



Reciprocating Engine

Gas Technology Institute CHP Packaged System Team

Benefits of Packaged CHP Systems

Capital Cost Reduction

Packaged systems can cut CHP system capital costs by 15% to 30%

Shorter & Less Expensive Installation

IES can reduce CHP system installation time by as much as two-thirds, and provide corresponding installation cost savings.

Replicability

System designs are suitable for multiple applications in facilities around the country.

Optimize Facility Energy Use

Packaged systems allow facility operators to manage power generation, cooling and heating to optimize energy use as well as reduce electricity use during peak periods.

Simplified Systems

The use of exhaust-fired absorption chillers eliminates the need for steam/hot water generation equipment.

Adaptability

This system is easily adaptable and is already optimized for a variety of customer facilities.

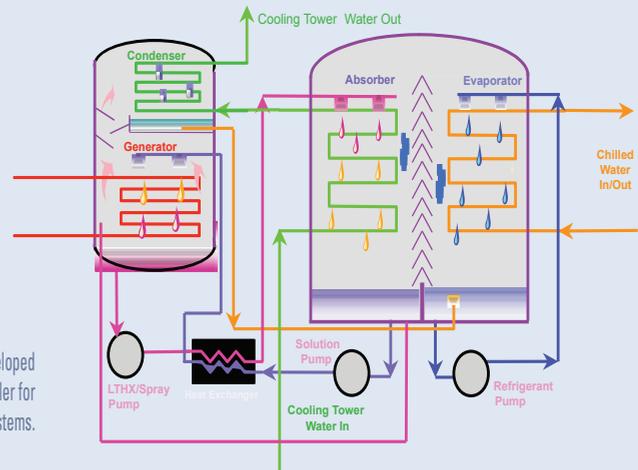
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Project Overview

The Gas Technology Institute, Waukesha, the Trane Company, Ballard Engineering, Inc., Charles Equipment Co., and the University of Illinois at Chicago have teamed to develop and demonstrate a modularized “plug-and-play” Integrated Energy System (IES) that will supply electricity, hot water, and chilled water to facilities. The team is using market analysis to guide development of this system so that commercialization will be expedited.



Absorption chillers are being developed and tested using a 90-ton chiller for inclusion in packaged systems.



Objectives

- Match engine generators in the 290 kW – 770 kW size range with absorption chillers to achieve optimal performance
- Develop modular systems in a range of sizes to optimize performance for a variety of energy customers in a number of different building types and locations.
 - To date, team has developed 45 target building/location load profiles
- Demonstrate prototype system(s) in one or more target applications.

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