

**Seventh National ACEEE Conference on Energy
Efficiency as a Resource: Report to the U.S.
Department of Energy**

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About the Author

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Abstract

This report summarizes the content and themes of the ACEEE Seventh National Conference on Energy Efficiency as a Resource, held in Nashville, Tennessee from September 22 to 24, 2013 per the agreement with the U.S. Department of Energy. The successful conference demonstrated the progress of energy efficiency as a resource in the Southeast and leading regions of the country. Speakers and sessions examined progress and energy savings achievements, and how programs in the field are evolving past previous limits towards greater savings and participation. Challenges and policy issues arising after a decade of growth were addressed in-depth.

Click on <http://aceee.org/conferences/2013/eer/program> to access the presentation slides.

Introduction

ACEEE's Seventh National Conference on Energy Efficiency as a Resource, held in Nashville, Tennessee from September 22 to 24, 2013, showcased the substantial progress made in the past few years in using energy efficiency as a resource across the country. This was ACEEE's seventh bi-annual conference on this topic and the largest yet.

Locating the conference in Nashville, Tennessee in particular helped to focus discussions on emerging energy efficiency efforts in the Southeast, including at the Tennessee Valley Authority (TVA). The choice of this location created the opportunity for energy efficiency resource professionals, experts, and leaders from around the country to converge in an area where interest in and demand for information, new models, and best practices for energy efficiency as a resource are all rapidly increasing. There was an influx of new conferees from utilities, businesses, and government eager to get access to approaches and knowledge concerning energy efficiency as a resource.

People are taking notice of the growth in energy efficiency. A confluence of forces at work in the electric and natural gas utility sectors has accelerated interest in energy efficiency as resource nationally and expanded the scope and scale of impact and what is at stake for the economy, jobs, and the environment. ACEEE originally convened the first National Conference on Energy Efficiency as Resource in 2001 in response to the California and West Coast electricity crises. Since then policies and structures to encourage, support, and execute expanded energy efficiency program portfolios in the majority of states – and every region of the country – have been established and developed. Among them:

- Total annual budgets for utility ratepayer-funded electric and natural gas energy efficiency programs have increased from less than \$1.4 billion in 2001 to more than \$7 billion in 2012.
- Energy efficiency resource standards with binding targets have been enacted in 25 states.
- With the creation of SPEER, the South-Central Partnership for Energy Efficiency as a Resource, nearly every state in the United States now has a its own dedicated regional energy efficiency organization (REEO) to advocate for, educate about, and implement energy efficiency programs and policies.

Strong interest in and progress toward accessing the energy efficiency resource in the Southeast as seen at the conference is in part due to the new scale of energy savings – and concomitant economic and environmental benefits – in other regions, which was explored and discussed in both plenary and breakout sessions at the conference. California, the Northwest, and the Northeast have over 3 decades of experience with policies and programs that have helped build a robust energy efficiency infrastructure. The experience of these regions has demonstrated the value and viability of energy efficiency as a resource. Their leadership provides a rich set of examples for what has worked, what has not, and what might be possible in the future.

That future of mining demand-side energy resources holds rich veins of remaining opportunities, not to mention yet-to-be discovered efficiency resources. To realize energy savings from emerging opportunities, programs will need to evolve beyond tried-and-true

approaches such as those that rely heavily on providing rebates for efficient lighting. Conference sessions on multiple sectors and industries, as well as new opportunity presentations for business and residential, explored current best practices for collaboration and integration, lessons learned, and potential for growth. Realizing growth depends in part on the outcomes of several policy issues and debates and the politics that surround them that were identified and addressed in many of the discussions and presentations.

Progress in the Southeast

The conference welcome and introductions showcased energy efficiency initiatives at the host city, state, and utility, exemplifying the shift underway in the region to greater energy efficiency on multiple fronts. Before even the welcoming remarks were complete, attendees had heard about Tennessee's Energy Education Initiative providing an impressive 48 energy education events in six months, Nashville's stunning new Convention Center boasting the largest green roof in the country, and Tennessee Valley Authority's savings of \$100 million per year in fuel and operations and maintenance (O&M) savings.

