

# Primer on the U.S. Solar Industry: Risks and Opportunities

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### Key Points:

- *The solar industry is growing rapidly, due to sharply falling technology prices, volatility in the oil market, government subsidies and support measures, and ongoing environmental concerns.*
- *Total installed costs for solar facilities have fallen precipitously in recent years and should continue to do so, owing to improvements in solar panel technology, economies of scale in production, and improvements in the technology and efficiency of the other components of solar systems.*
- *Despite the recent declines, the levelized cost of producing solar energy is still considerably higher than the comparable costs of producing energy not only from fossil fuel sources, but also from other renewable energy sources.*
- *In 2011, solar energy accounted for 0.04 percent of total U.S. electricity production. Advocates regard solar energy's current small share as a major opportunity for future growth.*
- *Other renewable energy sources such as hydropower, wind, and biomass currently play much greater roles in the nation's mix of energy sources than solar energy.*
- *The solar energy industry's three biggest pluses are (a) that its fuel source is limitless and priced accordingly, (b) that its various technologies are "clean" and emit neither pollutants nor greenhouse gases, and (c) that solar energy generation tends to be greatest during daylight hours and the summer months when peak power demand occurs.*
- *In principle, these environmental benefits should be taken into account in calculating levelized costs, and the value of these benefits should be used to offset some of the current high cost of solar energy. However, there is no consensus on how to value them.*
- *While there is no guarantee of continued government support, the ultimate objective of the public policies providing this support is to create a solar industry that is self-sustainable and achieves full cost-of-energy grid parity without this support.*