American Industry Needs Low-Cost Energy and an Expanded Power Grid

By Karen Onaran
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The Trump administration is working to unleash American energy to restore the nation's economic prosperity. But the economic sectors driving this prosperity will require a stronger, expanded power grid to support this growth.

With policy reform and the right incentives in place, a growing U.S. industrial sector could bolster our global competitiveness, strengthen national security, create jobs, and support local economies.

It's no secret that advanced manufacturing and other industrial facilities require significant amounts of low-cost, reliable electricity. These sectors use more than one-third of the nation's energy to produce the products and goods that make America the world's leading economy. And that energy usage is projected to grow by 36 gigawatts (GW) by 2030 — the amount of electricity needed to power more than 25 million homes.

Bringing that power online efficiently will require significant but cost-effective upgrades to the nation's transmission infrastructure. That means new high-voltage regional and interregional lines, as well as the deployment of advanced transmission technologies (ATTs) to maximize the use of the existing grid infrastructure.

Notably, the administration recently called for the deployment of all these transmission solutions. Interregional transmission lines would "reduce price differentials across regions by letting power flow where it is most needed, lowering production costs and increasing resiliency," the White House Council of Economic Advisers recently stated. That same month, the White House touted the need to "enhance the efficiency and performance of the transmission system" using advanced grid management technologies and line upgrades, according to the AI Action Plan.

Without an expansion of the transmission network, growth in electricity demand from new manufacturing plants and other large users of electricity could strain the grid and increase the risk of power outages. Manufacturers don't take this risk lightly; outages at large facilities can cause safety issues and supply chain disruptions with long-lasting effects on their businesses and the global economy.

In addition to maintaining grid reliability, expanding transmission capacity would help keep prices affordable for consumers across the country. Well-planned transmission expansion, rather than piecemeal upgrades, can save consumers on their energy bills for decades to come.

Fortunately, state utility commissioners and regional grid operators have solutions that can quickly add grid capacity to help meet demand growth. ATTs – which include grid-enhancing technologies and high-performance conductors – are quick-to-deploy infrastructure, hardware, and software options that cost-effectively add capacity to the existing system. During this year's legislative session, at least ten states passed laws requiring the consideration or deployment of ATTs, with similar bills still under consideration in several other states. State utility regulators in states that passed ATT bills will soon have an opportunity to ensure their local utilities are optimizing their grids.

To keep costs down for all customers in the longer term, state regulators, regional grid planners, and utilities can work together to plan efficient, high-voltage regional lines. Large-scale regional lines help keep costs down by transporting the lowest-cost electrons from power plants across the region and are often more cost-effective than local upgrades. The Great Plains, Midwest, and Texas grid operators approved regional transmission expansion plans in recent years, showcasing how better regional transmission planning is possible in every region across the country.

Interregional transmission lines are another longer-term solution for cost-effectively upgrading the grid. The Great Plains and Midwest grid operators recently approved new lines through a first-of-its-kind planning process which will help the two regions cost-effectively share power. While the agreed-upon lines are a good first step, more interregional lines are needed.

Additionally, policymakers have an opportunity to streamline the nation's antiquated permitting processes this fall. As Congress gears up for permitting reform discussions next month, lawmakers must ensure legislative changes represent sensible reforms that will accelerate the buildout of the transmission and generation needed to power our growing industry.

Manufacturing and energy have always had a reciprocal relationship, but we're now entering a new era — one in which American manufacturing and energy dominance are intertwined as an economic imperative. U.S. manufacturers are investing in America, and we must now invest in the infrastructure the industry needs to thrive.

President Donald Trump's leadership is opening new opportunities, but more work is needed to ensure we have the power and regulatory frameworks needed to bring his vision to fruition.

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