



STATE TECHNICAL FORUM ON EE/RE
Call #7 Summary – April 14, 2005
Energy Efficiency Resource Standards

Participants: 26 state officials participated in the call (see the attached participant list)

Key Issues Discussed

- Setting Energy Efficiency (EE) Goals
- Measurement and Verification
- Enforcement and Incentive systems
- Financing & Program Results

Summary of Presentations

A. Overview - Steve Keach, PQA (See also Background and Discussion questions,)

- **Benefits & Challenges:**
 - Reasons to implement energy efficiency targets include increased flexibility; driver for large-scale adoption of EE, opportunity to leverage other program funds such as public benefits funds
 - Challenges to implementation including, legislative and regulatory issues; and establishing targets, measurement, verification, and enforcement.
- **Measurement and Verification:** Steve mentioned a number of websites that address measurement and verification issues which were not included in the Background document:
 - December 16th Call of the State EE/RE Technical Forum on M&V:
http://www.keystone.org/Public_Policy/Energy_Program/State_EE_RE_Forum/December_16_Call/december_16_call.html
 - The California Measurement Advisory Council – www.Calmac.org
 - The Northwest Power and Conservation Council - 5th Power Plan – www.nwppc.org
 - The International Program Measurement and Verification Protocol (IPMVP) – www.ipmvp.org
- **Decoupling:** For information on overcoming barriers to energy efficiency programs (i.e. de-coupling sales volume from rates): The Regulatory Assistance Project – January 2005 Issue Letter – www.raponline.org; Next EE/RE Technical Forum Call will discuss decoupling in depth.

B. *The Energy Efficiency Target for Regulated Electric Utilities in Texas - Theresa Gross, Texas PUC* (See PowerPoint presentation)

- **Senate Bill 7** in the 1999 session required utilities to conduct EE programs. Electric and gas utilities must meet 5% of growth in demand through EE programs by Jan. 1, 2003, and 10% by Jan. 1, 2004, (147 MW goal based on 5-year rolling averages of historical peaks. Actually achieved 192 MW reduction) Funded by utility transmission & distribution rate. There is proposed legislation to increase the targets.
- **Senate Bill 5** in the 2001 session required the PUC to conduct an EE grant program, and calculate the reduction in air emissions from both SB 5 and SB 7 programs. Differed from SB 7 in that the incentive program included municipal utilities and co-ops, and programs are funded from fees and surcharge on motor vehicles.
- **Incentives:** Financial incentives are based on a portion of the calculated avoided energy and demand costs (kW and kWh) . All customers are eligible, but incentive levels varied from 100% for hard-to-reach customers to 15% for load management programs.
- **M&V:** Measurement and Verification is based on the International Measurement Portfolio Standards or by “deemed savings,” that is savings that have been previously validated for an EE measure and do not need additional M&V. More information about the calculation of deemed savings can be found at:
<http://www.puc.state.tx.us/rules/subrules/electric/25.181/25.181.doc>
 - TX PUC plans to hire a contractor to conduct an independent M&V. A utility may not be involved directly in providing energy efficiency services; it is done by Energy Efficiency Service Providers (EESP). EESPs are compensated by the utility under contracts and requirements of the law. Any one EESP may not receive more than 20% of the total incentive payments available.
- **Emissions Benefits:** Texas uses EPA’s Emissions and Generation Resource Integrated Database (EGRID) to calculate annual emissions avoidance. EGRID uses Energy Information Administration (EIA) data to generate the value of NOx emissions avoided.
- **Challenges:**
 - Lots of success reaching urban areas where there were a number of energy efficiency service providers, but it has been more difficult in rural areas.
 - Time needed to market and start-up the program is substantial; Policy choices are many, and it takes time to sort through decisions that have to be made.
- **Results:**
 - SB 5 - \$3 million in EE awards between 2002-3; resulted in 220 tons of NOx reductions over 10 years.
 - SB 7 - \$85 million in EE awards in 2004; resulted in 7,300 tons of NOx reductions over 10 years.

