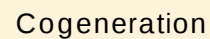
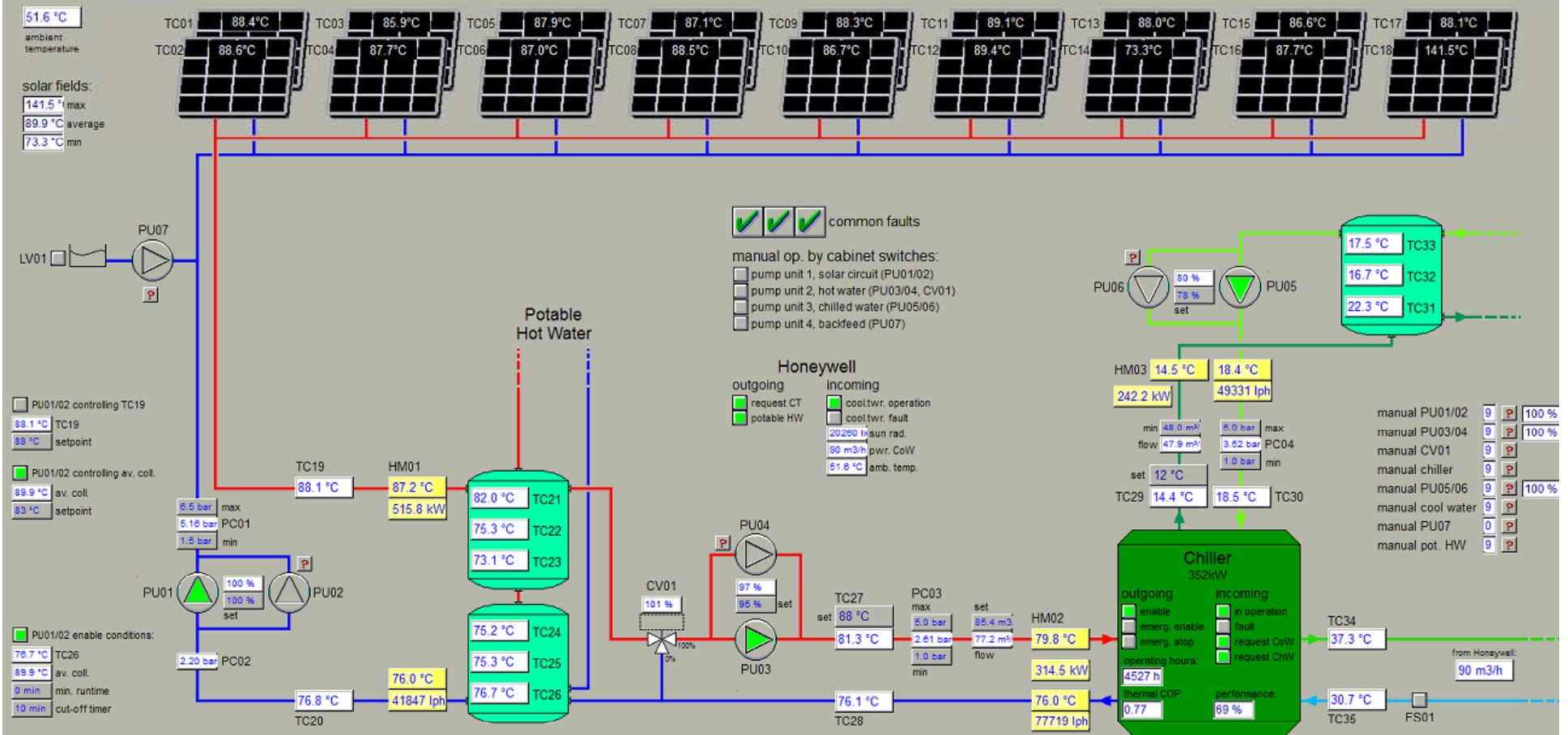


Solar Cooling System at SZDLC



Introduction to Solar Cooling





Sheik Zayed Desert Learning Center (UAE/AI Ain)



