YORK® Chiller-Plant Design for a Deregulated World

In a deregulated world, it pays to diversify your chillers.

Millennium® Electric Centrifugal Chillers

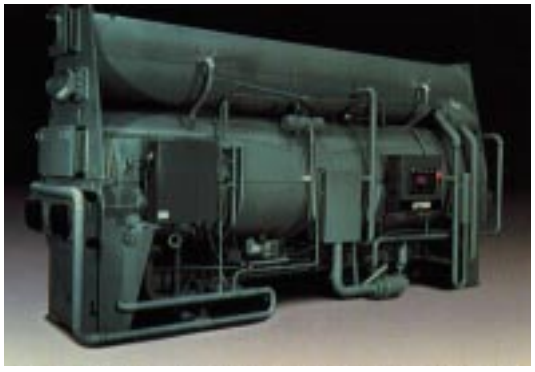
For the most economical use of electricity

YORK® Millennium electric centrifugal chillers maximize energy savings by offering superior off-design chiller efficiency. That's because chillers in general spend less than 1% of operating hours at design conditions—even those in multiple-chiller plants. By maximizing performance during the 99% of the cooling season with off-design loads and entering-condenser-water temperatures, Millennium electric chillers drastically cut system energy costs by operating as low as 0.20 kW/TR.

Millennium Gas-Engine-Drive Chillers

For the most cost-efficient use of natural gas

With YORK gas-engine-drive chillers, you can fully exploit low summer gas prices. This technology offers the highest available gas-cooling efficiency—a 2.0 Coefficient of Performance. As a result, you can switch from electric chillers to Millennium gas-engine-drive chillers sooner to avoid peaking electric costs. YORK gas-engine-drive chillers are ideal for maximizing energy savings under deregulation, because they minimize your dependency on the electric grid during peak demand periods.



Millennium Single-Stage Absorption Chillers

For low-first-cost, alternative cooling using steam or hot water

YORK Millennium single-stage absorption chillers are driven by low-grade heat sources: 210°F hot water or steam lower than 15 psig, giving facilities with waste heat or low-pressure steam an economical source of energy for cooling. YORK Millennium single-stage absorption chillers feature about the same first cost as an electric chiller of equivalent capacity. As a result, when initial cost is compared to the cost-savings over electric, a payback is often realized in a matter of months.

Electric utility deregulation is changing the cost of electricity to reflect real-time pricing. As a result, you can count on off-peak prices going lower. But during peak cooling hours, prices will be dramatically higher.

This new pricing scheme favors chiller plants that operate with multiple sources of energy. Under deregulation, the ideal chiller-plant management strategy is to use electric chillers to take advantage of low off-peak rates, then switch to non-electric chillers to avoid exorbitant peak rates. In other words, mixing electric and non-electric chillers in a hybrid plant will give you the best of both economics in a deregulated world.

To help develop your hybrid plant, YORK offers the broadest line of electric and non-electric chillers, plus intelligent controls to optimize chiller operations based on the most economical energy source available at any given time. With the wide range of Millennium chillers, you'll be able to react to peak and off-peak pricing to save energy dollars in a deregulated world.

Millennium Double-Stage Absorption Chillers

For greater energy savings using steam or fossil fuels

Millennium double-stage absorption chillers use medium-grade heat sources—high-pressure steam or fossil fuels, such as natural gas, no. 2 oil, or propane. Combined with highly efficient double-effect absorption performance, you realize much greater annual energy savings and lower operating costs than with single-effect technology. With a somewhat higher first cost than a single-effect chiller, a double-stage chiller will save hundreds of thousands more energy dollars over its lifetime.

Millennium Steam-Turbine-Drive Centrifugal Chillers

Proven features provide major savings

A Millennium steam-turbine-drive chiller offers about the same first cost and payback as a double-stage absorption chiller of equivalent capacity. But where medium-pressure steam (125 psig) is available, it is an even more cost-effective source of cooling. Plus, these chillers can be specified for very low chilled-water temperatures, which is ideal for district-cooling plants that make numerous demands on chilled water-supply.

Millennium Central-Plant Automation

For optimizing operation with the most economical energy source

YORK Central-Plant Automation (CPA) reduces annual energy consumption by operating only those chillers using the most economical energy sources at any given time. The CPA system continuously analyzes changing energy prices and chiller efficiencies to select the most economical chiller energy sources. With CPA, you'll be a "smart shopper" in the deregulated energy market who can take immediate advantage of the best energy deal.


YORK®