COMMENTS SUBMITTED TO THE

DEPARTMENT OF ENERGY DISTRIBUTION TRANSFORMERS RULEMAKING

DOCKET EERE-2019-BT-STD-0018 AND 88 FED. REG. 1722

REGARDING COMPETITIVENESS CONCERNS FOR ELECTRIC UTILITY SECTOR, TRANSFORMER MAKERS

AND INDIRECT IMPACTS TO THE HOME BUILDERS/CONSTRUCTION OF AMERICA

FROM

THERESA PUGH CONSULTING, LLC

MARCH 7, 2023

BACKGROUND

On January 11, 2023, the U.S. Department of Energy (DOE) published a proposed rule titled "Energy Conservation Program: Energy Conservation Standards for Distribution Transformers.". Theresa Pugh Consulting, LLC respectfully submits the following comments on the proposed rule. This organization and our clients have more than 20 years' experience with electric utilities and make recommendations on how to address significant and long-lasting economic impacts and negative impacts on the distribution aspects of the electric utility sector and their industrial, home construction, hospital, and local governmental customers.

Electric utilities and their allies in other industries, do **not** oppose sensible steps to reduce CO_2 or CO_2 equivalent (CO_2e) in greenhouse gases in order to reduce the negative effects of climate change. Companies are committed to prescribed state and local regulations (or shareholder obligations) to reduce the reliance upon natural gas-fired power plants or to increase their efficiency of electricity usage. In this case, distribution transformers are already regulated to address climate change and energy efficiency.

The proposed DOE energy efficiency standard is not the only mechanism to reduce CO_2 in the energy sector. Electric utilities will also be regulated by U. S. EPA and states under Sections 111(b) and (d) Clean Air Act to reduce CO_2. It is probable that the steel industry will face its own regulation under Sections 111(b) and (d) for CO_2 in subsequent years.

DOE staff may have incorrectly assumed that with the current shortage of distribution transformers that revising the standard might make the manufacturers produce more efficient distribution transformers to accomplish efficiency improvements in the electric utility sector. While DOE might be well intended and

naive it appears they did not consider significant warnings in response to the RFI and communications from the utility, steel, and transformer makers over the last six months.

DOE'S OBLIGATION UNDER CONSENT DECREE

DOE asserts that it must take action under a consent decree. DOE must consider effectiveness of its current efficiency standards that have achieved and sustained a 99.5% efficiency improvement (single and three-phase transformers) along with other EPAct 2005 statutory requirements. The review as required under the law and consent decree do not mean that DOE must revise the standard again. **The proposed rule's de minimis 1% further efficiency improvement will risk electric distribution reliability and undermine EPAct's primary purpose**. The electric reliability concern for an entire critical sector being reliant upon on steel company alone justifies not revising the standard again. The standard can be reviewed again in the future.

Distribution transformers are already regulated to meet energy efficiency. Seeking the additional de minimis 1% is an incredible waste of private sector money, investment, re-design of transformer manufacturing, resulting upon reliance upon ONE steel company. Most of all it is a waste of time and makes supply chain problems worse.

Under the Energy Policy Conservation Act (EPCA), DOE is required to develop energy conservation standards and test procedures for covered products.[1] Manufacturers use test procedures to test their own products and certify compliance to DOE. EPCA requires that any new or updated standard that DOE implements be designed to achieve maximum improvement in energy efficiency **that is technologically feasible and economically justified**.[2]

UNDER EPACT 2005 DOE MUST ALSO CONSIDER:

(1) The economic impact on the manufacturers and consumers FAILED
(2) Savings in operating costs throughout the estimated life of the covered product. FAILED
(3) The total projected amount of energy savings resulting from the standard. INCOMPLETE
(4) Lessening of the utility or performance of the covered products. FAILED
(5) The impact of lessening of competition. FAILURE TO IDENTIFY IMPACTS TO CONSUMERS
(6) The need for national conservation. ALREADY MET UNDER 2016 EFFICIENCY STANDARD
(7) Other factors deemed relevant by the Secretary of Energy.[1] In January 2016, DOE finalized energy conservation standards for distribution transformers that would make the products between 98 and 99 percent efficient according to DOE's own estimates. STANDARD IS SUFFICIENT AND SHOULD NOT BE REVISED.

