



*LPI-designed XR700 HCPV Solar Power Technology Begins Commercialization Phase*

The Boeing Company and Stirling Energy Systems have formed a strategic partnership to complete the commercialization and deployment of Boeing's XR700 high-concentration photovoltaic (HCPV) solar power technology. The key component of the XR700 is the Off-Axis optics used in the system. Through a licensing agreement with Boeing, Stirling has acquired the sole rights to develop, manufacture and deploy the HCPV product globally.

Boeing began developing the XR700 technology in 2007 with LPI designing the optics used in the system. The project was in collaboration with the U.S. Department of Energy's Solar Energy Technologies Program. The technology development phase is expected to continue for the next two years before achieving commercial-scale deployment in 2012.

The XR700 technology uses a non-imaging optical system to concentrate sunlight by a factor of 700 onto high-efficiency, triple-junction solar cells. Most CPV systems lose substantial efficiency due to shadows cast by the solar cell onto the concentrating mirrors. LPI's patented Off-Axis design prevents this shadow effect by focusing the sun's energy on a solar cell which is positioned perpendicular to the sun. The solar cells used in the XR700 are from Spectrolab which holds the world record for terrestrial concentrator solar cell efficiency at 41.6 percent.

Boeing is in the development and construction phase of a 100-kilowatt facility at California State University, Northridge, using the HCPV solar power technology. An automated 2-megawatt per year production factory in Detroit is producing and assembling the solar arrays for the Northridge solar facility. LPI designed an optical system that grades each assembly for quality control to monitor the production process. Installation of the solar arrays at the Northridge facility is expected to begin in the second quarter of 2010, with the solar facility expected to be operational during the third quarter.

The HCPV product will extend Stirling's solar energy portfolio and is expected to give Tesseract Solar access to more project-development opportunities, especially in the distributed-generation sector. The XR700 HCPV technology will be aimed at smaller-scale projects of 50 megawatts and less.

"We are pleased to obtain the rights to deploy a complementary technology to the SunCatcher and therefore offer an additional product to suit our potential customers that are interested in smaller-scale projects," said Tesseract Solar North America CEO Bob Lukefahr.

For more information:

News Release from Stirling Energy: <http://www.stirlingenergy.com/press-room.htm>

News Release from Boeing: <http://boeing.mediaroom.com/index.php?s=43&item=1139>