

SMARTD, Danfoss Turbocor & Southern Air, Win Association of Energy Engineers Award for Citizens Bank Installation

Case Study: Bank Data Center

Location: Medford, Massachusetts

Benefits:

- Improved Energy Efficiency
- Superior Energy Savings
- Reduced Operating Costs
- Reduced Environmental Impact
- Built In Redundancy
- Lowest Total Cost of Ownership

The New England Chapter of the Association of Energy Engineers (AEE) announced its 2007 Energy Awards Projects at its February meeting. Among the award winners were Southern Air and Citizens Bank for the Citizens Bank data center project in Medford, Massachusetts.

The project achieved multiple goals, including:

- 1) An enticing electric utility rate being available if the data center could be switched over to in-house emergency generator power controlled by the utility company during peak demand periods.
- 2) The customer wanted to be able to lower condenser water temperatures under light load conditions, to significantly reduce energy consumption.
- 3) By reducing overall energy consumption, the owner would realize financial benefits of utility rebates and reduced electric power costs, and thereby offset the project cost.



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The facility's existing chillers were replaced with **two 90 ton SMARTD brand chillers** that utilize Turbocor oil-free, variable speed, centrifugal compressors. Because Turbocor compressors draw less than 2 amps at start-up (rather than a typical in-rush current of 300-400 amps) they are very compatible with the emergency generator application. No in-rush current, greatly reduced the generator capacity that would otherwise be needed.

Furthermore, the oil-free compressor design enhances operation at the lower condensing pressures that can be achieved, as oil return is no longer an issue. This provides extremely efficient operation at low load conditions, where the chillers will operate most of the time.



Dan Venezia of Citizens Bank and Bill Veazie of Southern Air

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From the New England AEE Chapter February, 2008 newsletter:

Congratulations to all the Energy Project award recipients!

At our last meeting, AEE-NE recognized excellence in regional energy projects by announcing this year's New England Chapter Project Award winners.

2007 New England Energy Project Awards (in alphabetical order) :

Bridgewater State College, Bridgewater, MA - Ameresco

Cape Cod Vocational Technical High School, Hyannis, MA - Aircogen CHP Solutions Inc

Citizens Bank, Medford, MA - Southern Air



Crystal Ice, New Bedford, MA - Con Ed Solutions

Condakes, Chelsea, MA - NRM

EF Education, Cambridge, MA - Bluestone Energy

Warren Prison, Warren, ME - Siemens Building Tech.

Western Connecticut State University - ENERNOC

Jim Donnelly, Chapter President of the New England AEE said:

“Congratulations to all our outstanding project award winners. You should all be proud of your accomplishments, and in earning the respect and admiration of your peers. It’s great to see so much of the useful information shared at our monthly meetings being put into practice. From using “other people’s money” to installing high efficiency equipment, to green and sustainable designs, we were able to highlight the best projects in the region at our most recent meeting.”

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Southern Air Inc. (South Boston, MA; www.southernairinc.com) a local contractor well known for its chiller expertise, is also a Certified Network Contractor for Danfoss Turbocor Compressors. They sell and install the compressors to retrofit existing cooling systems with inherent weaknesses (in addition to being very efficient, these compressors are very quiet (about 72 dBA), vibration free, and weigh less than 300 pounds apiece; ideal for retrofit applications).

SMARDT (Dorval, QC; www.smardt.com) specializes in using Turbocor compressors in its full line of water and air cooled chillers for commercial and industrial applications. They are represented in the Boston area by Trumbull & Campbell Associates.

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