C. *California’s EE Loading Order - Lainie Motamedi, CA PUC* (See PowerPoint presentation)

- **Policy Drivers:** Demand reductions and conservation during the California energy crisis, which demonstrated the power of efficiency.
- **Resource Loading Order:** The California Energy Commission and California PUC developed an Energy Action Plan in May 2003 which requires utilities to add EE and RE as a resource before new generation and other resources – described as a resource “loading order” with efficiency and conservation efforts at the top.
- **EE Targets:** CA didn’t originally have specific savings goals, As the programs developed, they realized they could make the programs more aggressive by setting Targets. Only applies to regulated utilities.
 - o Currently EE is meeting approximately 35% of load growth, expected to be 50% of load growth in future.
 - o The State of California Energy Action Plan:
<http://www.cpuc.ca.gov/PUBLISHED/REPORT/28715.htm>
- **Linking to Public Benefit Fund for EE:** While CA has a history of cost effective EE program, the public goods charge is not large enough to meet all the cost effective programs available. The CA Public Goods Charge (PGC) is currently capped at approximately \$289 million per year. The CPUC approved an additional \$110-135 million of funding in utility procurement dollars for 2004 and dollars in order to achieve additional cost effective energy efficiency programs and reach the EE savings targets.
 - o Lainie mentioned the findings of “Secret Savings Surplus” which compared the EE potential against "business as usual programs" as support.
- **M&V:** To make sure that there were checks and balances to minimize conflicts of interest, CA established an independent verification process. Contractors that have a role in delivering EE cannot serve as a verifier. Not clear what the penalties will be if the utility’s estimate is not what it claims.
 - o Cumulative savings have been measured at 26.5 GWh, 6,892 MW, and 290 Therms.
- **Challenges:** Early concerns about conflict of interest between EE suppliers and M&V of savings.
 - o For a number of reasons, the CA Climate Action Registry will be assuming responsibility for determining potential COI between member and certifier. Pierre DuVair, CA Energy Commission, forwarded two documents that the CEC developed when thinking through the issue of Conflict of Interest (COI) between members of the voluntary CA Climate Action Registry and the State/Registry-approved third-party certifiers. (Provided as separate documents on the EE/RE Technical Forum weblink: Qual_reg_4-12-04.pdf and Conflict_Interest_Policy 2-03)

- The guidance in the two documents should be of interest to agency staff in states that are taking a fresh look at conflict of interest issues related to verification of actual energy efficiency delivered by programs or projects.
 - Questions on the attached COI information could best be answered by Jeff Wilson and Pierre DuVair at the CEC (pduvair@energy.state.ca.us) and Robyn Camp or Sam Hitz at the Climate Action Registry.
- **Administration:** CA PUC is coordinating efficiency programs with utility procurement to shift focus to cost-effective programs rather than operating efficiency programs like social programs (return to integrated resource planning approach); Making changes to the administrative structure to increase transparency and stakeholder participation were adopted in January and are currently being implemented. Savings Targets were adopted in Q4 of 2004 and programs are being designed to meet those targets. The program solicitation for 2006-2008 is anticipated to be announced in June 2005.

D. Pennsylvania Alternative Energy Portfolio Standard with EE - Cal Birge, PA Public Utility Commission

- **Alternative Energy Portfolio Standard:** Includes EE among many other resources that must be part of electric utilities' resource mix.
- **Current Status:** PA is in the early stages of developing regulations to implement AEPS. The law was passed in Nov. 2004, and took effect in Feb. 2005. They have formed working groups and received comments. Current utility retail price caps will delay implementation of targets.
- The EE program is different from other states, in that EE must compete with waste coal, DSM, large hydro, wood byproducts, IGCC plants, etc. in the Tier 2 Resource requirement. It is put on an even keel with these other sources – essentially the cheapest source wins. The goal is to have some combination of these reach 10% of kWh sold in the Commonwealth in a 15-year period.
- PA has a two-tiered RPS, with traditional renewables (solar, wind, biomass, small hydro, etc.) in Tier 1; and other sources, including EE, in Tier 2. Many believe that EE should be in Tier 1,. (See Joe Sherrick's presentation on March 17 EE/RE Technical Forum Call for details about AEPS.
http://www.keystone.org/Public_Policy/Energy_Program/State_EE_RE_Forum/March_17_Call/march_17_call.html)
- Electric distribution companies are given recovery on a \$ to \$ basis through retail rates.

E. Illinois - Steve Dunn, EPA State & Local Capacity Building Branch

- The Illinois Sustainable Energy Plan recommends an energy efficiency portfolio standard that will meet 25% of projected annual load growth by 2017. The Illinois Commerce Commission (the state utility regulatory agency) is convening stakeholder meetings regarding the plan now, and will consider adopting it in May 2005. Source:
<http://www.ase.org/content/article/detail/2075>

- The proposed Illinois proposal is a hybrid of Texas and PA approach, with a % goal for load growth with the important distinction that IL proposes separate goals for RE and EE.
- The IL proposal If adopted the Illinois efficiency portfolio standard is estimated by the Midwest Energy Efficiency Alliance to generate more than \$1.1 billion in energy savings by 2010, \$2 billion in investments, 2,000 construction jobs and hundreds of permanent jobs in the state.
- The program originated in the Governor's office, and will be administered by the IL Commerce Commission.
- The proposal has broad support from utilities, environmental and consumer groups, and other stakeholders. See also <http://www.icc.state.il.us/ec/docs/050309ecCommentsMidwest1.pdf>.

