

FACT SHEET

UT's Utilities and Energy Management (UEM) provides reliable and cost-effective electricity, chilled water, steam, deionized water, compressed air, emergency power, and elevator services for The University of Texas at Austin. We are part of the Planning, Energy and Facilities unit within the Office of the Senior Vice President and Chief Financial Officer. We have more than 170 employees in five divisions:

- Power Plant and Chilling Stations
- Electrical Distribution and Elevator Services
- Mechanical Distribution
- Energy Management and Optimization
- Support Services

Our sole energy source is natural gas, which is delivered directly to the UT campus to power our infrastructure. We generate all of our own electricity, and we only produce what we need.

The campus operates as a **district energy system**, whereby our main campus buildings are connected underground by a network of pipes and circuits. Thermal energy and electric power are delivered to each building from the central power plant and chilling stations. This centralized type of energy distribution is far more efficient than the conventional utility distribution systems found in most U.S. cities.

TO POWER THE ENTIRE UT CAMPUS, WE USE THE SAME AMOUNT OF FUEL USED IN 1976.

Energy conservation: Since 2009, demand-side energy use (energy used by buildings) has been reduced by more than 20%, and annual utility cost avoidance from supply-side energy conservation measures has reached \$12 million, totaling nearly \$160 million over the last 15 years.

Carbon-neutral growth: UT Austin has maintained flat natural gas use since 1976, despite campus growth of more than 100 percent, representing four decades of carbon-neutral development and offsetting more than 220,000 metric tons of CO₂ production each year.

Water reuse and use reduction: We capture condensate from nearly all building HVAC equipment and use it to offset cooling tower makeup. We also purchase reclaimed water, offsetting the need for more than 1.2 billion gallons of municipal water use since 2006.

[Learn more about our efficiency and optimization efforts.](#)

100%
On-site Generation

85%
Average Annual
Efficiency

70+ Miles
Underground
Distribution

22 Million
Square Feet Served

74,000
Students
Faculty
Staff



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FAQ

Why does UT have its own microgrid?

Our independence from the City of Austin's electrical grid began nearly a century ago with the construction of the Hal C. Weaver Power Plant in 1928, and the installation of the first campus generator in 1929. Our forward-thinking university leaders understood that the unpredictable nature of the city's power grid at that time would not support UT's mission to build a flagship institution for research and academic excellence. The plant has grown from two 1 ½ MW generators to more than 130 MW of capacity, providing the entire campus community with a reliable, cost-effective source of power. We are tied into the city's grid, and we are able to receive power from Austin Energy at a moment's notice if needed. We have a remarkable record of only five campus-wide outages since 1964.

What are the advantages of generating your own energy instead of buying it?

A large, dense campus, such as UT Austin, is best served by what is known as a combined heat and power (CHP) plant. By utilizing highly efficient gas turbine generator technology, we meet all of our power needs, and we are able to recover energy in waste heat by producing steam and utilizing it as a heating medium all across campus (e.g., for domestic water heating or comfort heating). Most U.S. municipal utilities do not have the option of extracting this additional energy from their systems. In addition, we are able to share how the technology works, along with our efficiency practices, with many of the UT students and faculty who visit and tour the plant throughout the year. It provides an excellent learning opportunity, particularly for those in the areas of engineering, geosciences, and sustainability studies.

Do you plan to implement renewable energy sources, such as solar or wind power?

We evaluate the potential for implementing renewables on an ongoing basis. In terms of logistics and cost to the university, and compared to the 85-87% efficiency rate at which we are already operating, switching to solar or wind power in the near future is not a viable option and would significantly increase our annual operating costs. To

have one hundred percent green power (purchased from Austin Energy) would increase our budget by more than \$7.5 million per year and would actually reduce plant efficiency.

Our aim is to provide the most cost-effective and reliable utilities to the UT Austin campus. Thus, as the technology for renewable sources continues to mature, we will continue to evaluate how to incorporate such sources into the mix.

Do you sell any of your energy to the public?

First and foremost, our priority is to provide UT with the most cost-effective and reliable source of power possible in order to maintain its research and learning environments. Becoming a seller in the energy market would not align with our mission. We are further limited by geographic constraints, being that our campus is located in the center of a municipality, and thus we lack the capability to send power to outside customers.

Where does your water come from?

For the water used in power plant and chilling station operations, our primary source is recovered water from run-off, rain water, air conditioning condensation, and other clean sources. We also purchase reclaimed, irrigation, and domestic water from the City of Austin. Our largest usage goes to plant cooling systems such as cooling towers, where alternative sources, such as recovered and reclaimed water (the City's treated wastewater effluent) now comprise nearly 30% of overall use.

Awards and Recognition

- PEER Platinum Certification Renewal, 2020
- Optimum Energy recognition, 2020
- International District Energy Association System of the Year Award, 2018

[View more awards and recognition.](#)

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