DOE'S PROPOSED RULE WILL HAVE SIGNIFICANT AND LASTING ECONOMIC IMPACTS ON SEVERAL SECTORS

DOE's proposed rule has a series of serious and long-lasting economic effects and market consequences. DOE staff (a) did not anticipate (b) did not understand the connection between these industrial sectors. This seems particularly odd given that DOE's very core addresses electricity, cyber protection and energy policy in the context of energy being a critical industry.

DOE's attention failed to adequately consider the serious current shortage and global lack of availability of electric distribution transformers. DOE's proposed rule will decrease the steel available with more

[1] 42 USC Section 6293 and 42 USC Section 6314
[2] 42 USC Section 6295 (o)(2)(A)

demand placed on **ONE single steel company in Ohio.** Many electric utilities and electric transformer manufacturers have testified at DOE's public hearing (March 16, 2023) and various meetings with DOE and Small Business Administration (SBA) pointing out that if the DOE proposed rule were to take effect (with a 2027 replacement deadline) there would likely be **a 2.5 or perhaps a 3 year wait for electric distribution transformers**. If this proposed rule's 2027 replacement deadline takes effect the consequences would not only be felt by the electric distribution manufacturers reliant upon one single steel company. The single American steel company does not meet the current demand for distribution transformers. To put this in perspective, there are approximately 1 million electric transformers (Single-phase and Phase-3) sold annually in America and most distribution transformers can function correctly for up to 40 years (although some utilities would prefer to replace some approximately every 25 years).

WAIT TIME AND THE INDUSTRIAL SEGMENTS/SECTORS AFFECTED BY THE DELAYS

Two years ago, most utilities were able to get distribution transformers in 4-12 weeks. The 2023 wait time is approximately 45-56 months. Many smaller purchasers (such as the construction industry) are not able to get the distribution transformers at all. There are many reasons for the supply chain shortages- ranging from lack of skilled workers to inadequate supply of electrical engineers designing new transformers (since transformers vary and have unique specifications). Some of these causes have been captured well by National Electrical Manufacturers Association (NEMA) response comments to the DOE RFI in 2022. Oddly, it appears that DOE ignored many of the compelling reasons that NEMA gave in 2022 as to why this proposed rule would affect the existing constrained supply chain in a negative way. DOE ignored NEMA's assertions about limited availability of skilled workers and DOE was oblivious to the labor shortage impacts to electric reliability at the distribution level provided to their docket.

DOE also ignored the length of time and costs required for the transformer makers to re-design their manufacturing processes to meet the 2027 deadline.

Perhaps most significant is that the single company that makes GOES steel has not indicated in their public statements (during DOE or SBA hearings) that they will increase production adequately to meet greater product demand. While it is a fervent hope by steel users that they would increase production they have not indicated this is likely. Nor is it clear that a new steel plant or a new transformer manufacturer would obtain a Title V Clean Air Act permit given NAAQs limitations (and possible tightening of the standards between 8-11 ug/m^3 – tightened from current 12 ug/m3).

PROPOSED RULE'S ANTI-COMPETITIVE IMPACTS ON THREE SECTORS IGNORED BY DOE

The proposed DOE electricity transformer proposed rule will reduce competition in three industries:

- Electric utilities and Virtual power plant (distributed energy providers);
- Distribution transformer manufacturers (both original manufacturers and re-manufacturers) and
- 4,242 home building construction companies (individual homes and multifamily apartment buildings) with 120,780 employees

Home builders obtain fixed rate financing commonly set based upon whether the location is already electrified or merely needs a small extension from existing utilities (electric, city water, cable, WIFI) taking nominal time.

As of March 27, one of the nation's largest cities, with population of >1 million, has 99 residential/commercial construction projects where the construction has been frozen because construction companies and local utility cannot obtain distribution transformers. This is merely one example of a snapshot of today when comments are due.

How many home building construction projects are frozen due to no distribution transformers across America? What will the consequences be for the economy? How many jobs will be lost as a result?

According to West Michigan's Channel 13 News on Your Side A new Newaygo County home construction sat idle with no finished construction from Sept. 23 to December 6, 2022 because the builder could not electrify the home. "If we can't finish the home on time, that pushes them (homeowner) past their mortgage, and they will lose their interest rate lock…Plus they may not have anywhere to live."

