

# News Release



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## Revolutionary CHP Facility Wins Engineering Excellence Award

**Austin, Texas** – The Texas Council of Engineering Companies awarded an Austin Energy Cooling-Heating-Power (CHP) facility a silver award in its 2005 Engineering Excellence competition. Austin Energy is owned by the city of Austin. Located at a local business park, the new facility was partially funded by the Department of Energy (DOE). It is part of DOE's effort to diversify the nation's power supply. CHP is a form of distributed energy that recycles valuable waste heat produced in electrical generation.

The 4.5 MW unit has a new technological approach – it recycles the waste heat from the natural gas-fired generator, and this waste heat is the only fuel source for the chiller that provides air conditioning and heating.

“This new facility is 40 to 50 percent more efficient than conventional units in how it uses fossil fuels to generate power and thermal energy,” said Ed Mardiat, director of CHP development for Burns & McDonnell, the prime design-build contractor. He estimates the plant will be at least 70 percent efficient.

To achieve these results, the low emission, natural gas-fired combustion turbine was installed in conjunction with an absorption chiller that recycles waste heat produced by the turbine to produce chilled water without the need for any

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additional fuel. The chiller is capable of delivering 2,500 tons of chilled water, sufficient to air condition 1 million square feet of office space.

Burns & McDonnell was awarded a project by DOE and after an extensive site selection process partnered with Austin Energy to integrate this first of a kind system at The Domain Business Technology Park in Austin, Texas.

DOE's Distributed Energy Program focuses on reducing the demand on the nation's electrical transmission grid and increasing efficiency of electrical supply through on-site cooling, heating and power. Onsite power also provides building owners with additional protection from power outages. By sponsoring research and development of new technologies, the DOE hopes to make these types of packaged integrated energy systems the preferred method of providing cooling, heating, and power.

Less complex than traditional one-of-a-kind designs which need extensive on-site engineering, these integrated systems result in lower capital costs, shorter construction schedules, easy replication for multiple applications and control systems that can optimize facility energy use," said Jan Berry, research and development program manager for Oak Ridge National Laboratory (ORNL).

The plant is modular and is a test of off-the-shelf technology that can be scaled up or down to meet the needs of a wide variety of situations.

Founded in 1898, Burns & McDonnell is an engineering, construction, environmental consulting solutions firm with more than 1,775 employees and offices worldwide. For more information about Burns & McDonnell, visit its website at [www.burnsmcd.com](http://www.burnsmcd.com)

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