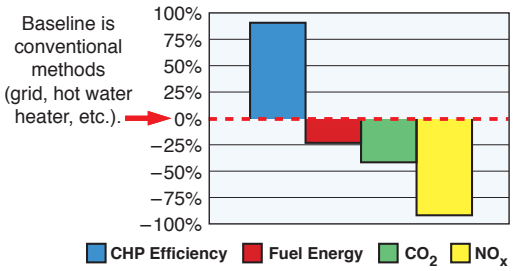
Microturbines for Commercial Markets

PureComfort™ systems are well suited to applications in hotels, offices, schools, and hospitals as well as in supermarkets and other retail businesses that depend heavily on refrigeration. The first supermarket installation of the PureComfort™ 240 took place during July 2004 at a new 57,000-square-foot A&P supermarket in Mount Kisco, New York. It uses waste heat from its four 60-kW microturbines to produce chilled water for air conditioning.

A&P Fresh Market with UTC PureComfort™ 240M

- Skid-mounted, preassembled integrated energy system
  - Four 60-kW microturbines
  - Gas compressors
  - Carrier double-effect absorption chiller
  - Cooling tower
  - Chilled-water pumping system
- Provides cooling, heating, and power
  - 240-kW, 480-V gross electric power (at 59°F)
  - Absorption chiller provides hot or cold water for space conditioning.
  - Demonstrated efficiency >75%

New A&P supermarket



Each PureComfort™ system produces about 40% less carbon dioxide and 85% less NO_x per megawatt-hour than the average fossil-fuel-fired utility power plant.

Estimated Annual Avoided Energy Loads & Cost

Quantity	% of Annual Baseline — Energy	Annual Cost Savings ($)*
Grid Electricity	54%	$44,000
Refrigeration Compression	10%	$10,000
Space Cooling Compression	70%	$45,000
Desiccant Regeneration	50%	$9,000
Space Heating	75%	$21,000
Total		$129,000

Gas = $0.69/therm & Grid Electric at $0.13 kWh
*Maintenance costs not included

The Bottom Line?

Reduced Energy Costs!

Environmentally Friendly!

Ronald Reagan Presidential Library, Simi Valley, California

A new wing being added to the Ronald Reagan Presidential Library will house

- A Boeing 707 that served as Air Force One
- A Marine One helicopter
- An F-15 fighter jet
- President Reagan's limousine

Microturbines provide ~1 MW of power.

Air Force One in the new wing

The Boeing 707 served as Air Force One for presidents Carter, Ford, Nixon, G. H. W. Bush, Clinton, and G. W. Bush. Bringing power lines to the new wing was prohibitively expensive for the utility. Therefore, three UTC PureComfort™ 300 systems were installed on site to provide power and air conditioning.

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