Due to the current shortage of distribution transformers, thousands of smaller "Mom and Pop" construction companies with <100 employees are being notified that their financing is being withdrawn because of the anticipated 2-3 year wait for the distribution transformers. Without electrification infrastructure it is not realistic for many smaller construction companies to compete in the residential construction market. Any DOE regulation on electric transformers that has an indirect and quick negative impact on financing for the nation's construction companies should not be allowed to proceed as drafted. For most Americans, the purchase of a home (or rental in multifamily dwellings also affected) is the largest family expenditure. **DOE and other agencies in a "tiger team" should consider the housing cost ramifications as well as the potential job losses in the home building sector if financing awaits electrification.**

DOE failed to identify this secondary effect or the impact upon **4,242 companies employing 627,398 employees** with an average salary of **$40,730 or $21 per hour** (based upon Bureau of Labor Statistics). BLS statistics identifies 68% of these home construction workers as white, 5.6% African American, 19% Latino; and 1.4% Asian. The top 15 states with residential construction growth are **CA, NY, FL, IL, TX, NJ, OH, MA, NC, MI, GA, IN, MN, TN, and VA** so one can easily make assumptions that this proposed rule will have a significant economic impact on home construction delays or stoppages in at least 15 states. An anti-competitiveness filing to DOJ was submitted on March 24, 2023 by Theresa Pugh Consulting, LLC.

DOE IGNORED ECONOMIC CONSEQUENCES AND CRIMINAL ACTIVITIES AGAINST DISTRIBUTION TRANSFORMERS

We are still at a critical time with negative higher costs effects of prolonged inflation, problems with vendor supply and delays in completing construction projects. Reliance upon one steel company that can make the distribution transformers is foolhardy. Nor should we allow a DOE regulation to place burdens on home builders because they cannot obtain distribution transformers. And should there be shortages of distribution transformers we do not want to see a broader electric reliability problem (even if not at the Bulk Electric System of the grid). **Shortages of distribution transformers are dangerous given the number of winter and summer storms, hurricanes, and disturbing number of violent attacks by extremists against distribution transformers. See detailed recent Brookings study.**

While distribution transformers shortages are not directly the cause of broader bulk electric system (BES) (or grid) at risk, it is foolish for any portion of the electric distribution system at risk due to a revised DOE regulation that will only achieve a 1% efficiency improvement. DOE officials and industry experts looking at BES and other related issues. It is easy to anticipate that if there is only one steel type has been

selected for distribution transformers that similar decisions would be made by DOE or EPA for other rules that might affect Bulk Electric Supply.

TECHNICAL ISSUES NOT CONSIDERED BY DOE (AND WHERE EPA WAS NOT CONSULTED)

- Will new amorphous steel transformers be "drop in replacements" for existing distribution transformers given the expansions for the many new renewable energy, demand side management, and expanded electric vehicle uses across the U.S.
- Amorphous metal is an extremely brittle material that is largely untested and underutilized by transformer manufacturers. Is a brittle and untested material (even if more efficient) a wise decision for use in the electric sector- a critical industry. Ironically PHMSA, a division of Dept. of Transportation, knows well the negative safety risks with brittleness in pipelines. **Do we know enough about amorphous steel's broad use in the replacement of approximately 1 million distribution turbines each year?** As American Iron and Steel Institute (AISI) points out in their comments "GOES is produced from the initial melting stage and currently forms the cores of the distribution and power transformers that serve as the backbone of the U.S. electric grid". **Why risk the "backbone of the U. S. electric grid" with amorphous steel if it has not been tested?**
- Can current wood poles handle the new if new distribution transformers must handle >30% larger capacity? Does this size/weight expansion mean that all locations of wood poles can handle larger capacity? **Are there enough steel or alternative wood poles to handle this weight? Could inadvertently require alternatives to wood poles create a secondary example of supply chain issues?**
- What is the energy use cost to transport the current distribution transformers to hazardous waste or nonhazardous waste landfills? Can the metals in these distribution transformers be recycled? Is there a capacity to handle the recycling or reuse? Will the 2027 deadline cause problems with disposal or recycling? Do the current 6,000 nonhazardous and hazardous landfills have capacity to handle all of the disposed of distribution transformers that would be replaced by 2027 or will all of these transformers be recycled? Will the U. S. steel and other company recyclers be able to handle these waste recycling or disposals? **What is the energy consumption for transporting and managing the existing distribution transformers? Does that energy cost outweigh the alleged 1% efficiency improvement in the proposed distribution transformer made with amorphous steel?** DOE's analysis on energy savings failed to look at energy costs in removal of old and transport of new distribution transformers for end of life disposal or recycling.
- DOE did not conduct an amorphous or GOES steel distribution transformer effectiveness test conducted over several years. Since DOE did not do this, do we know that the new distribution transformers will last 40-50 years as current distribution transformers do or maintain the efficiency improvements?
- **Can amorphous steel be recycled or reused when those new distribution transformers are no longer functioning?** If not, what is the energy cost and disposal cost under Resource Conservation and Recovery Act- whether the metals will be classified as class D solid waste or class C hazardous class wastes? DOE did not do any analysis on time needed to replace distribution transformers in underground vaults. Based upon the review of the proposed rule and the RIA, DOE did not seek U. S. EPA's concurrence that this proposed rule would not cause a new metal waste disposal issue when the millions of new amorphous steel distribution transformers are out of service in 20-50 years. These disposal or recycling costs that would be incurred by the electric utilities and their customers. **DOE did not conduct any analysis of these disposal or recycling costs**. **Nor did DOE offer any insight as to what happens to the current distribution transformers that will be removed in 2027.**

