

**Fall 2004
IPRO 328**

**Application of Solar Thermal Heating Technologies in Large Scale Buildings in the
Urban Environment- Midterm
Facilities Research, Inc., Nancy Hamill Governale, AIA, CEM**

Goals:

To provide heating to the pool facility and surrounding spaces of Keating Sport Facility through the use of solar thermal collectors placed in the immediate area.

Organization/Tasks:

Mechanical Team

Jaesun Jeong
Joe Sutalo
Kristen Kelley

Analysis Team

Sriram Mahadevan
Sean Huber
Rajiv Shah

Enclosure Team

Justin Odom
Chris Tokarz
Harsha Pannala

Faculty Mentor/advisors

Advisor-Nancy Hamill-Governale

Critical Issues:

Though the workers of the group seem to be completing their work in a timely manner the progress has not been as quick as originally predicted. This is due to a lack of cooperation from manufacturers of the needed equipment. Though several emails have been sent to multitude of companies the response has been slow and incomplete. The lack of getting hard factual information from several sources brings in to question the validity of our analysis. Though our facts do have a source it would be better to check them against several other companies for consistency.

Conclusions:

This IPRO has progressed remarkably compared to previous years'. Though currently unable to fully support the applications reviewed in this IPRO, we have designed an appropriate and practical prototype/blue print to provide heating to the pool facility and surrounding spaces of Keating Sport Facility through the use of solar thermal collectors placed in the immediate area. Solar thermal is clearly a worthwhile solution for reducing dependence on fossil fuels.

Next Steps:

In order to further the evolution of both the Keating Hall case study and the Machinery Hall experiment, additional recommendations must be taken into account. An upkeep and monitoring plan must be contrived for the duration of the projects.

Further research and experimentation with the developing technologies of different solar panels should be incorporated in future solar energy IPRO's.