

**A Systems
Analysis of Solar
Energy R&D:
How can we
understand
Solyndra?**



SF STATE

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Synopsis:

A Systems Analysis for the solar energy industry and solar R&D is presented to identify key positive reinforcements that can accelerate the adoption of solar technologies. Such an analysis can also identify constraints that can decelerate solar technology adoption, as well as points of leverage where investment and R&D can have the most positive impact. One challenge involves the means to continue to drive down manufacturing and deployment costs for solar energy systems and to expand manufacturing capability in order to accelerate deployment of such systems. Such an analysis is useful in understanding the context of Solyndra's PV technology and bankruptcy. Both aspects are described, together with a preliminary description of the optics and materials of the Solyndra module based on prior work on evacuated tube solar thermal collectors.

Speaker Bio:

Greg P. Smestad received his Ph.D. in Physical Chemistry from the Swiss Federal Institute of Technology (EPFL), his Masters degree in Materials Science and Engineering from Stanford University, and his B.S. in Biology the University of Santa Clara. He is the associate editor for the journal Solar Energy Materials and Solar Cells and is the owner of a consulting firm specializing in these topics. A frequent consultant to venture capitalists and the U.S. Department of Energy, he is also the author of SPIE's tutorial text, "Optoelectronics of Solar Cells" (2002). He has worked at Hewlett-Packard, the Hahn-Meitner Institute Solar Energy group in Berlin, Germany, the Paul Scherrer Institute in Villigen, Switzerland, Lawrence Bekeley National Labs, and has been a professor at California State University, Monterey Bay and the Monterey Institute of International Studies. He also is a descendant of the original settlers to the San Francisco Bay Area who came with Anza in 1776.