- **What would the proposed rule do to distribution transformer supplies needed for DOD facilities or FEMA in response to storms and other unexpected events?**
- Requiring underground vault replacements by 2027 is foolish. There are many reasons that underground vault transformers are more complicated and the time and costs of labor to undertake these transformer replacements could be disruptive to local electric utilities and other phone and cable TV providers. For many locations the underground vault operations would also require coordination with electric utilities and cable TV/WIFI and this issue was not even looked at in the proposed rule. Many local governments require that when one utility opens up a non-emergency maintenance for underground vault maintenance that the other utilities must be allowed to undertake their own maintenance actions.
- DOE's proposed rule lacks the most basic knowledge about distribution transformers that are placed in underground vaults. Repairs inside underground vaults often requires 2-4 days for repairs. If the new distribution transformers must be made larger, how would the current vault size allow this without enlarging the vault space by removing the soil and removing street surfaces. The soil may need to be tests for legacy waste such as PCBs before the soil can be removed. This process may also require the city to send road repair crews to protect workers inside the vaults from oncoming traffic. It is foolish to chase a fleeting energy efficiency improvement inside underground vault. **The DOE did not seem to have any operational knowledge about what disruptions inside underground vaults means if the vaults are on streets or in proximity to streets, highways, and sidewalks**. Nor did they consider these costs to both electric utilities and municipal governments. The underground vault usage of energy under current distribution transformer standards should be retained. It is for this reason that the U. S. EPA has wisely determined to not regulate underground vault dewatering under the Clean Water Act. OSHA appropriately regulates for sensor use to detect of carbon monoxide and other chemicals or gases that could be harmful to repair crews. **DOE should leave underground vaults out of this efficiency rulemaking entirely.**

ENDORSEMENTS OF OTHER COMMENTS SUBMITTED TO THIS DOCKET

- U.S. Small Business Administration's Office of Advocacy (with particular critique of the DOE's failures under the Regulatory Flexibility Act)
- National Electrical Manufacturers Association;
- American Iron and Steel Institute (AISI)
- EEI, APPA and NRECA associations representing the entirety of the electric utility sector

RECOMMENDATIONS TO ELIMINATE OR GREATLY REDUCE COSTS AND THE ANTI-COMPETITIVE RESULTS OF THIS PROPOSED RULE

- Withdraw the DOE proposed rule with the 2027 deadline dependent upon one company for amorphous or GOES steel since the proposed rule only achieves a theoretical 1% efficiency improvement based upon no improvement;
- Retain the existing energy efficiency standard on distribution transformers;
- Announce that DOE may revisit this issue and a possible proposed rule 1 year after the global shortages in distribution transformers has been corrected **and** full replacement of lifesaving distribution transformers in Ukraine, Syria and Turkey;
- DOE should work with the funding authorized by Congress under IRA and IIJA to fund more amorphous or GOES steel or other similar steel products to expand the production to be used for both distribution transformers and for the much anticipated new steel needed for transformers needed for charging electric vehicles across residential areas. DOE should consider the new or

replacement distribution transformers at both NEVI funded and private sector funded EV charging stations;