Key Data

Cooling power: 400 kW

Collector area: 1108 m²

Expected Solar yield:
825 kWh/m²/year

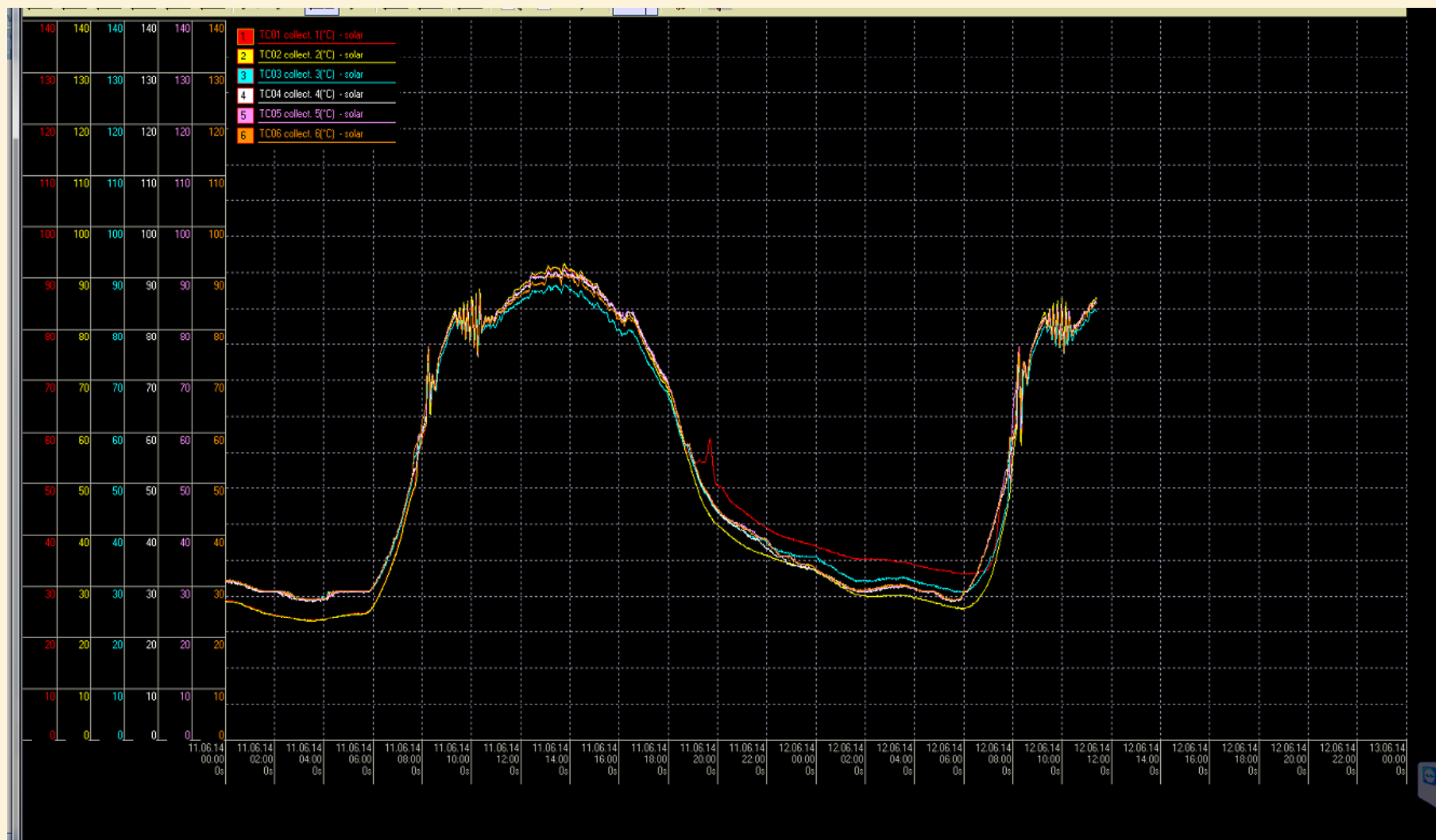
Commissioning: 2012





The solar heat that is causing the cooling demand is used for covering the demand at the same time!

- Solar Cooling is a renewable energy system that uses large solar hot water panels and generates large volumes of hot water at a temperature of 90 °C.
- In tanks the hot water is stored (battery of the system) and sent on demand to the absorption chiller.
- The chiller produces 7 °C cold water that can be pumped into the conventional HVAC cold water distribution system.
- The cold water produced by the absorption chiller relieves the normal electrical chillers so that electrical energy savings are achieved.



Advantages of Solar Cooling



- Full integration with the HVAC system which directly reduces the energy use of the HVAC system and more important therefore **shaves of peak demand** as the system delivers most energy during hot hours of the day when AC demand is at its height.
- By placing the panels on the roof the **shading** effect significant reduces the heat from the roof into the building thus extra savings are realized as overall demand decreases.
- Large scale solar hot water is much more efficient so that less space is needed in comparison with solar PV.





EAR Tower Pristina, Kosovo



2 LiBr absorption machines, total capacity of 70 kW / 20 tons

Solar Panels: 226 m²

4 m³ storage tank

Operating since Feb. 2003

11 th operating season, 0% unforeseen down time

Desert Mountain High School



Solar Panels: 5,200 m² / 3.6 MW

Cooling load: 500 tons / 1750 kW

Fully Operational Now !



Solar – over parking area



Contacts



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