most useful to the projects to connect microgrids to existing infrastructure corridors as contemplated in the IIJA? What criteria should be used to evaluate qualification of microgrids for support under the TFP?

The NOI states that the TFP's purpose is to assist in the construction of new, replacement, and upgraded high-capacity transmission. Additionally, the IIJA text "*directs the Secretary of Energy to prioritize projects that, to the maximum extent possible, improve resilience and reliability of the grid, facilitate inter-regional transfer of electricity; lower electric sector greenhouse gas emissions; and use technology that enhances the capacity, efficiency, resilience, or reliability of the transmission systems*[6]." This statutory authorization gives DOE tremendous flexibility to approve projects which have been developed in the spirit of bolstering transmission but might follow an untraditional or alternative path due to a multitude of variables.

This is especially true for microgrids that must operate with greater independence and limitation. Their autonomy restricts their effectiveness and capacity, meaning that the grander benefits of electrification are limited or impossible to realize. Connecting these isolated grids to existing infrastructure corridors, as envisioned by the IIJA, is notable to enhance their resiliency, capacity, and provide equal or consistent benefits to end-users who rely on them. But connecting remote grids to these corridors in geographically remote or logistically challenging U.S. states and territories will require substantial investment and significant new construction, which is often laborious and time consuming. The DOE's proposal to fund capacity upgrade projects which can be completed by the end of 2027 may create a disincentive for eligible entities to formulate projects to connect microgrids stipulated in the IIJA.

Regarding microgrid connectivity to existing infrastructure corridors, NEMA recommends:

1. That **DOE clarify what qualifies as a microgrid project**. Certain critical infrastructure, including hospitals, universities, government buildings and installations, operate their own microgrids for resilience and security (both physical and cyber) reasons. Does the DOE intend to connect these types of microgrids located in Alaska, Hawaii, and U.S. territories to infrastructure corridors, or is it referring to grids that provide services to a broader public audience?

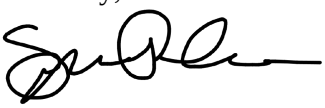
2. That **DOE use its authority to fund projects through this provision that would provide the intended benefits of connecting microgrids to infrastructure corridors but through alternative methods and strategies**. For example, to enhance a microgrid's resilience and reliability in the short term, the DOE could consider eligible projects that increase the utilization of:
    - *battery-storage subcomponents;*
    - *adaptive protection technologies;*
    - *undergrounding existing transmission lines; and,*
    - *advanced modeling technologies.*

    This would provide a stop-gap investment to those communities which rely on microgrids while capacity and other long-term projects (defined as those which would be completed after December 31, 2027) are developed.

3. **That DOE also consider involving public-private partnerships (P3s) in the strategic development process of eligible projects**. P3s, such as Energy as a Service and performance contracting service companies can offer microgrid solutions for localities and communities. Microgrids are very unique to the specific energy needs of the communities they service, and feasibility studies are usually required to scope any related project. Furthermore, P3s can help state and local communities leverage federal dollars and, in some cases, provide a match (if applicable to a project). P3s are necessary partners in developing eligible project strategies.

Thank you for the opportunity to provide comments, and please let us know if there are additional questions.

Sincerely,



Spencer Pederson
Vice President, Public Affairs

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[1] https://www.energy.gov/sites/default/files/2022-05/TFP%20NOI%20RFI%2005062022.pdf

[2] https://www.energy.gov/sites/default/files/2022-06/TFP%20Public%20Webinar%20051022%20final%20508C.pdf

[3] https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/27/fact-sheet-president-biden-takes-executive-actions-to-tackle-the-climate-crisis-at-home-and-abroad-create-jobs-and-restore-scientific-integrity-across-federal-government/

[4] https://www.energylivenews.com/2021/01/13/enough-wind-power-was-curtailed-in-2020-to-power-a-million- homes-for-a-year/

[5] https://www.povertyusa.org/data

[6] https://www.congress.gov/bill/117th-congress/house-bill/3684/text