February 10, 2023

Submitted via energy.standards@usdoj.gov

RE: Energy Conservation Program: Energy Conservation Standards for Distribution Transformers [EERE-2019-BT-STD-0018]

To Whom It May Concern:

The American Public Power Association (APPA) and the National Rural Electric Cooperative Association (NRECA) respectfully submit the following comments to the U.S. Department of Justice (DOJ) Antitrust Division concerning competition issues raised by the U.S. Department of Energy's (DOE) notice of proposed rulemaking (NOPR) on Energy Conservation Standards for Distribution Transformers (EERE-2019-BT-STD-0018).

APPA is the national trade organization representing the interests of the nation's 2,000 not-for-profit, community-owned electric utilities. Public power utilities are located in every state except Hawaii. They collectively serve over 49 million people and account for 15 percent of all sales of electric energy (kilowatt-hours) to end-use customers. Public power utilities are load-serving entities, with the primary goal of providing the communities they serve with safe, reliable electric service at the lowest reasonable cost, consistent with good environmental stewardship.

NRECA is the national trade association representing nearly 900 local electric cooperatives and other rural electric utilities. America's electric cooperatives are owned by the people that they serve and comprise a unique sector of the electric industry. From growing regions to remote farming communities, electric cooperatives power 1 in 8 Americans and serve as engines of economic development for 42 million Americans across 56 percent of the nation's landscape.

Our members are some of the primary consumers of distribution transformers and if this proposal is implemented as currently contemplated, it would have serious consequences on their ability to provide affordable, reliable electric service to millions of Americans. We urge DOJ to fully consider the competition issues raised by the DOE NOPR and work with DOE to address these concerns before a final rule is issued by DOE.

As drafted, DOE's NOPR would transition almost the entire distribution transformer market in the United States to use amorphous steel cores, as compared to the current widespread use of grain-oriented electrical steel (GOES) cores. We have numerous concerns about the proposal, but within the DOJ Antitrust Division's purview, we specifically raise (1) the lack of domestic suppliers available to produce amorphous steel cores and (2) the untenable timeline in the proposal.

Despite the insistence in the NOPR that its effects go into place in 2027, it has immediate market implications. There is only one domestic supplier of GOES and this proposal risks putting the domestic electrical steel market in a precarious state. Rather than helping to diversify supply, the DOE NOPR is counterproductive as it would deter further domestic investment in GOES production because only amorphous steel cores would be able to meet the new energy conservation standard proposed by DOE. Ultimately, DOE's NOPR will not foster competition and is instead likely to create a new monopoly supplier while simultaneously driving the existing GOES supplier out of the market. This would create a ripple effect of likely killing further investment in the domestic production of GOES for distribution transformers under consideration or announced by other steel producers.

Furthermore, we have serious concerns about whether the only domestic producer of amorphous steel cores today would even be able to meet electric utilities' demand for distribution transformers. The only amorphous steel core producer's output today is a mere fraction of what would be required to adequately meet the electric utilities' demand, raising serious implications for electric reliability and affordability. As currently drafted, the NOPR relies on a single supplier in the market to ramp up output to meet the demand in just three years.[1]

In addition, the Department of Commerce found that amorphous steel is "more labor intensive to form into cores" and "it is more economical in countries with low labor costs."[2] The United States' labor market, characterized by higher prevailing wages, is very different than the labor markets of countries, such as China and India, where most amorphous steel cores are widely produced today. Moreover, the labor shortages plaguing many U.S. industries today – including distribution transformer manufacturers– make it very unlikely that domestic production of amorphous steel cores will ramp up to the level that DOE assumes in the NOPR. The Department of Commerce also found that the current lone domestic supplier "has lost 50 percent of its employees due to its inability to compete with imports from China that have flooded the world market." We have serious doubts about the ability of one supplier to increase output in the timeline envisioned in this proposal. If this NOPR is finalized as drafted, and the sole supplier cannot meet the demand, manufacturers will be forced to source their material from international sources (particularly China) representing a significant national security risk to the United States.

Contrary to DOE's statements, the NOPR would not increase the diversity of steel suppliers in the market, but would rather drive out the lone GOES supplier in favor of an amorphous supplier because the new efficiency standards will drive nearly all distribution transformer manufacturing away from GOES. In addition, steel producers that have made tentative commitments to invest in electrical steel in the coming years will likely forego those additional investments because the manufacturing community will be forced to move away from GOES. This move will also be

[1] If the NOPR is finalized in 2024 as envisioned, compliance by manufacturers would begin in 2027.
[2] See the U.S. Department of Commerce's "The Effect of Imports of Transformers and Transformer Components on the National Security" (October 15, 2020) at: https://www.bis.doc.gov/index.php/documents/section-232-investigations/2790-redacted-goes-report-20210723-ab-redacted/file

detrimental to bringing back domestic manufacturing capacity for large power transformers (LPTs) used for electric utility transmission services. LPTs use GOES and cannot use amorphous steel cores, and it has already been identified as another national security risk that the U.S. receives nearly all LPTs and their components from overseas.

