

Electricity Generation Technologies, Policies, and Systems Integration: A Biased Perspective

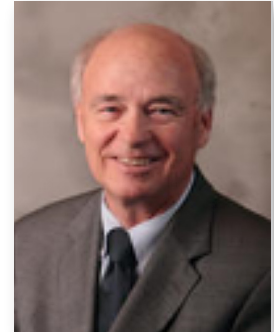
16 October 2015 – ME Lecture Hall – 1300

With Dr. Terry Surles, Ph.D.

Lead for Clean Energy Solutions, University of Hawaii

Abstract:

The presentation will be a follow up to the presentation made in 2014 that discusses the latest activities related to the electricity grid. An initial overview will be presented on electricity generation in the United States. The greater focus will be on the growth of variable renewables in the United States and globally, the insertion of newer smart grid technologies (such as automated demand response and energy storage) to address intermittency of these resources. In this regard, discussions will be on the substantive growth of residential and commercial photovoltaics in Hawaii and the impacts on the grid. Additionally, there will be a discussion on the substantive growth of wind and the impacts of regulation on that growth. There will also be a discussion on impending and existing legislation and regulation on coal and natural gas.



Dr. Terry Surles, Ph.D.

Abridged Biography:

Dr. Surles has a distinguished career in energy and environmental management and consulting positions. He currently is at the University of Hawaii as Lead for Sustainable Energy and Environmental Solutions and is also serving as Senior Advisor to the California Institute for Energy and Environment. During this time, he has also been an expert for APEC and IEA in serving as an expert in Indonesia, Vietnam, Peru, and Korea. From 2010 to 2012, as Desert Research Institute Vice President, he led program development and management efforts for three research divisions and four research centers in environmental and energy sciences. From 2006 to 2010, he was the Technology Integration and Policy Analysis Program Manager at the Hawaii Natural Energy Institute focusing on grid integration of variable renewable resources and electricity storage technologies. He was simultaneously a senior advisor to the University of California's California Institute for Energy and Environment focusing on carbon capture and storage. From 2004 to 2006, he was Vice President for Environment at Electric Power Research Institute focusing on air quality, health, energy/water nexus, and climate change issues. From 2003 to 2005 he was President of the Pacific International Center for High Technology Research. From 2000 to 2004, he was on loan to the California Energy Commission as the Public Interest Energy Research Program Director from Lawrence Livermore National Laboratory (LLNL) where he was Associate Laboratory Director for Energy Programs from 1998 to 2000.

Dr. Surles received his Ph.D. in Analytical Chemistry from Michigan State. He has more than 250 publications, technical reports, and presentations to his credit. He has served on a number of committees, including seven appointments with the National Research Council as well as the US Department of Energy and the National Renewable Energy Laboratory. He has consulted for a number of organizations, including the International Energy Agency, Asia Pacific Economic Consortium, the Northeast Asia Economic Forum, Institute for Defense Analysis, East-West Center, the United Kingdom Energy Research Centre, and the State of Victoria, and Booz, Allen, & Hamilton.



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