



# Developing the natural gas cooling market

by John Cole, CEO Intellicochoice

**T**he natural gas industry has clearly entered a new era. Through an ever-expanding natural gas supply resource base, the U.S. has adequate natural gas supplies to meet its needs well into the foreseeable future. As a result, consumers are enjoying very affordable and stable natural gas pricing.

On the other end of the spectrum though, as of 2014, Americans are now paying some of the highest electricity rates in history, and the cost burden of adding new electric generation capacity in many instances is not feasible. Electricity production in the U.S. has been declining since 2007, while some areas' electrical infrastructures are at such a full capacity, that they cannot expand and must incentivize local businesses and citizens to begin using alternative energy products to save electric grid capacity. Additionally, the aging of the power grid infrastructure is causing more outages and problems and, by one account, would cost \$107 billion by 2020 to fix and upgrade.

This dichotomy between the gas and electric industries has paved the way for new innovative technologies and products in the residential and commercial natural gas cooling market. As such, Americans are now taking notice of innovative and

energy-efficient alternative technology and creating tremendous new opportunities for gas cooling businesses across the country.

Intellicochoice Energy, LLC (ICE) has begun to seize this opportunity by offering products in the U.S. natural gas cooling market. One of the most efficient and innovative products offered by ICE is the NextAire gas heat pump (GHP). The ICE NextAire commercial GHP can provide a good heating and cooling solution for many building owners. Not a new technology, this product has been evolving in the U.S. since the 1980s. Worldwide, there are over 700,000 GHP units installed, and the U.S. has only a fraction of these installations. Given the current natural gas price environment, and the higher electricity prices, the NextAire heating, ventilating, and air conditioning (HVAC) system can reduce a building's space conditioning costs by as much as 50 to 80 percent. Also, when a natural gas heat pump is deployed, an electric utility can benefit through less utilization during peak summer periods.

The NextAire eight-ton units can function for up to 17 separate and distinct areas, while the 15-ton units can function for  
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## THESE UNITS SIMPLY REQUIRE STANDARD ELECTRICAL AND GAS INFRASTRUCTURE HOOKUPS

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up to 33 separate and distinct areas of a building. In new construction, product lines can earn LEED points, which help satisfy local requirements for more green-oriented and environmentally responsible properties within communities. These units simply require standard electrical and gas infrastructure hookups available in most buildings, and they can be used for many construction areas including commercial, residential (above 3,000 square feet), schools, government, and military bases.

Public natural gas systems are capitalizing on these attractive statistics. Several public natural gas systems are working with ICE to develop the gas cooling market within their service areas. By focusing on return on investment for owners, value engineering, and HVAC contractor training and development, ICE understands it is critical to bring the right HVAC heating and cooling solution to clients.

heating and cooling are delivered by the NextAire GHP. Included in the installation are 11 Daiken air-handling units that create a multi-zone, climate-control solution for occupants. The Gas Technology Institute (GTI) has installed performance monitoring equipment at this site to get detailed performance data on the unit.

- City of Statesboro, Ga., installed one 15-ton NextAire unit at a renovated city fire station in August 2014. This installation, also in need of multiple zoning, features zone temperature control and is expected to provide up to 50 percent savings in heating and cooling costs.

In all of these projects, the public natural gas systems partnered with ICE in training contractors, developing case studies, and they all now plan to showcase the NextAire GHP to other building owners in their service areas. The process begins with a good HVAC solution and system, then develops with trained



Several public natural gas utilities that have installed a NextAire unit are described below.

- Okaloosa Gas District in Valparaiso, Fla., installed two 15-ton NextAire units in its corporate office in 2012. This 30-year-old corporate facility was in need of a complete HVAC system replacement. Reports now show substantial energy savings and efficiency for this 12,700-square-foot facility.
- City of Dublin, Ga., installed one 15-ton NextAire unit at its city hall in April 2014. This historic building utilizes over 30 tons of cooling and now has a section of the building where

mechanical contractors, and eventually works its way into the building design community.

“At locations all over the county, our clients are saving substantial dollars on their utility costs over what they would be paying with more conventional units. And with electric rates continuing to climb as fast as they are, natural gas rates staying relatively stable because of production increases, and given the quality of our NextAire product line, it makes a lot of sense for new and retrofit projects to consider the NextAire brand for their HVAC systems,” says Tom Young, CTO and founder of Intellichoice. ●