

**Contact:**

Carole Jacques  
Lux Research, Inc.  
617-502-5314  
carole.jacques@luxresearchinc.com

## **SHAKEOUT SHIFTS SOLAR'S CENTER FROM EUROPE TO CHINA**

Solar industry will grow to \$77 billion in 2015, but not before bloodletting resets the supply curve, says Lux Research

Boston, MA – March 9, 2010 – Reeling from a stormy 2009, the solar market will soon see lopsided supply and demand rush back into parity, according to a new report from Lux Research. Strong demand growth in Asia and the U.S. will push the market to 9.3 GW for \$39 billion in 2010, while continued price reductions will open new markets and drive solar to a 26.4 GW market in 2015 for \$77 billion in revenue. Meanwhile, China – to date a large manufacturer of solar modules and materials, but not yet a large buyer of them – will swing into action and become the world's largest market for solar in 2015. The report underscores, however, that the renewed balance between supply and demand will arrive only after a wave of company failures and lower utilization rates.

Titled "Solar's Shakeout: Europe Loses Leadership as China Rises," the report analyzes economic competitiveness and other drivers for the industry's six major technologies: crystalline silicon (x-Si), cadmium telluride (CdTe), thin film silicon (TF-Si), copper indium gallium diselenide (CIGS), high concentrating photovoltaics (HCPV), and solar thermal – also known as concentrating solar power (CSP).

"We found that solar's short-term pain will enable it to exceed growth expectations over the very long-term," said Ted Sullivan, a senior analyst for Lux Research, and the report's lead author. "The volume of solar installations will grow at a 23% annual rate from 2010 to 2015, but revenue will grow by just 14%, as prices fall due to remaining over-capacity. While current subsidies in China and elsewhere will help soak up some of that capacity, there will be widespread company failures throughout the value chain first."

The report updates earlier market size and demand forecasts, extends Lux Research's outlook through 2015, and adds three new geographies – Czech Republic, New Jersey, and Ontario – due to their high levels of subsidies and rapidly developing markets. It compares Lux's demand model for each geography against the expectations of installers and project developers, and against projections for supply-side capacity and production. Among its key findings:

- **Capacity remains well above demand – signaling violent changes ahead.** Expect the supply and demand curves to move abruptly together over the next few years due to company failures – either through firms folding outright, or becoming "zombies" that still exist on paper but produce little or no product. Demand will also increase in producing regions such as China, prompted by government subsidies and other factors.
- **Low-cost x-Si technologies dominate, but thin-film and CSP nibble at the margins.** As financing begins to return to solar in 2010, crystalline silicon players will continue to use low price as a weapon against new technologies that don't share its "bankability" or scale. Even

so, new technologies such as CSP, CIGS, and even HCPV technologies will gain at the margins. The future of thin film silicon remains more questionable.

- **Solar adoption will be a multi-decade story.** While it won't meet outsized expectations in the near-term, solar will wildly beat them long-term – albeit often in unexpected ways. At its core, solar is an energy and construction industry, not a consumer-oriented one like semiconductors or IT. As a result, its adoption cycle is determined by replacement cycles for residential and commercial roofs – typically 15 years to 20 years – and for natural gas power plants, up to 30 years.

“The continuing glut threatens low-quality and high-cost players alike,” said Sullivan. “The decline of firms selling low-quality systems is intuitive, but over-capacity also threatens developed players like Evergreen Solar and Uni-Solar – which have incredibly innovative technologies, but high operating costs and insufficient scale.”

“Solar’s Shakeout: Europe Loses Leadership as China Rises,” is part of the Lux Solar Intelligence service. Clients subscribing to this service receive ongoing research on market and technology trends, continuous technology scouting reports and proprietary data points in the weekly Lux Research Solar Journal, and on-demand inquiry with Lux Research analysts.

#### **About Lux Research**

Lux Research provides strategic advice and on-going intelligence for emerging technologies. Leaders in business, finance and government rely on us to help them make informed strategic decisions. Through our unique research approach focused on primary research and our extensive global network, we deliver insight, connections and competitive advantage to our clients. Visit [www.luxresearchinc.com](http://www.luxresearchinc.com) for more information.

###