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A Smart Laboratory

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A smart laboratory

The Burns & McDonnell Smart Grid Lab is boosting education, research and recruitment in the College of Engineering.

The lab, in Rathbone Hall, includes power grid and network communication equipment to support undergraduate and graduate research projects. It is one of the first facilities to test how emerging software-defined networking technology can more efficiently manage, distribute, use and secure electrical power.

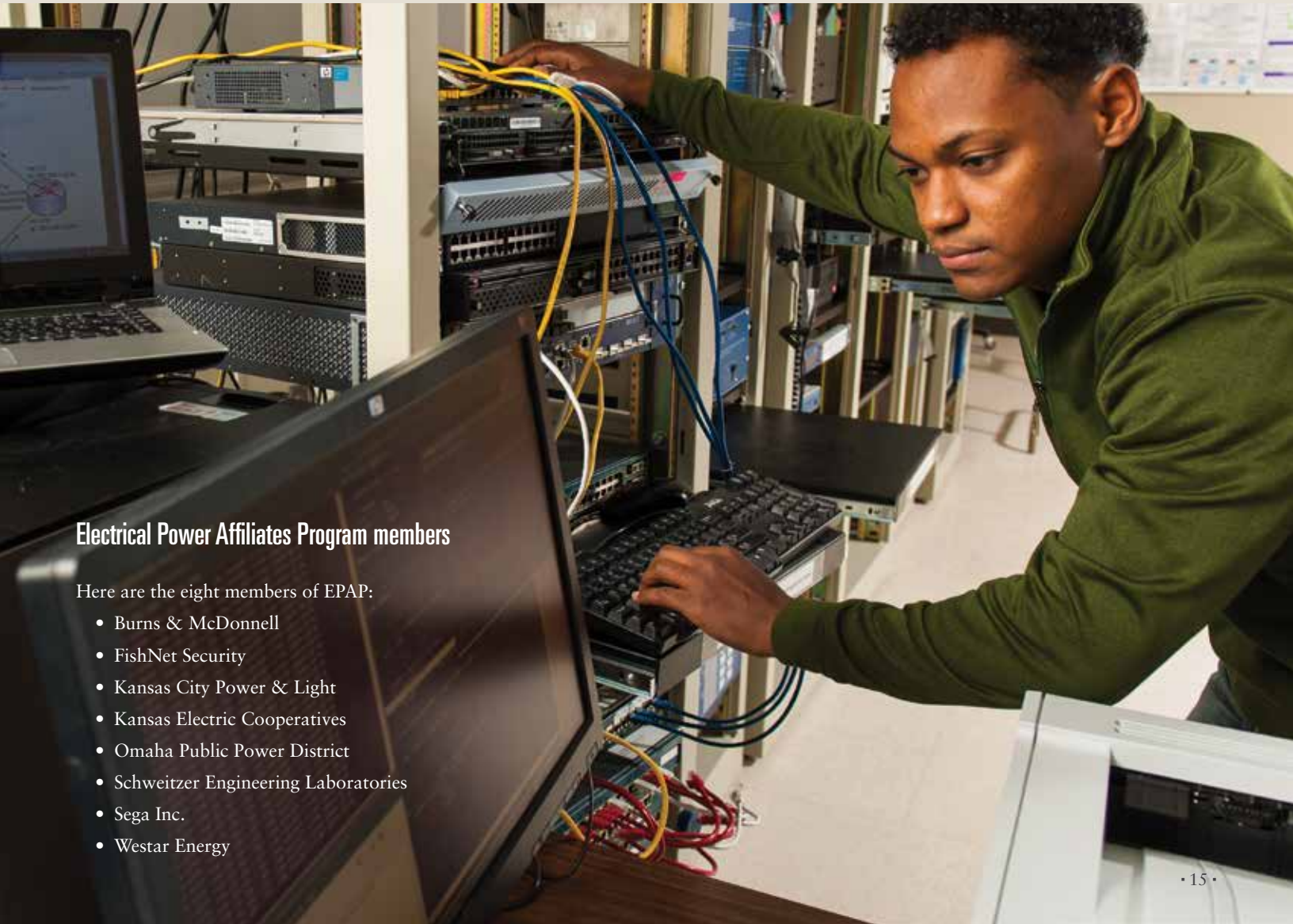
"The lab has been a tremendous tool to help with teaching and research," said Don Gruenbacher, head of the electrical and computer engineering department. "The lab is used for many of our senior-level design courses, including our power systems and computer networking courses. Our students also have used the laboratory and its capabilities for research projects involving power systems and power systems protection."

The lab has received financial support from Burns & McDonnell, an international engineering, architecture and consulting company based in Kansas City, Missouri. FishNet Security, an Overland Park, Kansas-based information security provider, has donated, integrated and managed software-defined networking equipment.

Gruenbacher and Caterina Scoglio, professor of electrical and computer engineering, have used the lab to research the development of software-defined networking approaches to communications for smart grids. Noel Schulz, director of the lab and the College of Engineering's associate dean for research, also has conducted smart grid research in the lab.

"We are able to use the laboratory as an outreach tool for students ranging from kindergarten to 12th grade," Schulz said. "The lab provides us with the opportunity to let the public know about how research affects day-to-day activities with electrical power. Such public outreach is key to our 2025 goals."

By Jennifer Tidball



Electrical Power Affiliates Program members

Here are the eight members of EPAP:

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- Kansas City Power & Light
- Kansas Electric Cooperatives
- Omaha Public Power District
- Schweitzer Engineering Laboratories
- Sega Inc.
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