- DOE should use any discretionary spending options to entice and support more domestic production and use of amorphous and GOES steel for transformers. This might include tax credits or grants toward transformer manufacturers to use the more efficient steel before 2030. This action would support the Biden Administration's decarbonization and electrification goals under both IIJA and IRA laws. However, there should be no expectation that all distribution transformers must be able to meet the steel requirements by 2027 given the current market shortages. These DOE enticements might be tax credits, direct grants or the EERE funding in their manufacturing innovation and efficiency programs. All options should be considered;
- Use DOE authorities and incentives for domestic production (and storage) of needed distribution transformers (and steel) for use by electric utilities and inventory should also be made available to the construction industry as secondary beneficiaries;
- Explore authorities under the Defense Production Act;
- **Prioritize**: Consider the logistical challenges of GOES or amorphous steel-based distribution transformers that will be needed for electric vehicles. DOE should consider the predicted optimal EV growth rate by 2035 and that strain on vendor supply of distribution transformers. Many in the utility sector state that current distribution transformers must have expanded capacity to match with local EV needs for charging in hundreds of thousands of neighborhoods by mid 2030s;
- Given the nation's move away from natural gas and coal-fired power generation and reliance upon renewable generation or virtual power plants using Distributed Energy, what will be the demand for more distribution transformers that was not considered in this proposed DOE rule.
- The Administration should **lift the 25% GOES steel tariffs and quotas** from OECD friendly nations to enable domestic transformer makers to increase production;
- **DOE needs to work with U. S. EPA to accelerate the permitting process** for Clean Air Act and Clean Water Act **new permits** (or five-year permit renewals) given NOx limitations (especially given small headroom where a tighter Particulate Matter limit will reduce probability of **permitting new steel mills or transformer makers** (or adding a second or third shift per day resulting in higher emissions);
- Steel and transformer manufacturers should be allowed to engage in NOx emission trading under the EPA's Good Neighbor Plan regulation that now includes industrial facilities;
- Do not revise efficiency standards for underground vaults;
- If appropriate, DOE and Department of State should also explore whether there are bilateral agreements that could expand the importation of GOES or amorphous steel from friendly OECD trading partner nations to expand appropriate steel for many purposes (distribution transformers and other purposes). This is a possible option under the new U.S. State Department's Critical Minerals Team, Office of Energy Transformation. **This trade action should not take precedence over expanding domestic steel manufacturing for many obvious reasons-including domestic competitive and resource availability options.**

RELIABILITY AND GLOBAL DEMAND

One only has to look at the economic effects resulting from current power outages in South Africa, Ukraine, Syria, and parts of Turkey due to the earthquakes and war to see the enormous economic consequences. Texas faced a $130 billion cost (Feb. 2021) after short-term or long-term black outs over only 4 days. While the power outages in South Africa may be the result of corruption and lack of planning and not the result of inadequacy of finished electrical product supply or the steel to make those products the shortages of distribution transformers globally should be considered. Some of these nations and

regions lack essential distribution transformers for hospitals, schools, government buildings, manufacturing, transportation and residential communities.

According to March 25th BBC News South Africa's intermittent power outages have reduced their annual economic growth from an anticipated 7% to 2%. While commenter is not suggesting that the distribution transformer shortages would have such a large economic impact in the U.S. the point is that power disturbances can easily result in economic disturbances to a nation's economy or state such as after the Feb. 14-17, 2021 events in Texas. South Africa's load shedding expected for the remainder of 2023 is expected to cost their country $1.3 billion annually or millions per day. What has not yet been discussed is the amount of electricity infrastructure products needed in South Africa that have not been correctly purchased by ESKOM for the last five years. Recent news articles point to power loss strain upon the South African health care system where hospitals must use backup generators and use human hands for hand pumping hearts during surgery.

One can hope that South Africa can restore its electric system but to do so they will need to purchase many thousands of bulk electric and distribution transformers and other types of equipment immediately The DOE rulemaking will simply make it harder for countries like South Africa, Ukraine, Syria and eastern Turkey to recover since we will make the distribution transformer circumstances worse. No one can predict the time needed to rebuild Ukraine's electric system.