Finally, the current manufacturing base serving electric utilities is struggling to meet demand and DOE's NOPR exacerbates this ongoing crisis. Our members are facing unprecedented challenges securing equipment and material to provide reliable electric service to their customers. Electric utilities have been sounding the alarm for more than a year about the supply chain constraints around multiple types of equipment they require to keep the lights on, with distribution transformers being the most acute challenge. It now takes more than a year on average for utilities to receive distribution transformers, compared with 60 days just a couple years ago. Further, we expect the backlog to continue to increase absent U.S. government support as utilities invest in grid resilience and modernization projects and federal and state policies drive more electrification. With that backdrop, DOE's NOPR sends the wrong signal at a critical moment when we need more investment in production capability right now and for the next several years to meet growing demand.

A proposal of this magnitude requires more time and analysis to avoid unintended consequences. At a minimum, DOJ should work with DOE to better understand the competition implications raised by the DOE's NOPR and take the requisite time to ensure that we do not create unintended consequences that will be detrimental to electric reliability and affordability, as well as U.S. national security.

Thank you for considering our comments. We would welcome further discussion about the issues we have raised with your team.

Sincerely,

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Enclosures:

(1) Statement of Christopher Perry, President and CEO of United Utility Services and CEO of the Kentucky Electric Cooperatives

Enclosure to APPA-NRECA Letter
RE: DOE Proposed Rule for Distribution Transformers (EERE-2019-BT-STD-0018)
February 10, 2023

Statement of Christopher Perry

I, Christopher Perry, state as follows:

1. I am the President and CEO of United Utility Services, a leading material supply organization serving the rural electric market. United Utility Supply (UUS) is owned by member electric cooperatives in 17 states. As a full line stocking distributor, UUS supplies a complete line of materials critical to the electric utility industry, including distribution transformers.
2. I am the CEO of the Kentucky Electric Cooperatives, a trade association that provides legislative, communications, and training services to Kentucky's 26 electric cooperatives. In this role, I am well aware of the unprecedented supply chain issues facing the membership, which have caused widespread challenges in receiving equipment in a timely way and at prices that have skyrocketed.
3. I am an electrical engineer with a Bachelor of Science Degree in Electrical Engineering from the University of Kentucky. I have held a professional engineering license in Kentucky and Florida. My career has been in design and application of distribution transformers for thirty years. My expertise in electrical distribution systems gives me a unique perspective on the load characteristics and performance of distribution transformers in both suburban and rural systems, as well as in service to overhead and distribution facilities. I have a Masters Degree in Business Administration from Embry-Riddle Aeronautical University and completed decision and risk management training from Stanford University.
4. As President and CEO of Kentucky Electric Cooperatives, I was responsible for a distribution transformer plant in Louisville, Kentucky that produced distribution transformers for over 70 years. The plant produced over 70,000 units a year at peak production. In this role, the engineers and plant managers produced traditional units with steel cores of varying impedance and loss values. For many years, the research of the engineering staff would consider new core designs including amorphous core units that would be needed to meet the new DOE transformer standards. The manufacturing plant was closed when a merger with another transformer manufacturer was completed.
5. In our testing at Kentucky Electric Cooperatives on amorphous core transformers, our manufacturing and engineering team determined that the amorphous cores were more difficult to work with due to the nature of the steel. The cores were more brittle and required more time to construct.
6. In the analysis of efficiency savings from new transformers, I urge the DOE staff to consider the operating characteristics of rural utility systems. These systems have voltage limitations due to the length of feeders and secondary services that may make the loss calculations less important in the overall application of the transformers to maintain reliable service that meets voltage drop criteria. In addition, the rural electric systems often have higher loading on transformers in parts of the country due to a lack of alternative heating systems such as natural gas. With continued moves to electrify the home including new heat pumps and electric vehicle adoption, it is very likely that transformers will be loaded more heavily and make the no-load losses less important.

7. The Department of Energy's (DOE) distribution transformer efficiency proposal will have the following negative competitive impacts on the electric utility industry:
    a. The cooperatives I represent are some of the primary consumers of distribution transformers and if this proposal is implemented as currently contemplated, it would have serious consequences to their ability to provide affordable, reliable electric service to over 1.5 million Kentuckians.
    b. The current manufacturing base serving electric utilities is struggling to meet demand and DOE's proposal exacerbates this ongoing crisis. It is likely to lead to longer lead times and higher prices for distribution transformers, which will negatively impact the ability of cooperatives to serve their members with affordable, reliable electric service.
    c. The proposal is counterproductive to diversifying steel supply by driving the market toward amorphous steel and would instead likely remove the only domestic grain oriented electrical steel (GOES) supplier from the market.
    d. It is unclear whether the only domestic producer of amorphous steel cores today would be able to meet electric utilities' demand for distribution transformers because today its output is a mere fraction of what would be required to adequately meet the electric utilities' demand, raising serious implications for electric reliability and affordability.
    e. If this proposal is finalized as drafted, and the sole supplier cannot meet the demand, manufacturers will be forced to source their material from international sources representing a significant national security risk to the United States.

Signed:

__/s/ *Christopher Perry*_____

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