March 20, 2008

Contact:
Carole Jacques
Lux Research, Inc.
(888) 589-7373
carole.jacques@luxresearchinc.com

SOLAR BUBBLE TO BURST IN 2009 AS SUPPLY EXCEEDS DEMAND

Lux Research projects overall solar industry revenues will grow to $70.9 billion in 2012, but oversupply and new technologies will squeeze today's leaders

New York, NY – March 17, 2008 – The solar industry has been on a remarkable run in recent years, attracting the attention of investors, corporations, and policymakers. This activity has inflated a bubble that's primed to burst. While growth will continue to be robust – solar industry revenues will grow at a brisk 27% annual rate to reach $70.9 billion in 2012, up from $21.2 billion in 2007 – the solar industry will look very different just two years from now, according to a new report from Lux Research entitled "Solar State of the Market Q1 2008: The End of the Beginning."

"Government subsidies in countries like Japan, Germany, and Spain have helped make large-scale solar a reality, with annual installations reaching 3.43 GW in 2007," said Lux Research Senior Analyst Ted Sullivan, the report's lead author. "During this period, solar demand has consistently outpaced supply. But the market is now approaching a tipping point: We project that the supply of solar modules will exceed demand in 2009, leading to falling prices and a shake-out among companies that aren't prepared to thrive in this new environment – particularly crystalline silicon players that haven't invested in new thin-film technologies."

To bring clarity to the solar market, Lux Research studied five solar technologies in depth – 1) crystalline silicon photovoltaics (PV), which dominate today; 2) multi-junction PV, used in high-concentrating PV (HCPV) systems; 3) inorganic thin-film PV; 4) organic and Grätzel PV; and 5) solar thermal. The team built a new forecast that independently models solar supply and demand through 2012 using a rigorous, scenario-driven methodology, spanning five technologies, three application segments, and 10 countries. Finally, the team also drew on Lux Research's comprehensive database of solar finance, which contains every round of institutional venture capital (VC) funding in firms commercializing solar technology, every solar initial public offering (IPO) on a major exchange, and every solar merger and acquisition (M&A) event, worldwide, going back to 1995. The Lux Research report finds that:

- Today's shortage of solar modules will end in 2009, when demand for solar installations will reach 8.96 GW, but supply reaches 9.57 GW. Supply will spike as the shortage of polysilicon for crystalline silicon PV begins to relax, inorganic thin-film PV capacity builds out, and new HCPV and solar thermal technologies gain a foothold.
- Oversupply will persist through 2012, growing in 2010 before the gap begins to narrow: Demand will reach 20.3 GW worth of installations in 2012 against supply of 21.2 GW.
- Shortages of polysilicon – the starting material for the crystalline silicon PV value chain – have plagued the solar market since 2005, driving spot prices as high as $450 per kilogram. While conventional wisdom has polysilicon supply constraints easing this year or next, Lux Research's comprehensive risk-weighting of 133 polysilicon construction projects finds that polysilicon constraints will last into 2010.
- Government subsidies for solar will continue to be a critical driver of demand through 2012. Subsidies in early-adopting countries like Germany, Japan, and Spain will ramp down, but new markets like China and India will introduce richer subsidies, shifting existing suppliers to new geographies and fueling domestic production.
- While the solar IPO environment has exploded since 2005 – of the 46 solar IPOs that have taken place on major exchanges since 1995, 76% have occurred in the last three years – solar IPOs dropped in 2007, as total funds raised fell 40% from 2006's level to $2.20 billion. Since 1995, the 46 solar companies that have gone public on major exchanges have raised a total of $7.33 billion and boasted combined opening valuations of $34.7 billion.
- Solar M&A has only become a factor in the last two years. All told, 41 solar M&A deals have taken place since 1995, totaling $2.48 billion – but 97% of this value has been realized since the beginning of 2006, owing largely to an acquisition spree by thin-film solar manufacturing equipment supplier Applied Materials.

The Lux Research analysis finds important implications for incumbent companies in the solar industry. “By 2010, crystalline silicon PV will be freed from polysilicon supply constraints – but it will immediately be hit with a one-two punch of slackening demand growth and increased competition from new technologies, namely inorganic thin-film PV and solar thermal,” said Michael LoCascio, Senior Analyst at Lux Research. “While sales volumes, measured in megawatts, will continue to increase, average sales prices will fall. The result is that revenues for crystalline silicon PV will drop on a year-over-year basis in 2010 for the first time in memory – which will cool the enthusiasm for venture capital funding and IPO events.”

The 137-page report includes solar market sizes and forecasts from 2000 to 2012 broken down by technology, application, and country. It offers in-depth discussion of each of the five major solar technologies, providing breakdowns of the value chain for each technology, as well as benchmarks for technology variations, drivers and challenges, key companies, key events, key developments, and a technology outlook. The report also includes a detailed analysis of all VC, IPO, and M&A activity in solar since 1995, and deeper investigations of key issues such as polysilicon supply, the maturation of inorganic thin-film PV, and government subsidies.

“Solar State of the Market Q1 2008: The End of the Beginning” is part of the LR Solar Intelligence service. Clients receive: 1) State of the Market reports every six months; 2) ongoing technology scouting reports and proprietary data points in the weekly Lux Research Solar Journal; and 3) on-demand inquiry with Lux Research analysts. For information on how to become a client, contact John Schwartz at john.schwartz@luxresearchinc.com or (646) 649-9582.

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 for more information.

###