

Seminario:

The impact of distributed solar generation on the role & function of incumbent utilities

Presentation by
Fereidoon P. Sioshansi, Ph.D.
President Menlo Energy Economics

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Abstract

The electric power industry is rapidly and fundamentally changing on a number of dimensions including **generation, transmission, distribution** and on the **customer** end.

Dramatic cost reductions of **distributed energy generation**, particularly from rooftop solar PV are turning more and more **consumers** into **prosumers**, eroding utility sales and revenues and threatening the historical business model, which was based on **fixed tariffs** applied to **volumetric consumption**.

The result is that for the first time in history, consumers in high retail tariff regions are able to meet most if not all their service needs through **self-generation** at costs that are on par or lower than the grid-supplied electricity, a phenomenon that is likely to spread as the cost of distributed solar generation continues to fall while the cost of grid-supplied electricity is projected to rise.

Equally important are rapid technological advances in **energy storage, electric vehicles, micro-grids, intelligent home energy management, demand aggregation, and demand response**, all pointing to a different future with a different role for the incumbent stakeholders in the power sector, particularly for the distribution business.

This presentation, based on a forthcoming book, examines the ramifications of these developments and their impact on the power sector.

Biographical sketch of Dr. Sioshansi



Dr. Sioshansi is President of **Menlo Energy Economics**, a consulting firm in San Francisco and the editor and publisher of ***EEnergy Informer***, a monthly newsletter with international circulation. ***EEnergy Informer*** is regularly featured in ***The Electricity Journal***, ***Energy Spectrum*** (UK), ***Renew Energy*** (Australia), ***Energize*** (So Africa), ***IAEE Forum*** and other publications.

His professional experience includes **Southern California Edison Company** (SCE), the **Electric Power Research Institute** (EPRI), **National Economic Research Associates** (NERA), and **Global Energy Decisions**, now part of **ABB**.

His recent edited books include

- ***Electricity Market Reform: An International Perspective*** (2006)
- ***Competitive Electricity Markets: Design, Implementation, Performance*** (2008)
- ***Generating Electricity in a Carbon Constrained World*** (2009)
- ***Energy Sustainability and the Environment: Technology, Incentives, Behavior*** (2011)
- **Smart Grid: Integrating Renewable, Distributed & Efficient Energy** (2011)
- **Energy Efficiency: Towards the End of Electricity Demand Growth** (2013)
- **Evolution of Global Electricity Markets, New Paradigms, New Challenges, New Approaches**, (2013)
- **Distributed Generation and its Implications for the Utility Industry** (2014)
- **Utilities of the Future: Future of Utilities**, forthcoming March 2016.

He has degrees in Engineering and Economics, including an MS and Ph.D. in Economics from **Purdue University**.