



Frequently Asked Questions “The Energy Behind What’s Next”

How dependable is steam and chilled water service from TECO? Can TECO still operate under hurricane conditions?

Given its location and mission-critical customers, it is vital for TECO to be vigilant about storm preparations. TECO has developed and implemented detailed plans to prepare for both natural and manmade disasters before they strike. TECO’s preparedness has enabled it to weather Hurricane Alicia in 1983, Tropical Storm Allison in 2001, Hurricane Rita in 2005 and Hurricane Ike in 2008 without losing service to its customers.

Why is there a large wall around TECO’s Central Plant?

The wall is a specially constructed floodwall that is designed to protect the plant from 100-year floods.

TECO operates a district energy system, piping steam and chilled water underground to customer buildings. Are there other district energy systems in Texas?

Yes. Just for starters, district energy systems operate in downtown Houston, Austin and San Antonio; at the Dallas-Fort Worth Airport; and on nearly all of the campuses of The University of Texas.

How many locations does TECO have?

TECO solely operates on the campus of the Texas Medical Center in Houston. It owns and operates one Central Plant and a satellite plant called South Main. It also operates a plant for one of its customers on Texas Medical Center’s mid campus.

Who designed the exterior of TECO’s new thermal energy storage tank and East Chiller Building?

Houston-based Jackson & Ryan Architects incorporated architectural features into TECO’s Master Plan Implementation Project that reflect the surrounding Texas Medical Center.

If TECO just became the largest district cooling system in the U.S., who used to be the largest?

Thermal Chicago was previously the country’s largest district cooling system. It has 100 customers in the downtown loop. The world’s largest district cooling systems are located in the Middle East, where the cooling need is understandably significant.

What is district energy?

District energy is not a new technology. It is not a technology we have to wait to test or to research. It is here today and it works today.

District energy systems produce steam, hot water or chilled water at a central plant and then pipe that energy out to customer buildings for air conditioning, space heating, dehumidification, sterilization, kitchen and laundry processes, and domestic hot water use. Individual buildings don’t need their own boilers or chillers. A district energy system does that work for them.

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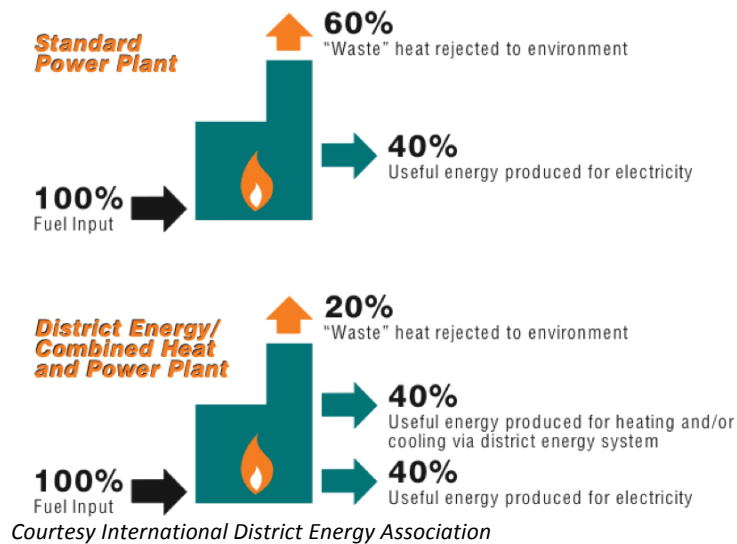
TECO’s district energy system is now connected to its new combined heat and power system. Many people may not be familiar with district energy because it quietly does its job. Plus, the pipes that deliver the steam, hot water and/or chilled water are usually buried underneath the streets, so most people don’t know they are there.

How does combined heat and power (CHP) work?

Combined heat and power is an efficient, clean and reliable approach to generating power and thermal energy from a single fuel source. Standard power plants effectively use just one-third of the fuel they burn to produce electricity. Two-thirds of the fuel used to produce electricity ends up being rejected or “wasted” up the smokestack. By using this waste heat — effectively recycling it — to produce heating or cooling, efficiencies go up and emissions go down.

In TECO’s case, electricity and waste heat from the new natural gas-fired CHP plant are being used to produce steam and chilled water, which are piped underground through TECO’s district cooling and heating network to more than 18 million square feet of customer buildings. The 48-megawatt CHP plant will operate at 80 percent efficiency, cutting carbon dioxide emissions by more than 302,000 tons per year, the equivalent of taking 52,000 cars off the road or planting 72,000 acres of new trees.

Energy-Efficiency Comparisons



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