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Before the

U.S. Senate Committee on Energy and Natural Resources

"Opportunities, Risks, and Challenges Associated with Growth in Demand for Electric Power in the United States"

May 21, 2024

Chairman Manchin, Ranking Member Barrasso, and distinguished members of the Committee, thank you for the opportunity to provide testimony this morning examining the opportunities, risks, and challenges associated with growth in demand for electric power in the United States.

My name is Karen Onaran and I am the President and CEO of the Electricity Consumers Resource Council ("ELCON"), the national trade association for large industrial consumers of electricity. ELCON's mission is to promote by all lawful means the development and adoption of coordinated, rational and consistent federal, state and local policies and regulations regarding generation, transmission and distribution of power that will ensure an adequate and reliable supply of electricity for its members and other users at rates that are just and reasonable and not unduly discriminatory or preferential. In support of this purpose, ELCON advocates for (a) efficient and competitive electricity markets and pricing, (b) resource neutrality, (c) reliable and sustainable service at least cost (d) cost allocation based on the principle of beneficiary pays, and (e) elimination of barriers to self-supply and sale of any surplus on fair terms.

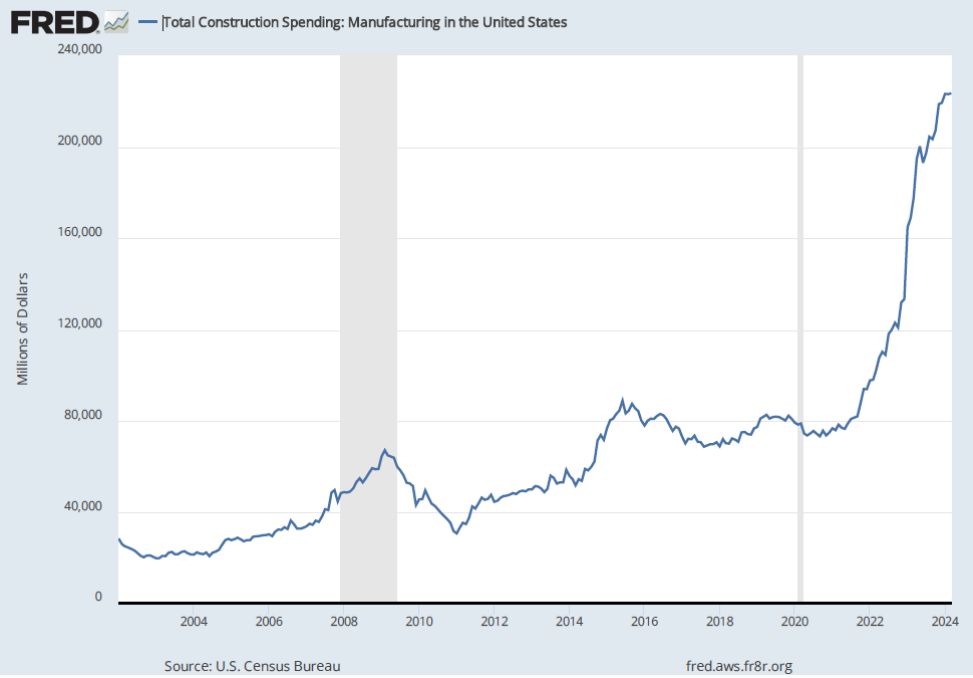
Large Industrial Load Growth

The purpose of my testimony this morning is to provide the large industrial consumer perspective, as one of the drivers of growing demand for reliable and affordable electric service. Manufacturers, on average, use one third of the nation's energy.[1] After decades of declining domestic manufacturing, the industry is seeing a resurgence due to the onshoring of previously outsourced industrial operations as well as expanding domestic exploration of new technologies and supply chain opportunities. According to an April 2024 article from the Deloitte Research Center for Energy & Industrials, the number of manufacturing facilities in the United States grew by more than 11% between the first quarter of 2019 and the second quarter of

[1] National Association of Manufacturers, "Facts About Manufacturing: The Top 18 Facts You Need to Know;" https://nam.org/manufacturing-in-the-united-states/facts-about-manufacturing-expanded/#:~:text=1.,U.S.%20economy%20in%20Q4%202023.&text=2.,%242.69%20to%20the%20overall%20economy.

2023. Construction spending in manufacturing has nearly tripled since June 2020 and was up 37% year over year in January 2024 when it reached a record high of $225 billion.[2] *See* Figure 1.

