



- Four gas absorption chiller/heaters
- 200 total refrigeration tons
- 41,771 sq. ft. city hall / 24,000 sq. ft. recreation center
- Mesquite, Texas



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**The experience of a less-than-3-year payback on gas absorption chiller/heaters at city hall convinced city leaders to install similar equipment 5 years later at the city's rec center.**

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**W**hen the city of Mesquite bought a two-story, 41,771-square-foot former doctor's office to renovate for use as city hall, officials knew the energy system would need to be updated, as well. It gets plenty hot in Mesquite, so they asked both the gas and electric utilities to make presentations based on economic studies. They wanted to make an informed decision on which HVAC system would be the most efficient and economical in the long run. Five years later in 1994, when the city had to replace an ancient HVAC system at the Evans Recreation Center, no proposals were necessary. The decision was automatic, based on equipment performance at city hall. In both cases, the city installed Yazaki

absorption chiller/heaters.

Back in 1989, the city didn't know what it wanted or needed. Leaders were wide open to suggestions. The proposal from Lone Star Gas Co. made the most sense, as they learned that they could make up approximately \$80,000 in installation costs in about 3 years with three 50-ton Yazaki absorption chiller/heaters. "And this estimate was made even before we knew that a second nuclear plant would become operational and electricity rates would increase 15 percent," says Lone Star's Technical Account Manager Jim Phillips. "The city management started getting a return on their investment in the first year; plus they've saved even more





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than anyone thought, and faster, too.” He adds, “They’ve met or exceeded projected savings every year.”

“The absorption cooling uses water instead of freon and has few moving parts. Maintenance is easy.” This is a big plus for Ronnie Ashworth, superintendent for Building Services, City of Mesquite. “We were so happy with the energy savings and management at city hall, we installed a fourth Yazaki 50-ton absorption chiller/heater over an electric system at the rec center,” says Ashworth. The building, more than 30 years old and with no

insulation to speak of, is amply cooled and heated year round by the Yazaki unit. “Only on the very hottest days do we have to use the older system as auxiliary,” adds Ashworth.

The units at city hall and the rec center run on a four-pipe system that can cool and heat simultaneously. Because the units save at least \$26,000 per year to operate, the parties involved consider the Yazakis a wise choice when smaller tonnage is adequate.



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