F. New Jersey - Cameron Johnson, NJ BPU

- NJ has a high cost utility environment with a long history of utility EE programs. This has led to a high acceptance of EE programs NJ is putting lots of money into awareness building; Pinning most of their program on Energy Star compliant products.
- State government and universities are now buying 15% of their energy from wind projects.

Discussion & Questions

A. What was the actual reduction achieved?

- In TX, the projected growth was 1,470 MW, so the goal was a reduction of 147 MW, but they actually achieved 192 MW. The total generation baseline was approximately 60,000 MW.

B. How do you verify results?

- To avoid pressure on those measuring benefits to conform to the stated goal, Texas separates the EE Service Providers from the utilities. The utilities do one level of verification of the EESPs measurements. The PUC has also hired a consultant to do an independent review of the overall program. The consultants are hired on technical capability and integrity.
- In CA, they originally had utilities work directly with M&V organizations. They felt that by working together, this created a conflict. Now the Energy Division of the CEC holds the contract with M&V providers, in order to facilitate objectivity and to reduce perceived conflict of interest.
- In PA, they have discussed this, but have not created the verification system yet.

C. Are utilities worried about rate impacts?

- The CPUC has decoupled energy sales from revenues, thus removing a counterincentive for utilities to pursue energy efficiency strategies.
- The Regulatory Assistance Project (RAP) January 2005 Issuesletter describes the importance of viewing energy efficiency as a resource and aligning utility profit motives with investments in energy efficiency programs. www.raponline.org
- Next EE/RE Technical Forum will also address decoupling in more depth (May 19)

D. How is avoided cost calculated as the basis for incentive payments?

- In TX, it is based on the construction of a gas turbine. Considered input from consumer advocacy groups, utilities, other stakeholders. Assume a 10 year EE program life, 10% discount rate, 3% escalation rate, \$78.50/kW and 2.68 cents/kWh.

E. What do you do if the targets prove to be too high or too low?

- In Texas, targets must be changed legislatively. There are two bills under consideration to take the targets to 15% and to 20%, respectively, but it is unclear whether either will pass.
- In California, targets can be changed administratively. CA PUC is considering making them more aggressive.
- Neither Texas or California have explicit penalties if utilities do not meet the targets, However, in CA utilities are required to count the forecasted EE savings in their demand forecast and thus reduce their energy procurement investments. Further, the CPUC is currently looking at procurement incentives which would likely create incentives for exceeding the estimated targets and penalties for missing the targets.

F. Observations about differences in program design (Steve Schiller, Schiller Consulting)

- Level and volatility of electricity prices- In TX, energy rates are lower and more stable than CA which results in differences in cost-effectiveness and may be a factor in setting the EE target
- Amount of experience with EE before starting program - In TX, little was done on EE prior to the current program, so there is lower consumer awareness, compared to CA
- Utility and state policy makers attitudes: In CA, EE was put at the top of the resource acquisition order, whereas in TX, the incentives are still to build more power plants. PA places EE on the same level as waste coal, IGCC, and other resources.
- Stability of Marketplace - can determine the ability of parties to make investments; are the utilities and other suppliers financially strong?

G. Efforts to Quantify Emissions Benefits

- In CA, the CAPUC recognized that EE and Demand Response programs have positive climate impacts. In their next solicitation they will ask utilities to report on portfolio-wide reductions. They are providing guidance to the CA Climate Action registry, including lessons learned on avoiding conflicts of interest. In addition, the regulated energy companies are all members of the Climate Action Registry and are currently inventorying and tracking their emissions footprint.
- TX has developed detailed emissions calculation protocols in collaboration with Texas A&M University. See <http://ecalc.tamu.edu>
- Electronic copies of the ESL's 2002, 2003 and 2004 Emissions Reductions reports for Senate Bill 5 and related legislation can be found at: [Http://eslsb5.tamu.edu](http://eslsb5.tamu.edu) under the "reports" link.

H. Suggestions where states need additional help

- Challenges related to starting up a program, including awareness of the program, and developing the design and infrastructure.
- Access to performance contractors, especially in rural areas
- Potentials for conflicts of interest in M&V.

NEXT CALL: MAY 19th – Decoupling Utility Revenues from Sales to Encourage Utility EE programs