Figure 1. **Total Construction Spending: Manufacturing in the United States**



As a result, energy usage by the industrial sector is projected to grow by 36 gigawatts ("GW") by 2030[3] which is the equivalent of the electricity necessary to power over 25 million homes. These projections not only take into account new manufacturing facilities, but the electrification of existing facilities and operations to achieve greater efficiencies and lower carbon-intensive production processes. As part of the move to lower carbon processes, industrials are considering hydrogen technologies to generate the electricity necessary for their manufacturing operations. However, hydrogen production itself is an electricity-intensive process that will contribute to growing load forecasts. Traditional oil and gas production is also expanding with a projected 24 GW of load projected to be added in the Permian Basin, the nation's largest oil-producing region.[4]

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[2] Deloitte Research Center for Energy & Industrials, "Taking charge: Manufacturers support growth with active workforce strategies." (April 3, 2024); https://www2.deloitte.com/us/en/insights/industry/manufacturing/supporting-us-manufacturing-growth-amid-workforce-challenges.html.

[3] Bruce Tsuchida, Long Lam, Peter Fox-Penner, "Electricity Demand Growth and Forecasting in a Time of Change," The Brattle Group (May 2024); https://www.brattle.com/wp-content/uploads/2024/05/Two-Pager__Electricity-Demand-Growth-and-Forecasting-in-a-Time-of-Change__May-2024.pdf.

[4] Tom Kleckner, "ERCOT, PUC Face Huge Tx Needs in Permian," RTO Insider (April 15, 2024); https://www.rtoinsider.com/76054-ercot-puc-face-huge-tx-needs-permian/.

As large industrials increase their presence in the US and contribute to growing energy demand, the nation is experiencing a confluence of complicating factors affecting the electric sector including rapid changes to the energy supply mix, accelerated fossil-fuel plant closures, the electrification of transportation and the economy, electric vehicles and supporting charging infrastructure, Artificial Intelligence and data centers, extreme weather, and insufficient and aging energy infrastructure.

Opportunities Provided by Growing Demand and Right-Sizing Infrastructure

Outside of the energy sector, the manufacturing resurgence is providing tremendous benefits and opportunities for economic growth in US communities. New and expanded industrial operations provide thousands of new job opportunities for communities including construction, operation, and indirect employment from services to support these new employees from food to retail to commercial and residential construction. According to the National Association of Manufacturers, manufacturers contributed $2.89 trillion to the U.S. economy in the third quarter of 2023.[5] These manufacturing facilities and their employees inject money into their communities through direct spending on goods and services and the related tax revenues. Manufacturing jobs represent one of the largest sectoral multipliers in the economy in that for every $1.00 spent in manufacturing, there is a total economic impact of $2.69 to the overall U. S. economy.[6]

Onshoring manufacturing and industrial processes also provide national security. The country can ill afford reliance on hostile nations for supply chains of critical minerals, infrastructure materials, energy resources, and sensitive computing components. COVID-19 and the Russian war in the Ukraine have demonstrated how precarious our global supply chain is. Domestic investment guarantees that we continue to thrive independent of global instability and threats.

For the energy sector, domestic manufacturing bolsters investment and production of the nation's rich energy supplies including oil and gas, fossil-fired generation, hydrogen, nuclear, hydropower, as well as the components to capture and store wind and solar resources in conjunction with the infrastructure necessary to reliably harness and deliver that power.

Now is the opportunity to right size our electric grid to ensure this prosperity and American ingenuity continue for decades to come. We, as a nation, must take the initiative now to guarantee reliable, resilient, and abundant electric service in the face of rapid changes in electric supply and demand. This will include

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[5] https://nam.org/manufacturing-in-the-united-states/facts-about-manufacturing-expanded/#:~:text=1.,U.S.%20economy%20in%20Q4%202023.&text=2.,%242.69%20to%20the%20overall%20economy.

[6] *Id*.

investing in our current, and in many cases aging, energy infrastructure to take advantage of its full potential through upgrades, modernization, reconductoring, and other grid enhancing technologies that will save consumers millions of dollars. Coordinated and well-planned transmission expansion will be necessary to meet the demands of the expanding industrial sector and the electrification of the nation's economy. It is imperative that we harness, rather than reject, the energy solutions that are abundant in this country. As the industrial sector seizes the opportunity to invest in and secure the economic independence and prosperity of our nation, we look to those states and regions that are working to alleviate the bottlenecks and red tape that hamstring energy development and grid resiliency.

