SAC system Desert Mountain High School

Scottsdale, Arizona
USA
S.O.L.I.D. Activities

Large solar thermal systems (>100 m²)

- Project development
- Design & engineering
- Construction
- Operation & maintenance
- Financing (ESCo)
- Research & development
Scottsdale, Arizona, USA
Solar Cooling for Middle School and High school

20% larger than SOLID’s Singapore project
Solar Panels: 5,000 m² → 3.5 MW
Cooling load: 500 tons / 1750 kW
In operation since 2014

World’s most powerful Solar Cooling System
Desert Mountain High School, USA

Collectors:
5000 m² → 3500 kW_{heat}

Chiller:
500 tons / 1750 kW_{cooling}

ESCo
In operation since 2014

World's most powerful Solar Cooling System
Preliminary results after 6 months of operation:

- Very stable and reliable operations
- Chiller COP$_{\text{thermal}}$ $0.7 - 0.75$
- Peak Hour COP$_{\text{electric}}$ 42
- Full day COPs$_{\text{electric}}$ 25-30

How to achieve these results?

- Learn how to run chillers and cooling towers within and beyond manufacturers specs!
- Develop intelligent control strategies adapted to Solar Thermal heat input profile.
- Benefit from Arizona climate ☀️ ☀️
Thank you for your kind attention!

S.O.L.I.D. Gesellschaft für Solarinstallation und Design mbH
Puchstrasse 85, 8020 Graz, Austria
CEO: Christian Holter & Franz Radovic
Tel: +43 316 292840-0
Fax: +43 316 292840-28
Email: office@solid.at
http://www.solid.at

Moritz Schubert
R&D, Project Development
m.schubert@solid.at
Tel: +43 316 292840-81