

Energy & Utility Terms

- Electrical
 - Typical cost of electrical energy per kWh in the US
 - \$0.03 to \$0.15 per kWh
 - A set of equipment that reduces electrical voltage from high to low for facility usage
 - Substation or Transformer
 - A standard unit of electrical POWER equal to 1,000 Watts
 - kilowatt
 - A measure of electrical Energy equal to 1,000 watts operating for one hour
 - Kilowatt hour or kWh
 - The peak amount of electricity consumed over a period of time
 - Demand or Electrical Demand
- Water/Wastewater
 - Water considered safe for drinking
 - Potable Water
 - Wastewater diverted for non-potable purposes
 - Reclaimed Water
 - Water added to a system to compensate for loss by evaporation or leaks
 - Make-up Water
 - A purification technology that forces water through semi-permeable membranes to remove impurities
 - Reverse Osmosis or RO
 - A device used to protect the potable water supply from contamination due to backflow
 - Backflow Preventer
- Energy Management
 - A computer-based system that controls and monitors building mechanical and electrical equipment
 - Building Automation System (BAS) or Building Management System (BMS)
 - An electronic device used to modulate the speed of an electric motor based on need
 - Variable frequency drive (VFD)
 - Most prevalent Building Automation System (BAS) communication protocol today
 - BACnet
 - An industrial computer system that monitors and controls a process
 - Supervisory Control and Data Acquisition (SCADA)
 - A system that reduces electric demand by producing ice or chilled water during off-peak periods for use during on-peak periods

- Thermal Energy Storage (TES)
- Heating
 - Kind of heat that can be felt or measured with a thermometer
 - Sensible heat
 - A vessel used to convert water into Hot-Water or Steam
 - Boiler
 - A device used to transfer the thermal energy from steam to water
 - Heat Exchanger
 - A control valve used to convert higher pressure distribution steam into lower pressure process steam
 - Pressure Reducing Valve (PRV)
 - Heat required to transform 212 F (100C) water into 212 F (100C) Steam
 - Latent Heat
- Cooling
 - A large piece of equipment that “makes” cold water used for space cooling and for dehumidification
 - Chiller
 - A term frequently used to describe a difference in temperature between two measuring points (like supply and return)
 - Delta-T
 - Device used in buildings to heat/cool, filter and circulate air as part of a HVAC system
 - Air Handler or Air Handler Unit or Fan Coil
 - A medium commonly used to absorb the unwanted heat in an air handling unit’s cooling coil
 - Chilled Water or Refrigerant
 - A heat rejection asset that uses water evaporation to transfer heat into the atmosphere
 - Cooling Tower
- Decarbonization/Sustainability
 - Most prevalent greenhouse gas in the atmosphere
 - Carbon-dioxide (CO₂)
 - Most vocal advocates of decarbonization on a college campus
 - Students or student groups
 - Examples of carbon-free sources of energy
 - Solar, Wind, Hydro, Nuclear etc.
 - Fuel with the highest greenhouse gas emissions per Btu
 - Coal
 - Scope of greenhouse gases directly generated by the university
 - Scope 1