

Business Focus: Keeping America Cool: Efficiency windfall for Aaon



[By D.R. STEWART World Staff Writer](#)

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Energy conservation makes sense, but it also translates into big bucks for Aaon Inc., the Tulsa-based manufacturer of commercial and residential heating and air conditioning systems.

[STEPHEN PINGRY / Tulsa World](#)

DeAngelo Oakley (left) and Elliott Bayhille work on insulated panels inside Aaon Inc.'s manufacturing plant in Tulsa.

Although the heating, ventilation and air conditioning industry -- and Americans in general -- has consumed energy over the past 30 years like a kleptomaniac in an unattended department store, the reckoning has finally arrived, industry executives say.

And for a company like Aaon, which is manufacturing some of the industry's most energy-efficient products, the new consciousness has given the west Tulsa manufacturer a competitive advantage with retailers, schools and businesses.

After a couple of years of retooling, Aaon broke out of the pack in 2006 with earnings of \$17.1 million, a 49 percent increase, on revenue of \$231.5 million, up 25 percent from a year earlier.

Aaon, with 1,450 employees companywide, is not an industry giant like Carrier or Trane, but it is winning critical acclaim where it matters: with its customers, one of whom is the new BOK Center arena under construction downtown.

Pamela Dunlap, director of mechanical engineering for Matrix Architects Engineers Planners Inc., one of three design firms involved with the BOK project, said several HVAC manufacturers were considered.

"Aaon had the low bid," Dunlap said.

Aaon CEO Norman Asbjornson said Aaon is the world leader in evaporative condenser technology, a mechanical technique of making large air conditioning units 30 percent to 40 percent more energy efficient.

David Knebel, Aaon's vice president of sales and technology, said the company has overcome problems with high humidity levels in air conditioned buildings by rerouting the air stream.

"We put in a heat recovery coil that adds heat to the air stream as the room (temperature)

load disappears," Knebel said. "We are efficiently operating the cooling coil at low, leaving-air temperature to remove moisture, and we are efficiently bringing the supply air temperature up in order not to overcool the room.

"That's the heart of the whole thing."

Customers are receptive.

"It took off like mad," said Kevin Teakell, Aaon's engineering manager for large commercial products. "It does a lot of things that higher-end custom units do, but at a much cheaper price.

"We insulated the (machinery-enclosing) cabinets in fiberglass in 2001. We redesigned it with foam insulation in 2004."

Asbjornson said foam has twice the insulation value of fiberglass. Between the sheet metal exterior and interior cabinetry of Aaon products are 2 to 4 inches of foam insulation, he said.

Asbjornson said Aaon had to overcome the industry's "we-have-never-done-it-that-way" mind-set.

"We didn't think it was a good reason not to do it," he said, "but it meant you had to totally redesign our products.

"We had to look at the next step to get on board energy efficiency."

An energy consultant who has a federal grant to increase the energy efficiency of residential housing visited Aaon a few weeks ago.

"It's their belief the biggest issue in the future for our society is going to be energy conservation and the use of energy," Asbjornson said.

The consultant told Aaon executives that 40 percent of U.S. energy consumption is used to illuminate, heat and cool commercial, industrial and residential buildings. Another 30 percent of this country's energy use is in transportation, and the remainder is consumed in a variety of other uses, the consultant said.

Aaon has been redesigning its heating, cooling and air handling systems along more energy-efficient lines since 2001, but the consultant's presentation imparted more urgency to the company's efforts, Aaon executives said.

"Anything we do right now is addressing a variety of things to improve the energy efficiency of our products," Asbjornson said. "The government has mandated how buildings must be insulated, how efficient windows should be, and yet there's no mandates for insulation of the (HVAC) box that processes all that air.

"It's like saying you have to do all this to conserve energy, yet you can leave your window open."

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Aaon Inc.

Business: Designs, manufactures and markets commercial rooftop air conditioning, heating and heat-recovery systems.

Address: 2425 S. Yukon Ave.

Management: Norman Asbjornson, president and CEO. 2006 revenues: \$231.5 million.

Web site: www.aaon.com

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