The economic risks and geopolitical risks of power outages and lack of reliability in the U. S. are serious. In this case the rule would be a foolish strain on global supply with an unforced error by revising distribution transformer standards. Achieving an additional 1% from the distribution transformers, even if for 30-50 years is not worth the risks to the home building construction industry and to our economy. *And perhaps chasing the negligible transformer efficiency is immoral considering the needs in Ukraine, South Africa, Syria and parts of Turkey*.

SUMMARY AND CONCLUSION

These comments address identified industrial sectors that have expressed their concerns about competitiveness in the public record. Theresa Pugh Consulting has filed separately with DOJ expressing that DOE did not address the anti-competitive effects. Those costs, even if only localized distribution due to inadequate supply of distribution transformers, were ignored by DOE.

EPAct 2005's Congressional intent was to address both **electric reliability, feasibility and economic impacts** to the customers should there be an electric reliability failure. **The proposed distribution transformer proposed rule also does not recognize that the current shortage will only become worse as the electric sector must place new distribution transformers to support electric vehicles**.

Please consider the recommendations offered to make significant corrections to this proposed rule. Utilities and their customers affected by this rule will be offering suggestions on how to proceed. Please consider their comments. Please establish a multi-agency committee or "tiger team" to assist DOE in moving forward. DOE must look comprehensively to ensure that the rule does not cause further disturbances in distribution transformer supply chain (where delays can cause reliability problems even if not at the bulk electric system level). DOE should consider the technical issues including transformer recycling and disposal issues with considerable study of landfill use, available capacity, transport energy and disposal costs. DOE must consider whether the 1% transformer efficiency improvement is really worthy of the economic problems. DOE should consider the impacts on distribution transformers that will be essential to the electric vehicle transformative sector that is essential to the Administration's decarbonization goals. DOE has an obligation to consider global market demands by Ukraine, Syria and eastern Turkey need replacements of their distribution transformers **for life saving purposes**.

Should the U. S. really make the current distribution transformer shortage worse all to find the last de minimis 1% efficiency improvement? Certainly not at the expense to their countries of not having distribution transformers to support their homes, hospitals, army facilities, schools, communications systems, and the rebuilding of Ukraine.

There is much in this proposed rule that is arbitrary, capricious, technically incomplete, and hastily done. **The most glaring failure was DOE's inability to recall what the essential purpose of EPAct 2005 was for improving electric reliability and fair competition**. It is a tremendous error in judgement for DOE to propose a rule that will make supply of distribution transformers worse with less competition that will certainly cause problems in electric reliability given current circumstances. **Response to a consent decree means that DOE must review the distribution transformer efficiency standard not that it must revise the standard making the supply chain problem worse.**

Submitted by
Theresa Pugh
President & Owner
Theresa Pugh Consulting, LLC
2313 North Tracy Street
Alexandria, VA 22311
703-507-6843

cc:
Secretary Jennifer Granholm
Department of Energy
1000 Independence Avenue SW,
Washington, DC 20585–0121
Jennifer.granholm@hq.doe.gov

Mr. Francisco Alejandro Moreno
Acting Assistant Secretary
Office of Energy Efficiency and Renewable Energy
Francisco.moreno@hq.doe.gov

Mr. Richard Kidd
Deputy Assistant Secretary for Environment and Energy Resilience
Department of Defense
Richard.g.kidd6.civ@mail.mil

Ms. Deanne Criswell
Director
FEMA
Deanne.criswell@fema.dhs.gov

Mr. John Podesta
Senior Advisor to the President, Clean Energy Innovation and Implementation
The White House
John.D.Podesta@who.eop.gov

Senator Joe Manchin
Chair, Energy and Natural Resources Committee

U. S. Senate
Renae_Black@energy.senate.gov

Senator Joe Barrasso
Ranking Member
Energy and Natural Resources Committee
U. S. Senate
Valerie_manak@energy.senate.gov
Patrick_McCormickA@energy.senate.gov

Mr. Richard Revesz
Administrator
Office of Management and Budget
Richard_L_Revesz@omb.eop.gov

