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## Stirling Energy Systems and Tessera Solar Introduce Optimized SunCatcher<sup>TM</sup> Solar Power System

ALBUQUERQUE, NM (June 23, 2009) – Stirling Energy Systems (SES) and Tessera Solar unveiled its new production design SunCatcher™ solar power systems today to select government officials, customer utilities and state leadership at the SES Model Plant at Sandia National Laboratories in Albuquerque, New Mexico. The refined design represents a key milestone on the path toward commercial-scale deployments of the SunCatcher™ beginning in 2010.

The modular Concentrating Solar-Thermal Power (CSP) SunCatcher™ system uses precision mirrors attached to a parabolic dish to concentrate the sun's energy onto a high-efficiency Stirling Engine. Each dish can generate up to 25,000 watts of power and has been certified by Sandia National Laboratories as having the highest sun-to-grid energy conversion in the world.

The new modifications build on the experienced and proven design, optimizing the SunCatcher<sup>TM</sup> for high-volume manufacturing, reduced operations and maintenance costs, higher availability and reliability, and ease of maintenance.

The SunCatcher<sup>™</sup> dish structure incorporates a substantial weight reduction of nearly 5,000 pounds in its steel structure by leveraging a combination of SES's structural analysis and Sandia's optical analysis capabilities. The reflective mirror facets are produced using automotive techniques enabling high volume production. The engines represent a 60% reduction in parts count and improvement in serviceability.

"The new production design of the SunCatcher<sup>TM</sup> represents more than a decade of innovative engineering and validation testing making it ready for commercialization," said Steve Cowman, Stirling Energy Systems CEO. "By utilizing the automotive supply chain to manufacture the SunCatcher<sup>TM</sup>, we're leveraging the talents of an industry that has refined high-volume production through an assembly line process. More than 90 percent of the SunCatcher<sup>TM</sup> components will be manufactured in North America."

The SunCatcher™ minimizes both cost and land use and has numerous environmental advantages:

- Lowest water use of any thermal electric generating technology.
- Minimal grading and trenching requirements.
- No excavation for foundations.
- No greenhouse gas emissions with converting sunlight into electricity.

The proprietary solar dish Stirling technology will be deployed to develop two of the world's largest solar generating projects in Southern California with San Diego Gas & Electric in the Imperial Valley and Southern California Edison in the Mojave Desert, in addition to the recently announced project with CPS Energy in West Texas.

"As we prepare for full-scale production and deployment of the SunCatcher<sup>™</sup> in 2010, we're currently planning the construction of a commercial-scale reference plant later this year and actively building our project pipeline across the Southwest," said Bob Lukefahr, Tessera Solar North America CEO. "Our projects will break ground next year, with the goal of producing 1,000 MW by the end of 2012."

Over the last decade, SES collaborated in a technology development partnership with Sandia National Laboratories and the U.S. Department of Energy (DOE). This highly successful public-private partnership helped SES to perfect the SunCatcher™ design making it ready for high volume manufacturing and world scale commercialization.

## **About Stirling Energy Systems (SES Inc.)**

SES Inc. was formed in 1996 to develop and commercialize advanced solar technology. The company maintains corporate headquarters in Scottsdale, Arizona, an office in Tustin, California, and engineering and test site operations at Sandia National Laboratories in Albuquerque, New Mexico. The SES SunCatcher is a concentrating solar power (CSP) technology that uses mirrors to concentrate the sun's energy and convert it to electricity. CSP technologies include dish systems, parabolic troughs, power towers and concentrating photovoltaic. The dish concentrator tracks, collects and focuses the sun's energy and the Stirling engine converts the thermal energy to grid quality electricity. The SunCatcher technology has significant advantages over other CSP technology including power conversion efficiency, cost competitiveness and low water usage. The SunCatcher is a zero emission renewable energy technology. NTR owns a controlling stake in SES Inc.

## **About Tessera Solar**

Tessera Solar North America, headquartered in Houston, Texas, with offices in Scottsdale, Arizona and Berkeley, California, and Tessera Solar International, based in London, England, are exclusively responsible for the global deployment of the SunCatcher™ solar dish Stirling system, the solar electricity generation technology manufactured by our sister company SES Inc., headquartered in Scottsdale, Arizona, USA.

## **About NTR plc**

NTR plc is a leading international developer and operator in renewable energy and sustainable waste management. Founded in 1978, NTR has evolved from being a developer and operator of infrastructure in Ireland to an international developer and operator of renewable energy (wind, solar and bio-ethanol), and sustainable waste management businesses in the USA, UK and Ireland. The company employs over 4,100 people and has a market capitalization approximating €597.3m.

For more information, visit <u>www.stirlingenergy.com</u>, <u>www.tesserasolar.com</u> and <u>www.ntr.ie</u>.