National Capital Area Chapter

United States Association for
Energy Economics
May 2002
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news

California's Efforts to Address Electricity Demand and New Markets—Experience to Date

Our Next Luncheon at Library of Congress

WHEN: **Noon, Friday, May 17**

WHERE: **6th Floor, Madison Building—Montpelier Dining Room**
Library of Congress (enter from Independence Avenue)
1st Street & Independence Avenue, SE, Washington, DC

SPEAKER: **Terry Surles, Director—Technology Systems Division,**
California Energy Commission

While electricity deregulation offers many benefits to consumers, the power market does not necessarily guarantee a balanced energy portfolio or technologies that do not hold near-term market potential. California recognized this deficiency and in 1996 established a new policy (and public goods charge) to support public interest energy research (PIER), renewable market support and energy efficiency market support. In 2000, the PIER Program was renewed, with funding authorized through 2011 at $62.5 million per year. The objectives of the PIER Program are to:

- improve energy cost/value;
- improve environment, health and safety;
- improve electricity quality/reliability/sufficiency;
- strengthen the economy; and
- provide consumer choice.

Our speaker this month, Terry Surles, wears two hats—he is Director of the Technology Systems Division, as well as Director of the PIER Program. In these capacities he is the "Chief Technology Officer" at the California Energy Commission (CEC). His responsibilities include:

- Maintaining and developing mid-term and long-term programs that contribute to long-term solutions to California's energy problems;
- Working with California industries to reduce their electricity usage while maintaining their competitiveness; and
- Developing environmental and safety information, measurement tools, and mitigation technologies that will help California meet its electricity needs with minimal impact on the environment.

Terry will provide an overview of the PIER Program, its accomplishments and lessons learned. He will also discuss the direction of the Program in light of recent events in California. Finally, he will address how the PIER Program accomplishes its objectives without interfering in the workings of the electric market.

Join us on **Friday, May 17** at 12:00 PM for networking, with the lunch-line forming promptly at 12:30 and the presentation beginning at 1 PM so we are done by 2 PM. **COST:** $15.00 for members and $20.00 for non-members—guests are always welcome. Make checks payable to NCAC-USAEE.

RSVP: By noon, TUESDAY, May 14, by phone to Pam Tomski on 202-861-2841. Cancellations after noon Thursday will be billed.

April Meeting Highlights

SPEAKER: Thomas Leckey, Energy Information Administration

Transmission Reliability Limits: The Unseen Effect on Costs and Competition

According to Leckey, the East Coast blackout in 1965 led to increased reliability efforts, among them interregional line load limits. Over the next thirty years, in a network of regulated suppliers and perfectly integrated monopolies, these limits likely made sense and contributed to higher reliability. But now, with the emergence of wholesale markets, regional transmission organizations and independent system operators, economists are increasingly interested in the opportunities lost from pursuing reliability to such an extent.

In a paper in which he shared authorship* it is maintained that these contingencies tend to reduce the range and magnitude of possible economic electricity transactions. In addition to higher costs, there is the implication that insulated markets may have a greater possibility of market power.

The Eastern Interconnect was modelled, based on the projections in the NERC 2000 Summer Base Case. The Eastern Interconnect includes everything east of the Rockies except Texas, including Canada. Solving such a large, nonlinear model required an iterative approach, first finding the least cost power flow solution, then using linear programming techniques to adjust for line/voltage violations, and then repeating these steps until a valid solution was reached. The solution represents a one-hour period, with electricity flows and nodal prices.

The model was solved for two cases, one with line limits in place, and the other, with power allowed to flow freely among regions. For a peak one-hour period, costs were reduced from $11 million in the restricted case to $10.6 million in the unrestricted case, or 3.6 percent. That was a one-hour cost reduction of $0.4 million. For a shoulder period, costs went from $7.6 million to $7.1 million, saving $0.5 million per hour or 6.7 percent, Leckey said.

The unrestricted case reduced cost disparities for locational marginal prices (LMPs). While there were large variations in costs in the restricted case, in the unrestricted case, approximately 93% of regions' costs were within a narrow range. Necessarily, some areas might see higher costs, either from congestion or from increased line losses. Some of that may be offset by higher revenues.

Leckey then reviewed some hypothetical examples that illustrated the implications for competitive markets. Florida, for example, has higher-cost generators and less ability to import. As a result, there is less of an impact moving from the restricted to the unrestricted case than in an area such as New England. In New England, removing administrative line restrictions would lower costs by 24 percent in the model, though removing physical limits on transmission would reduce costs by 37%, as generation within the region declines about 9 percent while imports increase. For New York City, the unrestricted case would reduce marginal cost within the city by about 9 percent, though costs would remain high relative to other parts of the state because of high loads and limited local generation. Because access through the existing interfaces is constrained, the area would remain vulnerable to market power, said Leckey.

* *Some Costs of Reliability Limits,* Thomas Leckey and Douglas Hale of EIA and Thomas Overbye of the University of Illinois at Urbana-Champaign.

Sixth Annual Washington Energy Policy Conference

New Developments in Electric Market Restructuring

Tuesday, May 21, SAIS Kenney Auditorium, 1740 Massachusetts Ave. NW

Don't forget to sign up for NCAC's annual energy policy conference. It's less than a month away! For program information, visit our web site at www.ncac-usaee.com. Please fill out the registration form below.

New Developments in Electric Market Restructuring

To register: Please mail the form below with your check (payable to NCAC/USAEE) to: Ms. Pamela Tomski, Treasurer, NCAC, c/o Wampler Associates, 1130 17th St. NW, Ste. 312, Washington, DC 20036. To register by e-mail: ptomski@erols.com

Please accept my registration for the Washington Energy Policy Conference on May 21, 2002

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