Mr. David M Turk
Deputy Secretary
U.S. DOE
David.turk@hq.doe.gov

Mr. Michael Regan
Administrator
U.S. EPA
Regan.Michael@epa.gov

Mr. Barry Breen
Assistant Administrator for Office of Land and Emergency Management (OLEM)
U. S. EPA
Barry.breen@epa.gov

Mr. Joe Goffman
Office of Air
U.S. EPA
Goffman.joseph@epamail.epa.gov

Ms. Patricia Hoffman
Principal Deputy Director for the Grid Deployment
U.S. DOE
Patricia.hoffman@hq.doe.gov

Mr. Jeremy Dommu
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy, Building Technologies Office,
Headquarters
applianceStandardsQuestion@ee.doe.gov
Jeremy.dommu@hq.doe.gov

Mr. Matthew Ring
U.S. DOE
U.S. Office of General Counsel
Matthew.ring@hq.doe.gov

Ms. Sandra Jenkins
U.S. DOE
Office of Electric Reliability
Sandra.jenkins@hq.doe.gov

Mr. George Cajati
Foreign Affairs Officer
U.S. Department of State
Critical Minerals Team Lead
Office of Energy Transformation
CajatiGP@state.gov

Dr. Monica J. Gorman
Special Assistant to the President for Manufacturing & Industrial Policy
National Economic Council
The White House
Monica.J.Gorman@who.eop.gov

Dr. Aaron (Ronnie) Chatterji
National Economic Council
Office of Science and Technology Policy
The White House
Aaron.k.chatterji@who.eop.gov

Mr. Dominic Mancini
Deputy Administrator
Office of Information and Regulatory Affairs (OIRA)
OMB
Dominic_J_mancini@omb.eop.gov

Ms. Prianka P. Sharma
Assistant Chief Counsel
Agriculture, Energy and Natural Resource Policy
SBA Office of Advocacy
U.S. Small Business Administration
Prianka.sharma@sba.gov

Commissioner Willie Phillips
Chair
FERC
888 First Street, NE
Washington, D.C. 20426
Willie.phillips@ferc.gov

Ms. Nicole Sitaraman
Acting Director
Office of Public Participation
FERC
Nicole.sitaraman@ferc.gov

Kal Ayoub
Critical Infrastructure and Resilience Adviser
FERC
Kal.ayoub@ferc.gov

Mr. Joe McClelland
Office of Energy an Infrastructure Security
FERC
Joseph.mcclelland@ferc.gov

Mr. Andy Dodge
Director
Office of Electric Reliability
FERC
Andrew.dodge@ferc.gov

Mr. James Robb
President & CEO
North American Electric Reliability Corporation (NERC)
3353 Peachtree Road, NE
Suite 600 North Tower
Atlanta, GA 30326
James.Robb@nerc.net

Mr. John Moura
VP
NERC
John.moura@nerc.net
Ms. Janet Sena
Senior Vice President, External Affairs
NERC
Janet.Sena@nerc.net

Ms. Susan Kelly
Member, Board of Trustees
NERC

Lynn Costantini
Deputy Director
NARUC
lcostantini@naruc.org

Mr. Matt Schuerger
Chair, NARUC Electricity Committee and RISC and Commissioner,
Minnesota Public Utilities Commission
c/o Lynn Costantini, NARUC
1101 Vermont Avenue, Suite 200
Washington, DC 20005

Mr. Tom Kuhn
President & CEO

EEI
TKuhn@eei.org

Mr. Jim Matheson
CEO
NRECA
James.matheson@nreca.coop

Jeff Haas
Acting President & CEO
APPA
JHaas@publicpower.org

Mr. Joe Donovan
President
Transformer Manufacturers Association of America
jdonovan@pierceatwood.com

Mr. Rob Talley
Rob Talley and Associates, Inc.
Rob@talleyandassociatesinc.com

Mr. Tom Popik
CEO
Foundation for Resilient Societies
1 Chestnut Street, Suite 335
Nashua, NH 03060
thomasp@resilientsocieties.org

Kevin Dempsey
President & CEO
American Iron and Steel Institute (AISI)
kdempsey@steel.org

Brett Smith
Senior Director, Government Relations
AISI
bsmith@steel.org

Peter Ferrell
Director
National Electrical Manufacturers Association (NEMA)
Peter.ferrell@nema.org