Sustainable Cooling Alternatives



Sunil Kher Sevcon (India) Pvt. Ltd Lets Contribute to Sustainability...



Snstainability



Ozone Depletion

Pollution

Greenhouse Gas Emissions



Energy Security And Economic Growth

Jncensive Growth And Happiness Quotient



Greenhouse Gas Emissions



Sastainability



Energy Security And Economic Growth



Pollution

All are Inter Related

Energy Consumption by HVAC Buildings 50-60%

contribute greatly to this Larger Cause

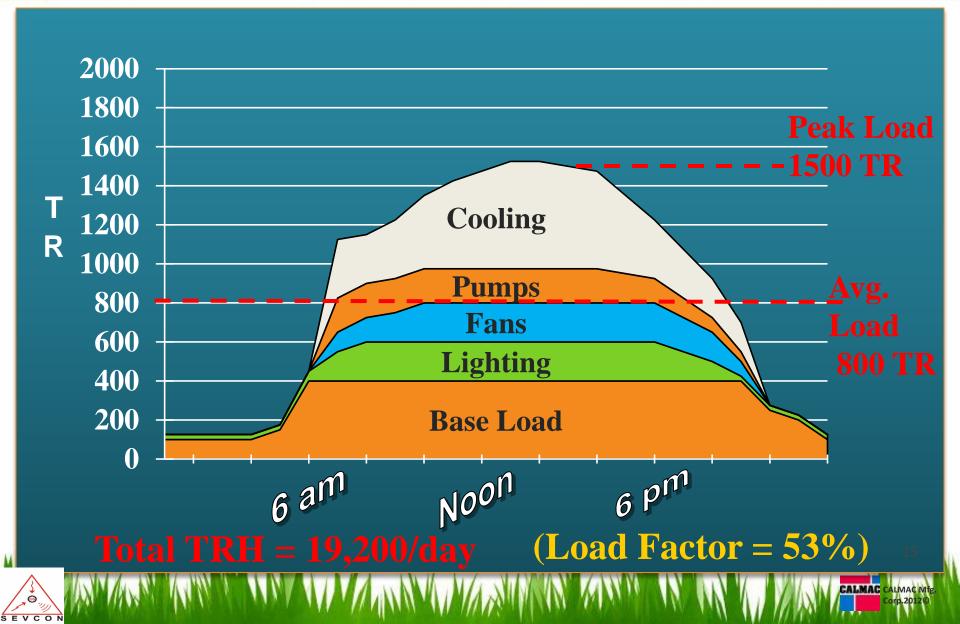
Energy Efficient Technologies therefore Play a Pivotal Role



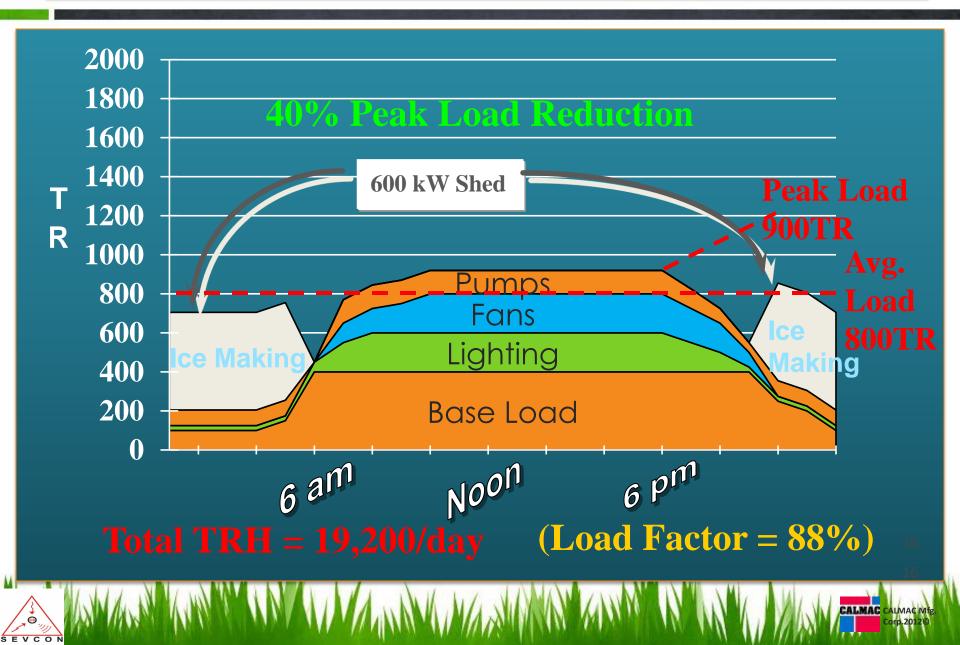


TESLA in Automobiles makes a Sense, Right ???

