Concentrating Solar -- Markets Reach $175.9 Billion By 2017

LEXINGTON, Massachusetts (September 13, 2011) – WinterGreen Research announces that it has a new study on Concentrating Solar Market Shares and Forecasts, Worldwide, 2011-2017. The 2011 study has 651 pages, 220 tables and figures. Concentrating solar is poised to become the largest of three solar energy technology markets because it can be implemented at scale quickly. Utility plants can be built incrementally. Electricity can be stored in molten salt storage systems that leverage traditional steam generators to manufacture electricity. Concentrating solar is evolving a significant market presence and is expected to continue to be used in climates close to the equator where there is more concentrated sun radiance. Sophisticated technology works initially to provide peak power supplements and power utility scale systems, having achieved grid parity in many places.

The worldwide demand for energy is steadily increasing. Demand for energy is doubling every 15 years. The major effort is to sustain growth in the electricity supply without causing irreversible harm to the environment. Solar energy has rapidly grown as a clean, renewable alternative to limited fossil fuels.
Concentrated solar power (CSP) systems, are systems that use mirrors or lenses to concentrate a large area of sunlight, or solar thermal energy, onto a small area. Electrical power is produced when the concentrated light is converted to heat which drives a heat engine (usually a steam turbine) connected to an electrical power generator.

Concentrating solar power is one of several preferred methods of solar electricity production. In most places it has achieved 'grid-parity' when considering ROI over 25 years. The mainstream cost of electricity from the grid can be complemented by solar systems. The solar industry in China is funded by the government. This unrelenting investment in energy efficiency has thrust the Chinese companies into the forefront of the industry.

Other countries rely on tax incentives and special tariffs to sustain further investment in solar electricity generation. While this has enabled the industry to develop and provides very attractive investment opportunities, the Chinese dominate the industry at this time. There is a move to achieve grid-parity. Once this is secure, the solar market can expand very rapidly achieving penetration growth calculations that exceed any growth rate per

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se. A step-change in system costs is being achieved, putting the industry on the cusp of a major growth spurt.

Concentrating solar technology uses photovoltaic and thermal systems. Photovoltaics turn light directly into electricity. Thermal concentrating solar systems use the concentrated sunlight to create heat. Heat is used to create steam that typically turns a traditional electrical generator turbine.

According to Susan Eustis, lead author of the study, "Utilities can add concentrated solar power systems incrementally as they become needed. The investment environment encourages smaller projects (2-100 MW). They are easily permitted. They are easy to finance because the paybacks are compelling." Concentrating solar systems provide utilities the flexibility to tackle uncertain load growth, by providing the ability to add solar power systems incrementally as they become needed.

CSP is being widely commercialized, with about 1.17 gigawatts (GW) of CSP plants online as of 2011. 582 megawatts of them are located in Spain, and the United States has 507 megawatts of capacity. 17.54 GW of CSP projects are under development worldwide. The United States leads with 8.67 GW. Spain ranks second with 4.46 GW in development, followed by China with 2.5 GW.

Concentrated solar markets at $964 million are anticipated to reach $175.9 billion by 2017. Significant growth is anticipated as countries all over the world realize that solar based utility scale energy generation is possible and that projects can be implemented from start to finish within a year. The ability of the concentrated solar systems to sit on the desert and produce electricity and desalinated water in an economical manner is very compelling, leading to incentive to invest in this technology. Once the trial systems now in place have been made to work for some groups, they will achieve rapid growth.

WinterGreen Research is an independent research organization funded by the sale of market research studies all over the world and by the implementation of ROI models that are used to calculate the total cost of ownership of equipment, services, and software.

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http://wintergreenresearch.com/reports/concentrating%20solar.html

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