SESSION 7E

CAN ENERGY EFFICIENCY DELIVER FOR THE GRID?

Moderator: Maureen McNamara, U.S. Environmental Protection Agency

PANELISTS:

Ken M. Keating, Ph.D.
Phil Mosenthal, Optimal Energy
Stephen Cowell, Conservation Services Group

SESSION SUMMARY:

Energy efficiency is a cost-effective resource that delivers a number of societal benefits including lowering energy bills, moderating utility prices, delivering environmental benefits, creating jobs and improving state economies, and improving energy security. Energy efficiency has been proven to be a reliable resource in some parts of the country in reducing demand growth, particularly in areas of the country such as the Pacific Northwest and New England that have had supportive policies and energy efficiency programs in place for many years. Given efficiency's track record in delivering results, it is increasingly being relied upon as a least cost resource for avoiding or delaying the need to build new power plants, particularly given regulatory uncertainty surrounding potential future climate change regulation. With this expanding use of energy efficiency as a utility system resource, there has also been re-vitalized interest in the use of energy efficiency as an alternative to transmission and distribution investments.

Can energy efficiency and related resource options such as combined heat and power deliver relief to congestion zones or help avoid or delay the need for new transmission and distribution (T&D) investments—in theory yes, especially if planned for in advanced and targeted (or cited near) constrained geographic areas. A few areas of the country have moved beyond theory and are beginning to target energy efficiency resources for this purpose. For example, recent Vermont legislation directed the Vermont Public Service Board (PSB) to develop a new transmission planning process so that all resources including energy efficiency can be considered and treated in a transparent and unbiased way. A complementary order issued by Vermont PSB, directed the energy efficiency utility, Efficiency Vermont, to increase energy efficiency targets in the state and to target efficiency investments in strategic ways to address transmission congestion and system reliability needs. In addition, for a number of years, Bonneville Power Administration (BPA) has undertaken collaborative efforts to examine "nonwires" solutions to transmission investments in the Pacific Northwest and has been able to delay transmission investment in the Olympic Peninsula through a combination of energy efficiency and demand response initiatives. Panel members will discuss the role of energy efficiency in avoiding or delaying the need for transmission and discuss how some jurisdictions are overcoming barriers to greater use of efficiency as a resource in this context. Panelists will discuss questions such as:

- What institutional barriers are there to convincing utility executives and transmission planners that energy efficiency and CHP resources are a reliable alternative to certain T&D investments?
- How do you know that you've got a MW with energy efficiency?

- How are costs and risks evaluated differently for energy efficiency vis-à-vis transmission investments? What is the best way to compare energy efficiency to other alternatives that have different characteristics?
- How far in advance do energy efficiency and CHP resources need to be pursued in order to offer a valid alternative to T&D investments? What conditions affect how quickly efficiency can be deployed?
- How do regulators view energy efficiency as an alternative to T&D investment? What needs to be done to educate regulators about the role of efficiency in delivering system reliability?
- Are there regulatory or other policy barriers that have limited consideration of energy efficiency in transmission planning? How and where are states working to overcome these barriers?
- When is energy efficiency not a solution for avoiding T&D investment?