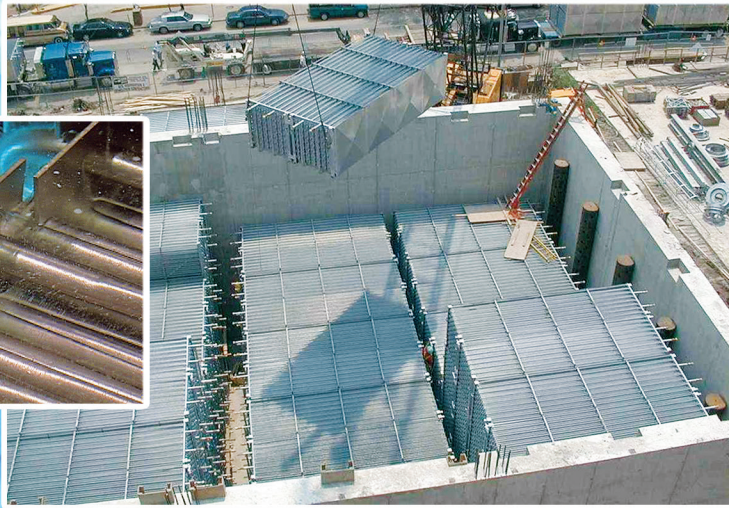
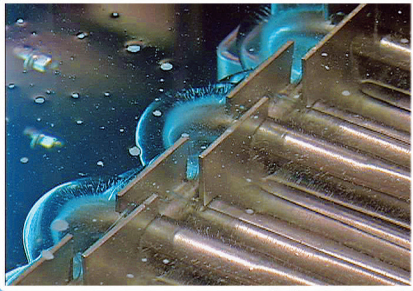




# Thermal Ice Storage QUICK GUIDE



## Why Ice?

Many regions experience:

- Energy shortages/supply issues
- Peak and off-peak pricing structures
- Demand response rebates
- Building space limited or costly
- R-22 chillers need replacing/retrofitted

Thermal Energy Storage is your client's solution for life!

### 1 ENERGY SHORTAGES

Ice storage shifts the cooling load to off-peak demand times, reducing peak loads. Thus allowing the utility to serve more customers without having to add additional generating capacity.

### 2 REDUCE ENERGY COSTS

*Ice storage shifts power demand to low cost periods.*

Reduce energy costs by shifting peak power demand to night time or off-peak periods. Avoid on-peak, time-of-use rates and high ratchet-based demand charges. Off-peak electricity rates can be 50% to 80% lower! This huge energy cost saving provides short payback periods for ice storage installations.

### 3 IDEAL FOR DEMAND RESPONSE PROGRAMS/SMARTER GRIDS

Demand response programs incentivize consumers to curtail electricity use during peak demand periods to receive substantial rebates. Most peak electricity used is for air conditioning. Thermal ice storage is the ideal strategy for commercial buildings to comply with demand response & still provide cooling to office space. Demand response is a sustainable technology, reduces carbon emissions & improves grid reliability. A smart grid combines technologies including smart meters, real time pricing, energy control, electric vehicle integration & energy storage.

### 4 LIMITED SPACE

Ice storage tanks are up to 8 times **SMALLER** than chilled water storage tanks for the same thermal capacity.

### 5 REDUCED CAPITAL COSTS

Thermal energy storage can reduce the size and cost of chillers, cooling towers and electrical switch gear by 40% to 50%!



# EVAPCO's Thermal Energy Storage... Where can I use it?

## NEW CONSTRUCTION

- District Cooling
- Universities
- Corporate Campuses
- Airports
- Large central cooling plants
- Hospitals
- Convention Centers
- Sports Arenas
- Office Buildings

## REPLACEMENTS & RETROFITTING

- Chiller replacement
- Add cooling capacity without increasing
  - Building transformer
  - Switch gear
  - Motor control center
- Solve existing building temperature and humidity problems by
  - Lowering chilled water supply temperature
  - Lowering air supply temperature



## ICE-ON-COIL

- Internal or external melt
- Ice inventory controls
- Ice thickness controls
- Air blowers

Bare ice coils in concrete vault (larger projects starting from 4,000 ton-hours, no upper limit.)



## MODULAR THERMAL STORAGE TANKS

- Internal melt ONLY
- 9 models
- Starting at 370 ton-hours per tank, maximum of 1,000 ton-hours per tank



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