

**CASE STUDY**

# Vision Transforms Into Strong and Sustainable Capital Investment Program

When FirstEnergy needed a plan to manage an annual expenditure of over \$1 billion, it leveraged a long-standing partnership with Burns & McDonnell to implement its vision — Energizing the Future — and create a manageable portfolio of improvements to meet customer needs and corporate goals.

**Challenge**

The Energizing the Future portfolio comprises hundreds of projects planned by FirstEnergy Corp., a client and partner of Burns & McDonnell for over 30 years. The portfolio is enhancing service reliability, increasing operating flexibility and improving the security of the company's electrical system.

**Solution**

As FirstEnergy's chosen program manager, our team participates in an ongoing cycle of identifying, developing, designing, executing and placing projects in service in accordance with a long-term portfolio of phased system improvements.

**Project Stats****Client**

FirstEnergy

**Location**

Multiple locations

**Total Program Value**

\$8 billion

# 700+

**MILES OF TRANSMISSION LINE\***

# 1.2K

**SUBSTATION EQUIPMENT  
PROJECTS\***

# 10K

**NETWORK DEVICES REPLACED\***

*\* Completed through 2021*

Our team of nearly 450 multidisciplinary professionals, including more than 250 design engineers, is typically engaged in portions of several thousand individual projects in various stages of completion. The team is a vital part of the framework bridging any gaps between planning, design, outage coordination, sourcing and execution to deliver meaningful projects to meet the technical and financial objectives of the program.

The Energizing the Future portfolio of projects is designed to:

- Upgrade system conditions by replacing equipment that is more than 40 years old or no longer supported by manufacturers.
- Enhance system performance through added communications and analytic infrastructure to harden the system and reduce outage minutes.
- Increase physical security at critical facilities by installing perimeter video, thermal imaging, virtual inspection and cut-proof fencing.
- Add operating flexibility for current customers and increase capacity to accommodate new customer load.
- Lower the company's overall operations and maintenance costs.

## Results

We have helped FirstEnergy complete timely rebuilding, retrofitting or replacement of over 700 miles of transmission lines, hundreds of substations, more than 10,000 network devices and 1,000 miles of fiber-optic cable. Through collaboration and efficiencies achieved through economies of scale, the Energizing the Future portfolio is helping the utility maintain and strengthen its vital infrastructure in support of its communities and customers. This framework will continue to bolster FirstEnergy's efforts for years to come.

## About Burns & McDonnell



Burns & McDonnell is a family of companies bringing together an unmatched team of engineers, construction and craft professionals, architects, and more to design and build our critical infrastructure. With an integrated construction and design mindset, we offer full-service capabilities. Founded in 1898 and working from dozens of offices globally, Burns & McDonnell is 100% employee-owned. For more information, visit [burnsmcd.com](https://burnsmcd.com).