Colette D. Honorable continued the upbeat tone concerning the Southeast as she delivered the first keynote address. Honorable, Chairman of the Arkansas Public Service Commission and incoming President of the National Association of Regulatory Utility Commissioners, presented *Counting on Energy Efficiency as a Resource, Now and in the Future*, featuring her slide presentation, [Building Public Utility Energy Efficiency Programs: The Arkansas Journey](#). She emphasized the team effort, collaboration, and coordination among commission staff, the utilities, other Arkansas stakeholders, and outside technical experts that successfully culminated after years of work with the signing of 15 regulatory orders in one day, bringing comprehensive energy efficiency – industrial, commercial, and residential programs – to Arkansas. The paradigm shifted from token or small efficiency programs to comprehensive, and she declared that the rapid ramping-up of programs in Arkansas was “not about appearances, but REAL energy savings.” Arkansas' efficiency budget went from \$25 million in 2011 to \$50 million in 2012 and customer satisfaction ratings have been exceeding 95%. They recently raised the targets for energy efficiency programs in 2015 to 0.9% of electric sales and 0.6% of natural gas sales, with targets 2016 and beyond to be determined after a new assessment of the available resource is completed.

Bill Johnson, president and CEO of Tennessee Valley Authority (TVA), gave a luncheon keynote address on the second full day of the conference. He reported on an impressive set of energy efficiency and financial accomplishments recently achieved by TVA. He began with a bold imperative on energy efficiency – to stop thinking of it as a program and start thinking of it as “a real resource that you can count on, one that can be priced, and plan on it.” He also noted that while TVA has been running programs directly throughout their region, they want to move more of the leadership to municipal utilities throughout the region that buy power from TVA. They are just beginning the process to work out the details of this evolution.

Positive trends and major progress in the Southeast were also prominent in the first plenary panel session, *National Overview: Latest News on Energy Efficiency as a Resource in Key Regions of the Country*, in which Mandy Mahoney of Southeast Energy Efficiency Alliance was one of the speakers. Mahoney connected her remarks to the keynote, noting that that Arkansas is

one of the regional anchors for SEEA's work. She also noted a recent successful effort in North Carolina to withstand a challenge to the Renewable and Energy Efficiency Portfolio Standard. In the Deep South states, Mississippi has recently established robust energy efficiency rules that will pave the way for "Quick Start" energy efficiency programs and later comprehensive programs, following the leadership of their neighbor, Arkansas. Louisiana also recently issued rules for initial voluntary programs, and a few days after the conference Louisiana's three utilities all filed plans to voluntarily operate Quick Start programs under these new rules.

Natalie Mims, in her presentation on [The Growing EE Resource in the SE: Rankings, Successes and New Financial Incentives](#), added even more evidence of progress in the region, quantifying and recognizing the energy-saving accomplishments of the highest ranking utilities: Duke Energy Carolinas, Gulf Power, and JEA in Jacksonville, Florida.

Regional Progress around the Nation

While the Southeast may be the most up-and-coming area, others shared policy and implementation successes, led by New England and the Northeast, in a variety of panels and presentations during the packed two days. Jim O'Reilly of the Northeast Energy Efficiency Partnerships set the bar higher than it has ever been before, laying out tremendous accomplishments on multiple fronts. Perhaps the greatest of these is that all of New England has now literally flattened the curve for electricity growth. The century-old assumption that demand will grow year after year can no longer be the starting point for electric policy and planning.

O'Reilly continued with an impressive array of significant and truly "game-changing" energy savings accomplishments and supportive policy structures, including the following:

- Massachusetts is on track to achieve 2.4% annual first-year electric savings and is targeting up to 2.8% annual first-year savings in future years.
- Maine has removed the legislative funding caps, allowing its all-cost-effective efficiency policy to make its full impact.
- The entire NEEP region is investing \$40 per person in energy efficiency.
- Five of the six New England states now have "all cost-effective" energy efficiency mandates.
- The region has flattened the curve even in the face of numerous hurdles and barriers, such as New York requiring measure-level cost-effectiveness screening, and New Jersey diverting almost one billion dollars from its Clean Energy Fund.

The full magnitude of the energy efficiency resource was on display across the regional updates and throughout the conference. The Northwest has saved 5,100 average megawatts, with energy efficiency the second largest resource after hydropower. Bonneville Power Administration (BPA), jokingly referred to as "the TVA of the Northwest," has noted in their publication [The Case for Conservation](#) that with efficiency they have saved \$1.36 billion dollars over the 2001-2011 period compared to what their costs otherwise would have been in net present value.