The Risks of Maintaining the Status Quo

There is no question we are at an inflection point in our energy's security and affordability. If we fail to plan and invest in our energy sector to meet the multitude of compounding challenges, we risk devastating not only the economic potential of our country but the health and wellbeing of our citizens and environment. In addition to energy demand growth that we have not experienced in decades, the nation's rapid transition to more weather-dependent supply and resulting premature retirements of 24/7 dispatchable energy resources, strain grid operators' ability to balance the system to ensure power is delivered exactly where and when it is needed. Not only does our energy supply act differently and sometimes unpredictably, energy demand can also be variable with needs changing rapidly as large consumers turn their operations on or off to chase price signals, batteries quickly transition from supplying energy to taking energy from the grid to recharge, and behind-the-meter customers turn to the bulk power system when their local distributed energy resources become unavailable.

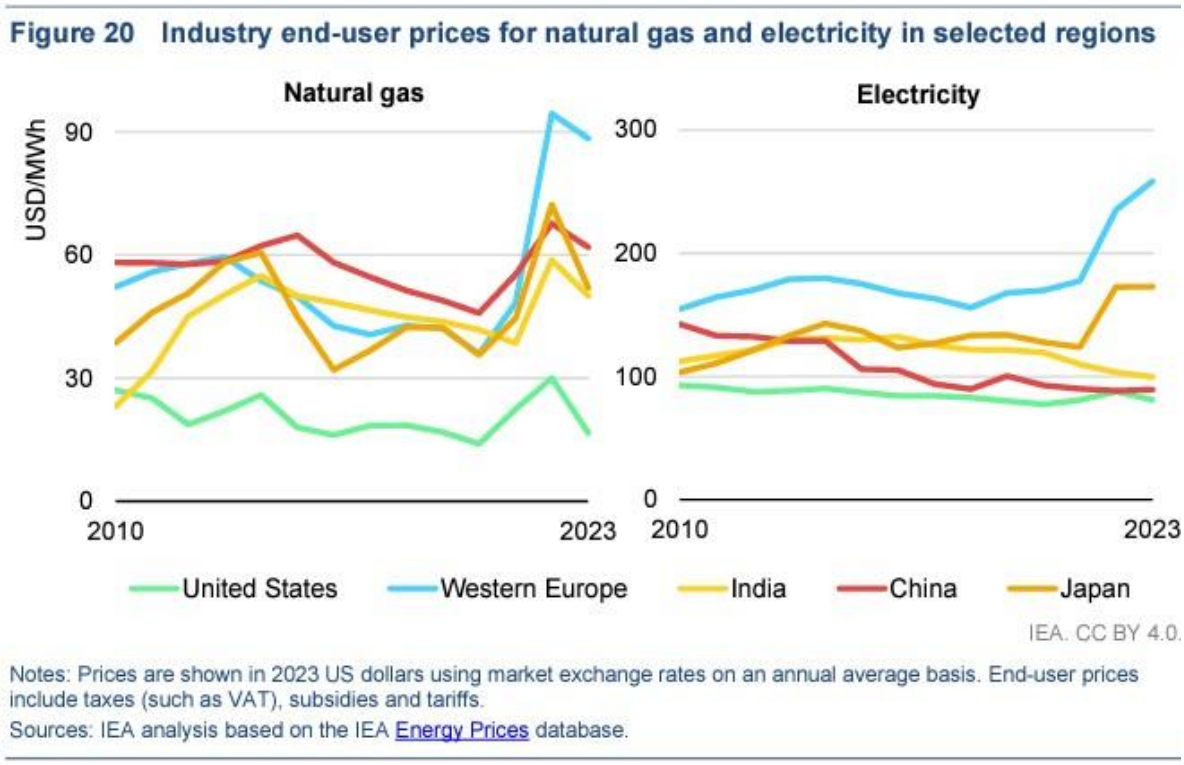
Inadequate energy reserves and extreme weather can result in extended blackouts unless we invest in resilient infrastructure that can withstand adverse conditions and import resources from other less-impacted regions. Degradation of power quality can interrupt industrial processes and damage sensitive equipment resulting in millions of dollars of lost revenue.

In short, one of the unique strengths of the U.S. from the perspective of our energy is our geography. The U.S. is a large nation blessed with abundant fossil and renewable resources and it is the ability to move these resources around through pipelines and transmission lines—making our energy system larger than the weather—that makes us globally competitive. A recent International Energy Agency ("IEA") report shows that the U.S. has long held an advantage over its peers and rivals in both electricity and natural gas prices.[7]

[7] International Energy Agency, *Advancing Clean Technology Manufacturing: An Energy Technology Perspectives Special Repor*t, p. 61 (May 2024).

