

# The infrastructure that drives America's future: Electric transmission



By Kathy Shea

It's the most critical national infrastructure of all: our interstate electricity transmission system. This 700,000-mile network of high-voltage wires that crisscross the country feeding energy into our communities powers America's digital economy much as roads and bridges carry physical commerce.

The problem is that we are putting increasing demands on electric infrastructure that wasn't designed for today's needs. We need an updated

and expanded power grid to support exponential technologies, new sources of energy coming online and the related needs of customers as we rush further into the 21st century economy.

Alaska Sen. Lisa Murkowski is right on target when she points out that energy infrastructure is "central to our way of life and our standard of living, but it is almost always an afterthought."

## Grid infrastructure in the spotlight

Natural disasters and events like the solar eclipse serve to bring the power grid into public consciousness, however briefly.

Hurricanes Irma, Harvey and Sandy are the most recent examples of the importance of the interconnected electricity grid. When the power goes out, everyone is affected. We need a system that is strong, networked and highly resilient in order bring electricity back online to our cities and towns as soon as

possible after a storm.

The recent solar eclipse also put electric infrastructure in the spotlight. While the nation watched in wonder, electric engineers made sure that our systems could still provide needed energy to places like California where its massive solar energy generation went dark. This was a successful event for our industry because the interconnected electricity transmission system delivered electric energy from distant locations — working as it was meant to work.

To continue to achieve the highest degree of reliability and efficiency that Americans expect in an increasingly dynamic and often disruptive economic and technological environment, we still need a diverse portfolio of resources, energy efficiency programs, demand responsiveness, conventional and renewable low-carbon generation, as well as imports of electricity.

**Updating and expanding our transmission grid will allow our industry to maintain the highest level of reliability and resilience while meeting our nation's advancing energy needs for decades to come.**

## Electric transmission infrastructure's evolving role

Transmission will play a pivotal role in securing a successful and cost-effective energy portfolio. It will facilitate the delivery of new resources and technologies. It also acts as insurance against unforeseen but inevitable changes in markets, climate and demography, many of which would otherwise increase risks and costs to customers. In support of this energy future, the Department of Energy's recently released grid study contains important guidance for improving grid resiliency standards and transmission siting processes.

These and other emerging energy issues have pushed our industry to adopt modern thinking toward a regionally connected grid instead of focusing only on building local facilities, and it has made us more dynamic and capable of adapting to new realities — all in the name of serving customers. In fact, a 2016 study done for the transmission industry group WIRES projected savings of up to \$45 billion annually in the U.S. if we as a country quit just talking about infrastructure and start making timely development of the grid a priority. That means streamlining transmission planning and thinking more positively about transmission as a wholly integrated and flexible interregional network instead of a patchwork of systems. Just as the interstate highway system facilitates commerce throughout the country, a robust, interconnected transmission grid provides access to a greater abundance of resources and customers that make the flow of electricity more efficient.

## Collaboration is key

For over a decade, WIRES has had a diverse membership of investor-owned, publicly-owned and member-owned transmission providers, as well as transmission customers, regional transmission organizations, and service and technology companies.

We know that modernizing our most important national infrastructure — our backbone power grid — requires our industry to collaborate with federal and state regulators, legislators, customers and other stakeholders. Updating and expanding our transmission grid will allow our industry to maintain the highest level of reliability and resilience while meeting our nation's advancing energy needs for decades to come. Let's keep this conversation going.

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