

## GRU market transition 2015-2025

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### Query:

If indeed a new technology can be brought to market that is cost effective with our product (electrical energy), what are the implications to our core revenue metrics?

In other words, what percentage of our customer base will start using this technology? 1%, 7%, 23%, 42%? In the decade following the magic point of cost equivalence, do we surrender market share, or position ourselves to be a provider of this new technology?

Ps, we have the know-how, infrastructure, policy tools, and industry connections available to successfully be funded under this (below) program.

### U.S. department seeks input on solar program

**GOLDEN, Colorado, US, March 22, 2006 (Refocus Weekly) Applicants have three months to express interest in funding under the U.S. government's 'Solar America Initiative' technology pathway.**

A notice of program interest was issued earlier this month by the Department of Energy, with a closing date for applications of June 3. The government site does not provide details on total program funding nor the expected number of awards, but it does say the award ceiling is US\$20 million and the award floor is \$5 million.

A major emphasis of the program is "achieving cost-competitiveness and broad commercialization of solar photovoltaic systems" to diversify electric supply options in the U.S., reduce the need for new conventional power plants, and improve the environment. The major goal of the Solar America Initiative is to make electricity generated by PV systems cost-competitive with other electricity sources by 2015 and to promote commercialization of 5 to 10 GW of new grid-connected capacity by that year.

President George Bush has requested an increase in funding for SETP in FY-07 and will realign existing research activities so work on PV systems is primarily focused on the goals of the SAI. The markets to be addressed are grid-tied residential, commercial and utility PV applications, because "they represent the largest current and potential markets for application of PV systems."

The DOE has used "very aggressive benchmarks" for determining levelized energy cost targets under the program, from 8¢ to 10¢/kWh in the residential sector, 6¢ to 8¢ in commercial, and from 5¢ to 7¢/kWh for utilities (in 2005 dollars). The SETP will focus on two areas: R&D on PV component and system designs, including low-cost approaches for manufacturing them; and technology acceptance activities that address *marketplace barriers* such as net metering.

To facilitate rapid commercialization of new technologies, the program will expand funding opportunities for private companies from the domestic PV industry, and the official notice describes preliminary concepts and considerations for industry's role in R&D. As industry's role expands, DOE says the role for its national labs (National Renewable Energy Laboratory and Sandia National Laboratory) will expand to provide technical support and to independently measure and test cells, modules and systems produced by industry.

It will also conduct in-house R&D on near-term technology challenges that are relevant to industry and perform R&D on disruptive device designs or fabrication processes that could be adopted by industry before the 2015 milestone. NREL will continue to conduct long-term research on technologies that may be adopted by industry beyond 2015, such as thin-film alloys and novel quantum effect cells.

Funding under the SAI Technology Pathway Partnerships will boost research on component technologies, manufacturing processes and integrated PV system designs that are considered to have "the best chance at making PV-generated electricity cost-competitive with market alternatives by 2015," the notice explains. The first phase will solicit formation of multiple industry-led partnerships to design prototype PV systems, demonstrate novel approaches for manufacturing and to implement results into ongoing or new mass production operations.

DOE is not accepting applications under this notice, but will review responses for the formulation of program strategies. It will not pay for information provided and there is no guarantee that there will be a funding arrangement as result of the notice.

Responses to the official notice must be less than 30 pages and no more than 5 MB in file size. "Providing data/information that is limited or restricted for use by the government would be of very little value and such restricted / limited data / information is not solicited nor will it be considered."