California has similarly received enormous impacts from efficiency, having enacted decoupling 30 years ago and shareholder performance incentives 20 years ago. In simple terms, the largest state has avoided the construction of 29 power plants. Acquiring resource savings at this scale has not been without its challenges, as the regulatory burden has been significant at times and there have been many lessons learned along the way – lessons that have led to improved policies and programs.

Nationwide, energy efficiency is still the lowest cost resource. Studies to measure recent costs in a rigorous fashion are underway. Research designs – and challenges – and interim results were presented in two breakout sessions. Steve Schiller, Lawrence Berkeley National Laboratory, described [4,000 \(Program\) Years of Efficiency: Results of a Program Level Analysis of the Cost of Saved Energy](#). Maggie Molina, ACEEE, gave an overview of research progress in [A National Review of the Cost of Conserved Energy in Utility Energy Efficiency Programs](#). Both presentations were of preliminary results, but in general results were consistent. Their research found an average utility cost of about two to four cents per kWh saved over the lifetime of measures through customer energy efficiency programs.

Capturing Future Opportunities, Evolving Beyond Past Practices

To continue and expand energy efficiency as a resource in the electric and natural gas sectors into the future, the programs in the field are evolving and moving past previous barriers and traditional program designs in order to achieve deeper savings and broader participation. This future and how we are getting there, including current best practices and lessons learned, were all explored in breakout sessions on industrial, multifamily, behavior, financing, commercial and residential new opportunities, and “big data.”

In the commercial sector session, for example, ACEEE Executive Director Steven Nadel discussed where and how these new resources are being acquired. The future lies in systems and holistic approaches that go far beyond past practice, into areas such as intelligent buildings, lighting design, next generation HVAC, leveraging building codes with utility programs, worker behavior, miscellaneous loads, and deep retrofits, not just in “rebates for efficient products” alone as has been the program model for many programs historically.

Key Policy Issues and Challenges

Speakers, expert practitioners, researchers, and other panelists also considered key policy issues and challenges.

In the national overview plenary session, Mandy Mahoney of SEEA noted the “revolving door” of elected and appointed officials and how this creates an ongoing need for proponents of energy efficiency to keep educating these legislators and regulators. Energy efficiency poses a challenge in this regard, as it is both “invisible” and not easy to explain. In the Q&A conversation that followed, it was observed that the renewables industry is organized and spends money on political action committees at a level that the efficiency industry does not – “energy efficiency needs an ‘agent,’ it is invisible and misunderstood.”

The elephant in the room behind many policy considerations is the fundamental charter for utilities and resulting utility business model, which directly ties sales of therms and

kilowatt-hours to increased utility revenues and profits. Dan York, ACEEE's Utilities Program Director, moderated the session on *Regulatory Mechanisms to Address Utility Economic Concerns with Energy Efficiency*, which also included discussion of decoupling, performance incentives, and treatment of DSM savings and expenditures. Mike Weedall, E Source, presented on [Energy Efficiency & the Evolving Utility Business Model](#). In particular he noted rising use of distributed energy and said the current utility model is not sustainable. He observed that utilities will divide into camps that pursue a variety of different business models to remain profitable while promoting energy efficiency and distributed energy such as become energy services utilities, smart integrators, and municipalization.

Multiple sessions looked at recent political opposition to (and sometimes outright attacks on) energy efficiency. Attempts to weaken or roll-back energy efficiency resource standards and statewide provisions led by elected officials opposed to efficiency have been made in both Ohio and Michigan. Another initiative in direct confrontation with expanding efficiency is industrial "opt-out," in which large energy users do not participate in the programs or program funding that other consumers do. It came up in contrast to the successful industrial self-direct programs explored in the *Industrial Energy Efficiency Approaches* session.

Conclusion

Despite these notable areas of resistance in some states to the decade-long growth in utility sector energy efficiency, the overwhelming evidence from this conference demonstrates that energy efficiency is thriving as the lowest-risk, lowest-cost, cleanest utility system resource virtually everywhere. This is true both in states with well-established, well-funded energy efficiency portfolios, and those areas just starting to build the structure for a more energy-efficient future.

Access Conference Presentation Slides

ACEEE has posted slide presentations from conference breakout sessions and some plenary sessions. Available presentations are individually hyperlinked in the conference program at <http://aceee.org/conferences/2013/eer/program>.