



SOLAR DISTRICT MARKET TRANSFORMATION

Saint Paul and Minneapolis: Solar America Cities

Solar America Cities, a United States Department of Energy (DOE) program, aims to “accelerate the adoption of solar energy technologies for a cleaner, more secure energy future.” This solar market transformation project initiated from collaboration with the State of Minnesota, City of Saint Paul, City of Minneapolis, District Energy St. Paul and NRG Energy, Inc.

District Energy St. Paul

District Energy operates North America’s largest hot water district heating system using renewable energy from a biomass fueled, combined heat and power plant in the heart of Saint Paul’s central business district. District Energy is a widely recognized leader in the movement towards economically viable and sustainable energy solutions.

NRG Thermal LLC

NRG provides energy-efficient and environmentally sound district heating and cooling services to buildings in downtown Minneapolis. NRG’s is a wholly owned subsidiary of NRG Energy Inc. which has global portfolio of projects totals over 24,000 MW including wind and solar generation.

Objectives

- Inventory and assess local sites for solar potential and carbon reductions (2009 / 2010)
- Engineer and install large scale solar systems utilizing solar thermal, advanced integrated thermal/PV, and solar powered district systems (2010)
- Leverage the economic and technical success factors of the project to saturate the local market and integrate these systems nationwide (2011 and beyond)

Site Potential

The Saint Paul RiverCentre will be the primary focus for a 2010 installation, with preliminary site analysis already complete. Advanced engineering analysis will begin immediately to determine final technical and economic feasibility. District Energy and NRG will also examine the potential at other sites, including business parks, corporate hubs, hospitals, and colleges. These sites present great opportunities for connecting energy users with large-scale installations.

Scale

The proposed installation will be the first of its kind in the United States. And will be the largest solar installation in the state of Minnesota, with peak estimated at 1 Megawatt.

Project Benefits

- Grow the Minnesota solar market.
- Economic growth through installations, installer training and hiring, and potentially increase local solar manufacturing.
- Increased penetration and visibility of solar thermal in a northern climate.
- Saint Paul and Minneapolis will create a replicable model for Solar America Cities.