District Energy at Mizzou

2017 System of the Year!
University of Missouri

- Founded in 1839 in Columbia, MO as the 1st public university west of the Mississippi River
- Over 33,000 students from all 50 states and 120 countries
- Strong research focus and member of the Association of American Universities
- Over 15 Million sqft of facilities including critical utility service to hospitals and clinics, a research reactor, a safety level 3 biocontainment laboratory, and numerous research buildings
MU Energy Management
a campus utility enterprise

Reliable!

Cost Efficient!

Sustainable!
Comprehensive Utility Micro-grid

- 66 MW electric generation capacity
- 40 MW 69KV transmission connection
- 1,100,000 lb/hr steam capacity
- 32,000 Tons chilled water capacity
- 4 Million gal/day drinking water capacity
- 110 miles of under-ground utilities
- Fully metered and automated
Reliable and Resilient

- Full on-site generation
- N-1 operational availability practice
- 40 MW 69kV electric grid tie
- Black start capability
- Multi-fueled energy plant
- Underground distribution and looping
- Proactive maintenance practices
- Over 99.9993% utility availability

24/7 monitoring and optimization to ensure highly reliable utility service
Combined Cooling Heat & Power at Mizzou

MU produces its utilities using highly efficient technologies dispatched with a focus of cost effectiveness!

A 2010 EPA CHP Award Winner!
Energy Optimization and Conservation

MU’s nationally recognized energy conservation efforts began in 1990!

- 21% Reduction in Energy Use (per GSF)
- $9.5 Million Annual Utility Cost Avoidance
- $85 Million Cumulative Utility Savings
Energy Intensity Continues to Drop

Current Initiatives:

- LED Lighting Conversions
- Improved HVAC Controls
- Automated Fault Detection
- Retro Commissioning
- Waste Heat Recovery
Renewable Energy for Mizzou

Biomass Combined Heat & Power
Grid Wind Energy
On-Campus Wind Energy
On-Campus Solar PV
On-Campus Solar Thermal

Our on-site renewable technologies are education resources for students!
Energy Sustainability Success!

- Over 39% total renewable energy portfolio of biomass, wind, and solar
- Over 51% reduction in greenhouse gas emissions since 2008
- Over a 21% reduction in academic building energy use and a 50% reduction in water use through conservation efforts
- EPA’s Green Power Partnership recognized MU as a national leader in the development and use of renewable energy
Thanks for our Missouri Military Bases!

Fort Leonard Wood Army Base – Home to the Maneuver Support Center of Excellence which trains over 80,000 military and civilians each year!

Whiteman Air Force Base – Home of the 509th Bomb Wing, which operates and maintains the Air Force's premier weapon system, the B-2 bomber!