



Alabama Power and E Source win prize for data analytics innovation

The Southern Company utility and E Source partnered on an advanced predictive power mapping data system to improve service reliability.

By Adarsh Nalam

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Boulder, CO (February 20, 2025)—[E Source](#) and [Alabama Power](#) have won the US Department of Energy's (DOE's) Digitizing Utilities Prize for the development of a custom enterprise graph database, a predictive power-mapping data system. The winning round 2 initiative builds on the success of the project team's round 1 proposal.

Launched in October 2023, the Digitizing Utilities Prize is a DOE initiative that incentivizes utilities to partner with software developers and data experts to address complex challenges in the electricity sector through data analytics and system digitization to improve grid reliability and resiliency.

The database, which helps Alabama Power more easily identify potential issues in the distribution network, earned the project team a \$275,000 cash prize (\$75,000 in round 1 and \$200,000 in round 2) and a \$75,000 technical voucher to a national laboratory.

The enterprise graph database is a tool that organizes and connects different datasets, making it easier to analyze and visualize network connections, asset relationships, and risks. It helps simulate distribution

networks, analyze power flow, optimize grid operations, and assess grid-side and customer-side investments. One of its main benefits is providing near real-time updates and insights by connecting to source data, allowing continuous updates instead of waiting for annual system modeling updates. It also keeps a record of previous grid configurations for accurate and comprehensive comparative analyses.

It adds to a series of successful data initiatives at Alabama Power, executed in partnership with E Source, that improve operational efficiency, manage risk, and enhance customer satisfaction.

Commenting on the importance of data analytics to utility effectiveness, [Shane Powell](#), Southern Company Director of Data Analytics for Power Delivery said, “We are at a key moment in the utility industry where data innovation has made significant progress to meet our needs and goals. At Alabama Power, we are focused on developing practical data solutions that offer quick benefits, can grow with our needs, and provide long-term results. This award is a testament to the integrity and effectiveness of our approach. Our collaboration with E Source has been critical to the success of this and other data initiatives at Alabama Power, so we are excited to move into the next phase of this program with their team.”

E Source and Alabama Power will now participate in round 3 of the prize program, a separate competition with a \$2.5 million prize pool. At this stage, teams will refine and demonstrate their solution’s effectiveness and scalability for industry adoption.

[Tom Martin](#), Vice President of Data Science at E Source, noted Alabama Power’s commitment to innovation in data analytics as the foundation for the win, saying, “I am delighted with the win and proud of our collaboration with Alabama Power. The success we have seen with this project reinforces our commitment to helping utilities pursue pragmatic innovation and secure funding to address complex industry challenges with data solutions. Alabama Power’s dedication to enhancing its grid operations through advanced technologies has been essential to our successful working relationship, and we are looking forward to working with them in the next phase of the program.”

Throughout 2025, project teams in round 3 will choose a track focused on resource integration or grid-sensing capabilities. The winners will be announced in December. To learn more about the Digitizing Utilities Prize, visit the American-Made Challenges website.

E Source’s data science experts support utilities with AI-powered data solutions to enhance a broad range of operations initiatives. To learn more about E Source’s data science capabilities, visit [the company’s website](#).

About E Source

E Source combines industry-leading research, data science, and consulting to help utilities make and implement better data-driven decisions that positively impact their customers, their bottom line, and our planet. Headquartered in Boulder, Colorado, E Source has teams across the US and Canada. Learn more at www.esource.com.

About Alabama Power

Alabama Power, a subsidiary of Atlanta-based Southern Company (NYSE: SO), provides reliable, affordable electricity to 1.5 million customers across the state. Learn more at AlabamaPower.com.

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