

# Case Study



## **Cinco Solar, Inc. – University of Texas at Austin, Norman Hackerman Building – Austin, Texas**

Cinco Solar's solar thermal system at the University of Texas Norman Hackerman Building will be a state-of-the-art installation that provides practical, meaningful results toward the buildings sustainability efforts of the University. Cinco Solar's system is currently under construction and will serve as the primary source of heat for the building's HVAC dehumidification process and building heat. The application will drastically cut energy expenses for the facility. This unconventional example of clean technology in action will put the power of the sun to beneficial use for years to come.

Dehumidification in a conventional HVAC system is accomplished by chilling air to condense the moisture from the air before it is delivered into a building. To remove the right amount of moisture, incoming air often must be chilled to a temperature well below the desired set point in the occupied space; this over-chilled air must then be *reheated* to achieve the desired usable temperature. Even in the hottest seasons of the year, there is a heat demand for this HVAC application. Solar thermal technology, which produces maximum results during the intense solar radiation of the summer season, is a perfect application to provide the heat source for this otherwise inefficient process. As an added bonus, heat from Cinco's solar thermal system can be used during cool months to provide building heat for the facility.

Cinco Solar looks forward to providing a practical, renewable source of heat for HVAC dehumidification and building heat at the University of Texas Norman Hackerman Building.

Facts about Cinco Solar's system:

- 185 evacuated tube collectors installed
- One of the largest evacuated tube solar thermal systems in the United States
- Produces hot water used for air-conditioning dehumidification and reheat application
- Provides 256,000 square feet of conditioned space
- Solar thermal system contributes towards LEED status of the new building
- Expected annual production of more than two billion BTUs
- Cinco Solar application interfaces with building integrated control systems

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**Cinco Solar, Inc.**, was founded in 2007 and is based in San Antonio, Texas. Cinco Solar uses state-of-the-art evacuated tube technology to provide solar water heating solutions on a commercial, industrial, or institutional scale. Solar thermal systems are a natural fit to provide domestic hot water for any facility or process that uses large amounts of hot water. Applications include, but are not limited to, domestic hot water, process heat, building heating and AC dehumidification and reheat. Properly sized, Cinco Solar's solar thermal systems can typically eliminate 80% of the energy costs associated with producing hot water. Cinco Solar is an exclusive commercial distributor of Kingspan Solar's Thermomax evacuated tube solar thermal collectors.

**Kingspan Solar** is part of Kingspan Renewables Ltd, a division of Kingspan Group PLC. As a major player in the building products sector, Kingspan Group is committed to energy conservation and the development of environmentally friendly solutions to generate hot water and building heating. Kingspan Solar packages reflect its on-going commitment to a zero carbon lifestyle and a brighter future for all. When it comes to creating efficient and cost-effective solar thermal and air source heat pump energy solutions that address today's growing environmental concerns, Kingspan Solar leads the way.

The **University of Texas Norman Hackerman Building** is the newest science building being built on The University of Texas at Austin campus and will be named in honor and memory of Dr. Norman Hackerman, chemist, professor and president emeritus. The Hackerman Building will house state-of-the-art classrooms and teaching labs for organic chemistry, research labs for faculty from the Department of Chemistry and Biochemistry, the Center for Learning and Memory and the Institute for Neuroscience and administrative offices for the School of Biological Sciences.

## **Inquiries:**

Hugh Daschbach

Regional Sales Manager

T: 210-364-7479

[hugh@cincosolar.com](mailto:hugh@cincosolar.com) or [info@cincosolar.com](mailto:info@cincosolar.com)