

Electric Utilities Want to Control Your Demand? Why Is This a Good Idea

Date: Tue. 10th Oct.

Time: 12:50 pm

Location: Building 59, Room 2013

Speaker:

Dr. Ali Al-Awami
Assistant Professor EE Dept.

Abstract:

To maintain stable and reliable operation of the grid, electric power generation and demand must match almost instantly. Traditionally, balanced operation used to be performed by centralized control of the generation side so as to "follow" the load because generators are readily accessible by the grid operator. The smart grid can enable the grid operator to have access to the distributed electric demand, either directly or through a third party. Hence, the demand may "respond" to grid conditions, making generation-load balance, among other services, more efficient than ever.

In this talk, demand response (DR) as an asset for the grid operator will be discussed. The talk will briefly cover the different services that DR can provide to the grid, whether these services can be valued monetarily, and whether they can be traded as commodities in an open-access electricity market.

Ongoing research activities at KFUPM by members of the Power and Energy Research Group in DR utilization will be presented. These include centralized and distributed control, stochastic scheduling, and even some long-term planning aspects of DR.

Speaker Bio:

Dr. Ali Al-Awami obtained his Ph.D. in December 2010 from the University of Washington, USA. Since then, he has been an Assistant Professor at the EE Dept. of KFUPM. Dr. Al-Awami's research interests include the integration of renewable energy sources, demand response, and electric vehicles, into grid operations, deregulated electricity markets, and smart grid technologies. He has a number of publications in top journals and conferences in these fields. Ali won several awards from IEEE, University of Washington, and KFUPM honoring the quality of his research. Dr. Al-Awami's industrial experience includes working for Saudi Electricity Co. and Bonneville Power Administration.