Need for Thermal Energy Storage

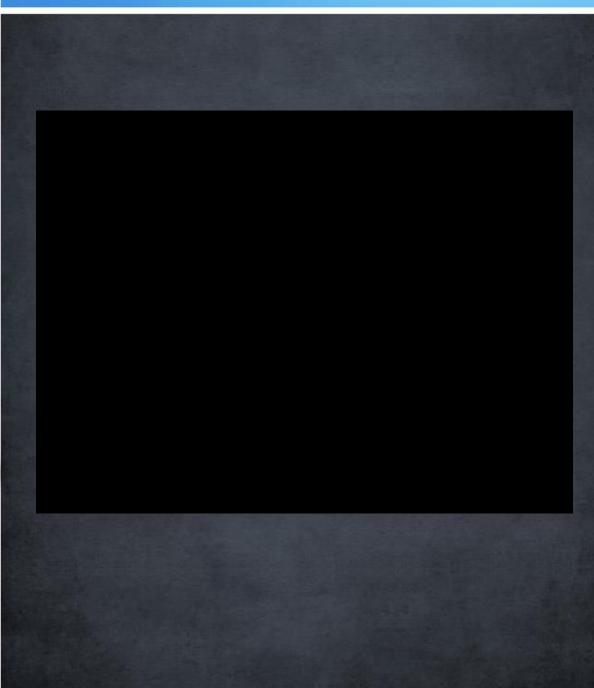


Off- Peak Cooling



Thermal Storage in HVAC is quite the SAME







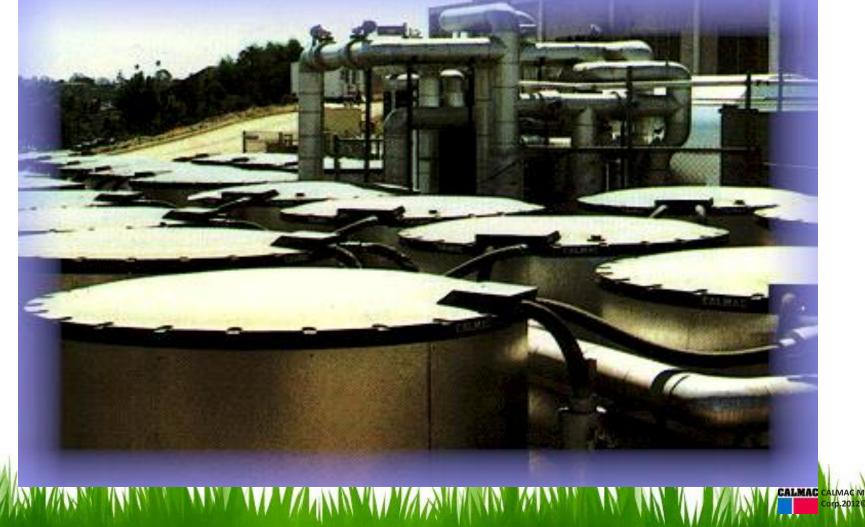
Location of storage tanks

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Indoor







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PARTIAL BURIAL



FULL BURIAL

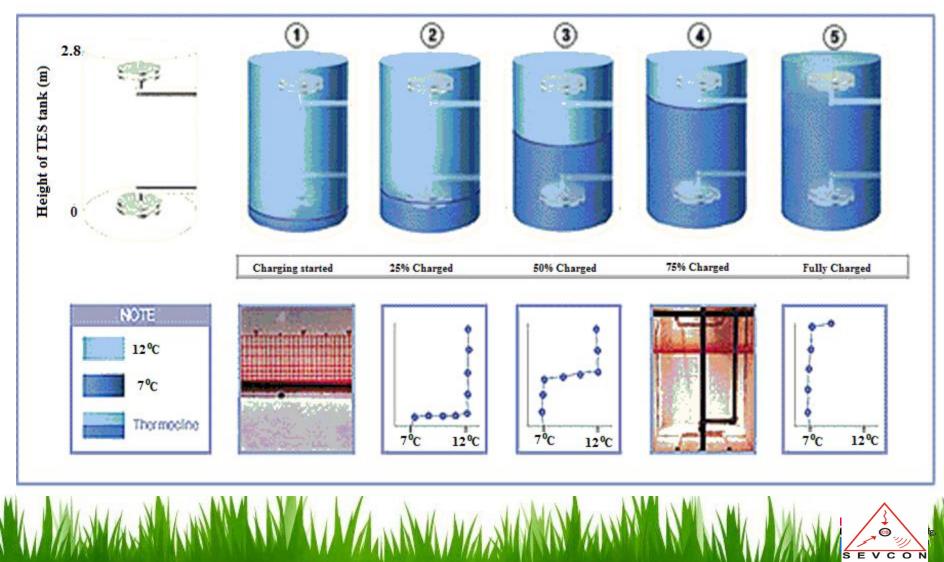


How Chilled Water TES works ???

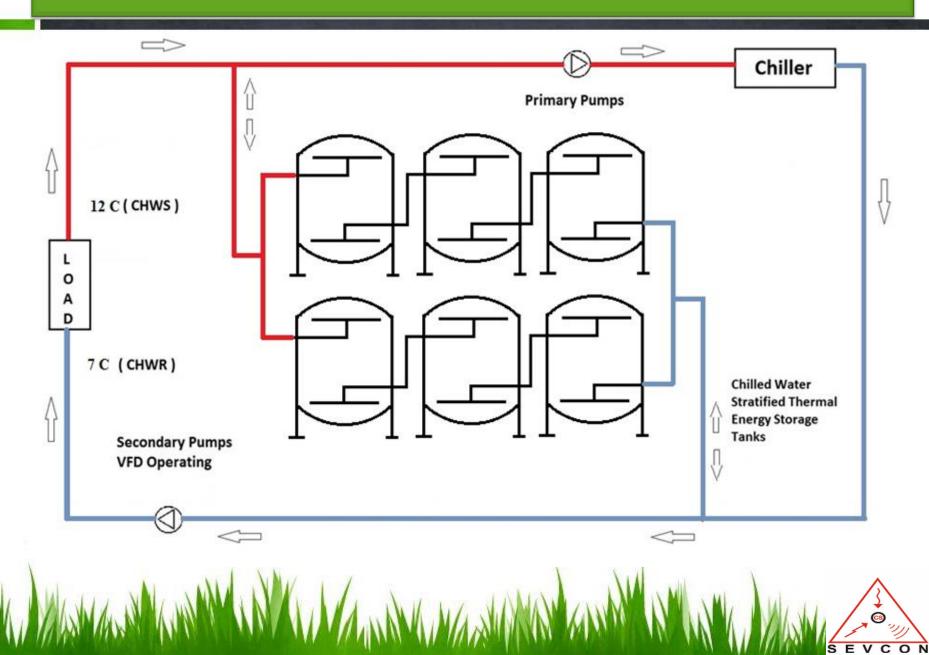
- Thermal Energy (chilled water) is produced during periods of offpeak electrical demand (usually at night) or simultaneously with ongoing operation.
- It is collected in a thermal energy storage tank and withdrawn and distributed through the facility during peak rate/demand hours.
- Warm and chilled water enters and exits the tank through diffusers located at the top and bottom of the tank. These diffusers are designed to eliminate turbulence and provide a stable, sharply defined transition layer, or "Thermocline", thus allowing for the natural stratification of warm water at the top of the tank and chilled water at the bottom.

Stratified Chilled Water Thermal Energy Storage

The Figure below shows the movement of thermocline during charging process :



Stratified Chilled Water Thermal Energy Storage



Stratified Chilled Water Thermal Energy Storage



EUTURE OF THERMAL ENERGY STORAGE

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