


HVAC NEWS

ADDRESSING CLIMATE CHANGE IN 2025

According to the American Gas Association, natural gas utilities have reduced their greenhouse gas emissions 69% since 1990. Natural gas yields fewer emissions than either coal or oil.

Improved understanding of world energy consumption helps us see systemic trends and patterns which point us to the most efficient and cost effective solutions. This edition will prepare you for new HVAC regulations that aim to target climate change concerns.



Innovative gas technology has already come forth from Tecogen, Combined Heat and Power systems. Recently (March/23) they unveiled a hybrid gas/electric chiller that seamlessly blends the two fuels with a system that employs free heat recapture to offset energy use.

Responsibly Sourced Gas (RSG) is conventional natural gas certified by a third party, verifying that it meets the stringent greenhouse gas standards. Current regulations require that collection and delivery of natural gas produce less than 1% residual methane emissions. Research is on-going in the development of RSG and other means of providing this affordable and clean fuel for future generations.

The opportunity for gas cooling becomes more widespread as electric costs increase. Other innovative gas technologies offer the continuance of natural gas fuel use for future generations and the alternative to a one fuel future with plaguing issues seen in states that have outlawed its current use.

In 2019 Tecogen was ranked by Wood Mackenzie as the 3rd largest provider of operational microgrids in the US. Tecogen's air conditioning and cooling products have the highest efficiency and lowest operating cost of any other equivalently sized system when heat recovery is used. Tecochill gas engine chillers save 1,167 tons of CO₂ a year over an electric chiller.

More information on Innovations in Gas Technology can be gathered from American Gas Assn., aga.com; the National Renewal Energy Lab, nrel.gov; and energysolutionscenter.org.

Lowering your GWP

The impact of climate change continues to drive innovation in the HVACR industry and a global refrigerant transition is underway. Becoming aware of the complexity of attaining decarbonization, this issue of CLOVER NEWS addresses alternatives to be considered as a response in real time, to the issue at hand, with natural gas and propane used as bridge fuels in the HVACR industry.

Refrigerant R454B and other lesser contaminating refrigerants will be used as of January 1, 2025, in all newly manufactured systems that contain refrigerant. Since condensing units manufactured with R454B cannot replace a condensing unit using 410A, older systems using the refrigerant 410A will be able to have those components replaced for the life of the system as long as the components are available and the refrigerant 410A continues to be manufactured and is affordable.

The Robur reversible heat pump is the first, air source, water-ammonia absorption heat pump using natural gas as the primary energy source. It supplies chilled water down to 37.4°F or hot water up to 140°F. The same unit is suitable for heating or cooling by reversing the absorption cycle, using the outside air for heat rejection in cooling mode and as a heat source in heating mode.

The efficiency at rated conditions is 126% in heating mode. This is 30% more efficient than the highest efficient available boiler and nearly 50% more efficient than your average boiler. The gas consumption savings during the heating season can offset the gas consumption normally required during the cooling season and with less than 1kW single phase electric draw.

Unit installation is outdoors. Doesn't require any indoor equipment room and operates on lower carbon producing natural gas or green propane with low pollution emissions and natural refrigerant fluids that have zero GWP and zero ozone depletion.



Products WE Know and Trust!

As an HVAC Wholesale Distributor, we trust the brands and products we sell. When we work with our customers, we want them to know they are receiving products that meet our own standards for quality and savings. So when the decision came, it was easy for Clover Corporation to make the right choice! Two 5-Ton Robur GAHP-AR gas heat pumps, were installed to heat and cool our very own 3,000 square foot offices, sales counter area, conference room, and drafting area.

Upcoming Workshops

Need a refresher? We will be conducting training classes. Let us know if you are interested in having your staff attend training. Email: info@clover-corporation.com with number of individuals and best day of the week to attend.

Equity in Available Energy

In August 2023 the Department of Energy reported that natural gas was 3.3 times more affordable than electricity and significantly more affordable than several other residential energy sources for the same amount of energy delivered and added that America's natural gas is critical to American and Global energy security.

The DOE went on to say that it is essential that consumers have the choice to select natural gas as their energy source and that natural gas is responsible for 61% of the CO₂ emissions reduction since 2005.

The American Gas Association (AGA) showed that households using natural gas for heating, cooling and clothes drying save on average \$1,068 per year compared to homes using electricity. AGA also said that natural gas is projected to be 1/2 to 1/3 the price of other fuels through 2050.

Natural Gas is the lowest emissions resource for most consumers today. It is crucial for reducing emissions while keeping prices affordable!

The trend toward sustainability in the built environment has brought new innovations in areas of design and construction. Passive housing properties such as a super insulated building envelope is conserving energy in heating and air conditioning.

On going research and development of other gas technologies as well as carbon reduction through carbon offsets, carbon capture and carbon sequestration promote the case for natural gas to remain a reliable fuel as a bridge to cleaner electric energy.

Incentives on the Horizon!

Energy rebates assist customers in upgrading to more efficient systems by reducing the first cost, equipment purchase. Higher efficiency systems reduce energy costs over the life of the equipment with long term savings.

Energize CT offers rebates on high-efficient equipment installed by an authorized contractor. Details on filing for rebates, available on the EnergizeCT.com website or as an authorized distributor, Clover Corporation offers assistance in filing for rebates.

The Inflation Reduction Act (IRA) also offers federal tax credits for projects incorporating low emission technologies if construction begins before 1/1/2025. Up to 50% of the project cost is available if the requirements are met.



Tax exempt Greenwich High School recently qualified for the Investment Tax Credit when they replaced 3 old absorber chillers that produced 1606 tons of CO₂ a year for the past 20 years. When approved, the Town will receive the tax credit amount to help off-set the cost of their upgrade to CHP Tecochill chillers.

Want updates on the latest in HVAC?



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HURRICANE READY with

MagicPak™ All-In-One heating and cooling packaged systems are designed to be installed indoors safeguarding the unit from the elements and preventing wear and tear on the unit.

Hurricane water dispersion is built into every MagicPak™ system. Custom colored polypropylene louvers are matched to blend seamlessly with the building facade, to protect internal components, and keep water out.

Louvers in the upper section are angled-up to discharge air away from the condenser coil intake. In the lower section, angled-downward, to prevent debris from collecting inside the louver. This will protect your system for longer, competing with big New England storms. With peace of mind, there's MagicPak!

