Media release



# Oerlikon Solar and Rusnano/Renova Joint Venture open up Russian market for leading thin film solar PV technology

Joint Venture of Rusnano and Renova places 120 MW end-to-end line order with Oerlikon Solar for factory in the Chuvash Republic, Russia

- Largest production equipment order to-date in 2009 for thin film PV market
- Micromorph<sup>®</sup> PV technology establishes a foothold in Russia
- Oerlikon Solar's Micromorph<sup>®</sup> technology gaining momentum

*Truebbach, August 17, 2009* – Oerlikon Solar today announced that Nano Solar Technology Ltd. (NST), a newly formed Russian high-tech firm, has ordered a 120 MW end-to-end Micromorph<sup>®</sup> line for production of thin film solar modules. NST is a Joint Venture between Renova Group and the Russian Corporation of Nanotechnologies (Rusnano). With the envisaged production capacity of one million solar modules annually, this is the largest equipment order in the worldwide thin film silicon photovoltaic (PV) market in 2009 to-date.

The order includes Oerlikon Solar's Micromorph<sup>®</sup> technology which raises module efficiency by up to 50 percent over prior generation technologies. The equipment will be delivered in 2010 to the new site currently under construction in Novocheboksarsk (Chuvash Republic). The start of production is scheduled for 2011. The order also encompasses a comprehensive multi-year service agreement, provided by Oerlikon Solar's global customer support team.

Establishing production of thin film solar modules in the Chuvash Republic is part of Rusnano's strategy to develop the high tech economy in Russia by co-investing in nanotechnology industry projects. Through acting as a catalyst for private coinvestments, Rusnano aims at creating conditions favourable to developing cutting edge nanotechnology in Russia, the joint venture with Renova being a good example. "Oerlikon Solar emerged from a thorough evaluation process to identify the best technology partner for our project, because of its leading technology" said Yaroslav Kuznetsov, CEO of NST. "This is a win-win situation for all parties involved. Oerlikon Solar can establish a strong presence in the Russian market and the Russian economy has made another step as a state-of-the-art production site",



Page 2 continued Yaroslav Kuznetsov. In addition to the planned production line from Oerlikon, Rusnano plans to set up a major research center that will focus on increasing the effectiveness of the solar modules in cooperation with the loffe Physical Technical Institute of the Russian Academy of Sciences.

The Joint Venture of Rusnano and Renova will be the latest Micromorph<sup>®</sup> end-toend line customer for Oerlikon Solar to take advantage of the company's proven high-performance low cost PV module production solution. It will deliver Micromorph<sup>®</sup> PV modules to serve the growing market for solar PV applications. The company will address PV markets such as Spain, Italy, Greece and Germany.

Oerlikon Solar's leading edge production solutions are having a major impact on the market as more and more companies launch their production. "Russia and the Commonwealth of Independent States offer great market potential for Oerlikon in the medium and long-term", said Oerlikon CEO Dr. Uwe Krueger. Already today, the Oerlikon Segments Coating, Vacuum, Textile and Drive Systems are conducting business in Russia. With the substantial order from NST, Oerlikon Solar established itself in this important economic zone as well. "The contract confirms our leading edge technology and our unique ability to quickly implement and scale up commercially successful mass production of thin film solar modules. The 120 MW Micromorph<sup>®</sup> end-to-end production line will position NST as a key player among thin film PV manufacturers", continued Dr. Uwe Krueger, CEO of OC Oerlikon. Oerlikon Solar is committed to the highest quality of customer support and is taking great measures to ensure that resources and delivery capabilities grow to meet the needs of future expansion in the solar industry.



## Page 3 Oerlikon Solar's technology gaining momentum

In addition to expansion into new markets, several existing Oerlikon Solar customers have recently announced new off-take agreements to deliver PV panels manufactured on Oerlikon Solar's end-to-end lines. HelioSphera (Greece) announced the signing of a long term supply agreement with Techno Spot, a major Italian distributor of photovoltaic modules and components. Under this agreement, HelioSphera will supply a minimum of 9 MW of Micromorph<sup>®</sup> thin film modules between 2009 and 2010. German based Sinosol AG has announced agreements with two Taiwanese Oerlikon Solar customers for a total of 68 MW.

"We clearly see improving market conditions for the solar PV industry at mid-year showing a mid- to long-term growth trend in demand for overall renewable energy and especially for solar PV applications", stated Oerlikon CEO Uwe Krueger.

According to a recently published study by New Energy Finance, new investments in clean energy worldwide rallied in the second quarter of 2009, reaching USD 24.3bn, almost double the amount invested worldwide during Q1 2009. According to New Energy Finance, this improving trend in Q2 was led by investments in asset finance for large solar and wind energy projects.



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### About Oerlikon

Oerlikon (SIX: OERL) is one of the world's leading international high-tech industrial groups specializing in machine and plant engineering. The company is a leader in the field of industrial solutions and innovative technologies for textile manufacture, thin film solar and thin film coating, drive, precision and vacuum systems. With roots in Switzerland and a long tradition stretching back 100 years, Oerlikon is a global player with a workforce of almost 18 000 at 180 locations in 37 different countries. The company's sales amounted to CHF 4.8 billion in 2008 and it ranks either first or second in the respective global markets.

#### About Oerlikon Solar

Oerlikon Solar offers field proven equipment and end-to-end manufacturing lines for the mass production of thin film silicon solar modules. Engineered to reduce device cost and maximize productivity, its end-to-end solutions are fully automated, high yield, high uptime, and low maintenance. The production lines are complete systems, yet modular and upgradeable in both throughput and process technology. As a global leader in thin film PV technology, the company provides its customers with extensive experience in both amorphous and high-efficiency Micromorph<sup>®</sup> tandem technology. Oerlikon Solar is ranked "global number one solar turnkey line supplier" by VLSI and has been named winner of the 2009 CELL AWARD for the "best technical product for thin film module manufacturing". Oerlikon Solar is headquartered in Switzerland, has over 750 employees in 13 locations world wide and maintains sales and service centers in the USA, Europe and China, Taiwan, Korea, Singapore and Japan.



#### Page 5 About Nano Solar Technology Ltd. (NST)

Nano Solar Technology Ltd. is a joint venture between Rusnano and Renova. Rusnano CEO Anatoly Chubais and Renova Chairman Victor Vekselberg signed an agreement founding the company during the St. Petersburg International Economic Forum in June 2009.

The **Russian Corporation of Nanotechnologies** (Rusnano) was established in 2007 to effect Government policy in the field of nanotechnology. Rusnano co-invests in nanotechnology industry projects that have high commercial potential or considerable social benefit. Early-stage investment by Rusnano lowers the risks to partners in investment from the private sector .Rusnano participates in building nanotechnology infrastructure, provides educational programs, and supports the popularization of nanoscience and nanotechnology. To enable the Russian nanotechnology industry to strengthen its international links and to advance to the global market, Rusnano develops partnerships with the world's leading nano-technology centers and organizes the annual Nanotechnology International Forum in Russia. To learn more about Rusnano please visit www.rusnano.com

**Renova Group** is a leading privately owned Russian business group, possessing and managing assets in metallurgical, oil, ore mining, chemical, construction industries, energy, telecommunications, hi-tech engineering, utility services and financial sector in Russia and abroad (CIS countries, Switzerland, Italy, South Africa and USA). Largest Renova Group assets are participation interests in TNK-BP, UC RUSAL, IES, as well as in Swiss OC Oerlikon and Sulzer technology groups, where Renova Group is a major shareholder.