Fraunhofer USA

New CFV Solar Testing Laboratory Opens in Albuquerque to Speed International Certification for Solar Panels

ALBUQUERQUE, New Mexico -- April 7th, 2011 -- To speed entry for solar panel manufacturers into the North American and international markets, a new laboratory opened today in Albuquerque, New Mexico, that offers worldwide certification services from one location.

CFV Solar Test Laboratory, a photovoltaic (PV) certification test company, is jointly owned by CSA Group, VDE Testing and Certification Institute, Fraunhofer Institute for Solar Energy Systems (ISE) and Fraunhofer USA Center for Sustainable Energy Systems (CSE).

The CFV laboratory offers complete certification and non-certification testing services for PV technologies not readily available at other test locations, including flat panel, thin film and concentrating PV (CPV) testing. The facility will help manufacturers to enter the market more rapidly and at lower cost, as the laboratory can simultaneously certify solar panels for use in multiple countries and meet the unique standards for each country.

Driven by global needs for renewable energy and growing environmental demands, solar panel manufacturing and installation is roughly a $40 billion dollar industry worldwide, and will approach $100 billion by 2014, according to industry estimates. In North America, the utility PV market reached $1 billion in 2010 and is projected to reach $8 billion by 2015, according to GTM Research.

Solar panels require testing and certification to assure the safety, longevity and proper operations. Different countries worldwide have diverse standards for solar panel certification, making the testing process complex and costly for manufacturers.

“Solar panels are high-voltage electrical devices – often being placed in very close proximity to people in offices and homes – that must be properly tested and certified as being safe and effective in generating power,” said Ash Sahi, president and CEO, CSA Group. “We are proud to be one of the partners in this joint venture as no other solar testing facility offers the complete range of services and global capabilities as this new laboratory.”

Testing in the 25,000-square foot indoor lab will include climate chambers for thermal cycling and humidity freeze up of panels to 4m x 2.5m; a large area AAA+ rated solar simulator with temperature controlled enclosure for performance measurements; and access to a five-acre outdoor testing area with single and two-axis trackers for accelerated light soaking and CPV testing. The joint venture combines Fraunhofer’s technical expertise and extensive research

capabilities with CSA Group and VDE's solar certification proficiency, creating a new center of excellence for PV module testing.

"We are very excited to start this new venture in Albuquerque, New Mexico," said Dr. Christian Hoepfner, director of technical operations at Fraunhofer CSE and president of CFV Solar Test Laboratory. "This new test laboratory will be instrumental in bringing new PV technologies and products to the market, while maintaining the excellent PV industry track record with regards to safety and product quality. The co-location with a Fraunhofer research group will help CFV to stay at the cutting edge of PV technology."

"Our generations of international experience have shown that customer trust and an excellent reputation with authorities can be achieved and maintained only by ensuring independence, neutrality, and uncompromising quality," said Wilfried Jäger, managing director of the VDE Testing and Certification Institute. "We look forward to applying our highest standards in working with customers in this dynamic and exciting industry, together with our joint venture partners. We believe our bundled services are truly unique and perfectly tailored to industry needs."

"From other markets we learned that accurate and efficient testing, backed by profound R&D expertise, is a key element for quick deployment of the PV industry," said Dr. Harry Wirth, head of department photovoltaic modules, systems and reliability at Fraunhofer ISE. "Our joint venture has the capabilities to provide the required comprehensive services."

About CSA Group
CSA Group is an independent, not-for-profit membership association serving business, industry, government and consumers. CSA Group consists of three divisions: CSA Standards, a leading standards-based solutions organization, providing standards development, application products, training and advisory services; CSA International, which provides testing and certification services for electrical, mechanical, plumbing, gas and a variety of other products; and OnSpeX, a provider of consumer product evaluation, inspection and advisory services for retailers and manufacturers. For more details, visit www.csagroup.org

About the VDE Testing and Certification Institute
The VDE Testing and Certification Institute is an independent institution which is nationally and internationally accredited. Under the leadership of Wilfried Jäger, Managing Director, the VDE Institute is responsible for testing and certifying the safety and performance of electronic devices, components and systems for the consumer and the general public using the highest standards of quality. Since 1920, the VDE mark stands for safety and quality in electronic and communication technology. Its independent test engineers put more than 100,000 electronic products per year to rigid tests before they assign the VDE mark. Worldwide, VDE's experts supervise more than 7,000 manufacturing plants. Cooperation agreements with more than 50 countries have ensured that the inspections of the VDE Institute are internationally recognized. More than 200,000 product families - and therefore more than a million of products worldwide - carry VDE certification marks. The non-profit VDE Testing and Certification Institute in

Offenbach employs about 450 staff members. In addition, VDE has established a worldwide network, especially in Asia, employing an additional 300 persons, mostly for testing and inspection issues. For more details, visit www.vde.com

About Fraunhofer ISE and CSE

Fraunhofer-Gesellschaft is the leading organization for applied research in Europe with 59 research institutes and 17,000 employees. Fraunhofer USA, Inc. is a non-profit applied research organization headquartered in Plymouth, Michigan with six research centers that collaborate with major universities throughout the U.S. For more details, visit www.fraunhofer.org

One of Fraunhofer USA's research centers is the Center for Sustainable Energy Systems CSE, located in Cambridge, MA. CSE is an applied research and development laboratory dedicated to the commercialization of clean energy technologies. CSE engages in contract research and development with private companies, government entities, and academic institutions. Current research focuses on PV module design and manufacturing and energy efficient building technologies. For more details, visit cse.fraunhofer.org

The Fraunhofer Institute for Solar Energy Systems ISE, located in Freiburg, Germany, is the largest solar energy research institute in Europe. The Institute is committed to promoting energy supply systems which are sustainable, economic, safe and socially just. ISE develops materials, components, systems and processes for seven different business areas: Energy-Efficient Buildings and Technical Building Components, Applied Optics and Functional Surfaces, Solar Thermal Technology, Silicon Photovoltaics, Alternative Photovoltaic Technology, Renewable Power Generation and Hydrogen Technology. ISE operates several testing centers for various solar technologies and in the building sector. For more details, visit www.ise.fraunhofer.de