See Figure 2. More robust interstate and interregional transfer capabilities of both molecules and electrons will help us maintain that advantage well into the 21st century.

Figure 2. Industry End-user Prices for Natural Gas and Electricity in Selected Regions



Globally and domestically, we are experiencing heightened political volatility. Hostile foreign nations and domestic extremists understand how much the U.S. relies on our electric system. Destabilizing our grid will have the direct effect of destabilizing our economy and civic life. It is imperative that we invest in the physical and cybersecurity of our critical infrastructure. Defending our electric grid will require robust, redundant, and flexible transmission and distribution services.

At a time of inflation with the costs for goods and services skyrocketing, we risk further unsustainable energy prices for the average American. Without access to abundant, reliable, low-cost energy supply and infrastructure, low-income consumers will be saddled with prohibitively expensive and less reliable electricity, hampering their ability to thrive.

Regulatory Challenges to the Energy Future

It is inevitable that something so crucial to our economy and way of life would be subject to challenges and differing opinions. But we cannot afford to let the perfect be the enemy of the good. We must work together on solutions without drawing lines in the sand and perpetuating inefficient and detrimental regulatory

policies. We strongly encourage Congress to pass electric transmission and energy infrastructure planning and siting and permitting reform to reduce the long and often unsurmountable study requirements and misguided opposition from regulatory authorities. According to a recent survey conducted by the National Association of Manufacturers, 72.4% of respondents in the manufacturing industry cited the length and complexity of the current permitting reform process as affecting their investment decisions in various degrees, with 38.9% of respondents suggesting that they were extremely or moderately impacted.[8]

We applaud the Federal Energy Regulatory Commission ("FERC") for its recent rules intended to foster comprehensive transmission planning, codify its transmission backstop permitting authority, and alleviate the backlogs in connecting much needed generation to the transmission grid. On this front, ELCON has worked with other consumer groups to propose further reforms to the generator interconnection process to quickly connect energy resources to the grid and lower consumer costs.[9] ELCON is also a key supporter of the bicameral bill *Expediting Generator Interconnection Procedures Act* (H.R. 8085) sponsored by Representative Castor and Senator Cortez Masto[10] and we strongly encourage Congress to consider this piece of legislation that instructs FERC to take more aggressive reforms to ease interconnection backlogs, increase reliability, and lower energy costs.

Work will need to continue to further encourage grid deployment, anticipate growing demands, and mitigate emerging challenges. The industrial industry endeavors to continue collaboration with FERC and its state regulators in pursuit of continued reforms and greatly encourages Congress, FERC, and the states to strengthen interregional transmission planning to identify multi-value projects and capabilities that open access to sufficient energy resources and deliverability optionality to meet the needs of growing demand and mitigate other grid stresses.

And finally, while we all aim to be good stewards of our environment and precious natural resources, overly aggressive rules from the Environmental Protection Agency exacerbate an already precarious and taxed energy system. Unfortunately, our desire for cleaner energy and industrial processes is not enough to

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[8] National Association of Manufacturers, "2024 First Quarter Manufacturers' Outlook Survey," (March 5, 2024); https://nam.org/2024-first-quarter-manufacturers-outlook-survey/.

[9] Ethan Howland, "Consumer groups, R Street urge FERC to expand interconnection reform proposal to increase savings," Utility Dive (June 9, 2023); https://www.utilitydive.com/news/ferc-interconnection-reform-proposal-r-street-elcon-nasuca/652570/.

[10] Press Release, U.S. Senator Catherine Cortez Masto, "Cortez Masto Introduces Legislation to Improve Reliability of America's Electricity Grid, Lower Energy Costs," (April 18, 2024); https://www.cortezmasto.senate.gov/news/press-releases/cortez-masto-introduces-legislation-to-improve-reliability-of-americas-electricity-grid-lower-energy-costs/.

overcome the realities of physics. Any transition to a cleaner economy must be done at a pace and scale that ensures we keep the lights on at affordable rates.

In conclusion, at a time of significant growth in industry and electric demand, we must not take anything off the table. We must commit to a coordinated, cooperative, and bold energy plan for both our electricity supply and the necessary infrastructure to ensure reliable and affordable service that underpins our national economy, national security, and future prosperity.

Senators, I thank you again for this opportunity to appear before you and the members of this Committee today. I will now conclude my remarks, and I look forward to taking your questions.