

February 15, 2023

Secretary Jennifer Granholm  
U.S. Department of Energy  
1000 Independence Ave., SW  
Washington, DC 20585

Dear Madam Secretary:

On behalf of a broad coalition representing critical stakeholders in the distribution transformer supply chain, we seek your immediate attention on an issue that could significantly impact national security and grid reliability. We write to strongly urge the Department of Energy (DOE) to reconsider its intention to increase energy conservation standards for distribution transformers, as signaled in its recent Notice of Proposed Rulemaking (NOPR).<sup>i</sup>

Our coalition, comprised of the National Electrical Manufacturers Association (NEMA), American Public Power Association (APPA), National Rural Electric Cooperative Association (NRECA), Edison Electrical Institute (EEI), Leading Builders of America (LBA), National Association of Homebuilders (NAHB), and GridWise Alliance (GridWise), is an assemblage of organizations whose members are at the forefront of the clean energy transition. Utilities and energy service providers, represented by APPA, EEI, and NRECA, provide electricity to all Americans. LBA and NAHB represent homebuilders constructing affordable and energy-efficient communities. Grid component manufacturers, represented by NEMA and GridWise, produce the critical equipment, including distribution transformers, needed to ensure its safe and reliable delivery.

Since 2021, our organizations have been communicating with DOE regarding the severe and ongoing supply chain challenges that have prolonged and complicated distribution transformer production and availability. The inability to quickly manufacture and deliver these critical components threatens the ability of the electric sector to service current and planned housing markets, swiftly recover and restore service following natural disasters, and deliver the benefits of economy-wide electrification.

Last June, working with electric service providers, you directed the Electricity Subsector Coordinating Council to establish a “Tiger Team” to examine the supply chain crisis. It concluded that current transformer production is not meeting demand—demand that is expected to increase for the foreseeable future. Moreover, both the electric and manufacturing sectors have raised awareness of the risks caused by lengthy lead-times in the production, procurement, and deployment of transformers. Under existing production output capabilities, manufacturers estimate the current order-cycle for most new distribution transformers to be longer than 16 months.

The Administration also recognized the severity of this crisis by issuing the June 6, 2022, Presidential Determination through the Defense Production Act (DPA) to prioritize the domestic production of transformers to bolster grid resiliency and national security. In response to that Determination and a subsequent Request for Information issued by DOE, manufacturers provided numerous recommendations on how best to scale up production. One such proposal included the standardization of “emergency-use” products, or transformers built to lower energy conservation standards to meet DPA expectations of greater output.<sup>ii</sup> Similarly, in a joint letter to you by APPA and NRECA on October 19, 2022, these organizations encouraged DOE to

reprioritize some Inflation Reduction Act funds under the DPA designated for heat pumps to distribution transformer production, including labor recruitment and retention.<sup>iii</sup>

Despite this information and our organizations' close work with DOE to explore short and long-term solutions to this crisis, on January 11, 2023, the Department issued a NOPR that would, through its various requirements, further exacerbate the supply chain situation. The proposed rule would dictate that manufacturers increase the efficiency of distribution transformers by a mere tenth of a percentage point.

DOE *already* mandates distribution transformers be manufactured to incredibly high efficiency standards. Currently, NEMA calculates a three-phase liquid-immersed distribution transformer with a kilovolt-ampere (kVA) output rating of 2500 is already 99.53% efficient; a similar single-phase type with a kVA of 833 is 99.55% efficient.<sup>iv</sup> Importantly, due to the intricate ways transformers are designed and assembled, increasing their efficiency even by a fraction of a percentage point could add months to an already lengthy order-cycle.

Our organizations agree that energy efficiency standards play an important role in reaching decarbonization benchmarks while transitioning our nation to a clean and increasingly electrified economy. However, as proposed, the rule would delay the realization of these benefits by worsening supply chain complications already well known to DOE.

Additionally, the proposed rule would require manufacturers to transition to a different type of steel, which is largely untested, less flexible, and more expensive.<sup>v</sup> Further, the existing supply chain of this alternative steel is very limited and mostly foreign-sourced. This rule would impose unnecessary cost burdens and further delay the delivery of such critical products. Simply put, this DOE proposal does nothing to address, and is likely to exacerbate, the current distribution transformer shortage crisis.

Given the unprecedented demand for distribution transformers, our organizations urge DOE to maintain the current efficiency levels required of these products. Getting these already highly efficient products into the market more quickly should be the highest priority and will result in the realization of electrification benefits much sooner—benefits that will far outweigh any gains achieved through a fractional percentage increase in efficiency.

Thank you for your time and consideration of this issue. We welcome the opportunity to discuss this with you further and appreciate your leadership in this area.

Sincerely,

American Public Power Association  
Edison Electrical Institute  
GridWise Alliance  
Leading Builders of America  
National Association of Home Builders  
National Electrical Manufacturers Association  
National Rural Electric Cooperative Association

CC: Rep. Kevin McCarthy – Speaker of the U.S. House of Representatives  
Rep. Hakeem Jeffries – U.S. House Minority Leader  
Sen. Charles Schumer – U.S. Senate Majority Leader  
Sen. Mitch McConnell – U.S. Senate Minority Leader

Rep. Cathy McMorris Rogers – Chair, Energy and Commerce Committee  
Rep. Frank Pallone – Ranking Member, Energy and Commerce Committee  
Rep. Kay Granger – Chair, Appropriations Committee  
Rep. Rosa DeLauro – Ranking Member, Appropriations Committee  
Sen. Patty Murray – Chair, Appropriations Committee  
Sen. Susan Collins – Ranking Member, Appropriations Committee  
Sen. Joe Manchin – Chair, Energy and Natural Resources Committee  
Sen. John Barrasso – Ranking Member, Energy and Natural Resources Committee  
Alejandro Moreno – Asst. Sec. (Acting), Energy Efficiency & Renewable Energy, DOE  
John Podesta – Sr. Advisor to the President: Clean Energy Innovation & Implementation  
Elizabeth Sherwood-Randall – White House Homeland Security Advisor

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<sup>i</sup> *Energy Conservation Program: Energy Conservation Standards for Distribution Transformers*, 88 Fed. Reg. 1722 (Jan. 11, 2023).

<sup>ii</sup> [https://www.nema.org/docs/default-source/advocacy-document-library/nema-gridwise-comments-doe-dpa-rfi-11.30.22.pdf?sfvrsn=2969fc7b\\_4](https://www.nema.org/docs/default-source/advocacy-document-library/nema-gridwise-comments-doe-dpa-rfi-11.30.22.pdf?sfvrsn=2969fc7b_4)

<sup>iii</sup> <https://www.cooperative.com/news/Documents/Trades%20Letter%20Supply%20Chain%20DPA%20Final.pdf>

<sup>iv</sup> [https://www.nema.org/docs/default-source/nema-documents-libraries/doe-transformer-efficiency-regs.pdf?sfvrsn=8253222a\\_0](https://www.nema.org/docs/default-source/nema-documents-libraries/doe-transformer-efficiency-regs.pdf?sfvrsn=8253222a_0)

<sup>v</sup> U.S. Dep't of Energy, DOE Proposes New Efficiency Standards For Distribution Transformers, <https://www.energy.gov/articles/doe-proposes-new-efficiency-standards-distribution-transformers> (DOE explains that “[a]lmost all transformers produced under the new standard would feature amorphous steel cores”).