

FIFTEEN CANDLES:

The Leading States Using Efficiency As A Resource

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Overview

- What's an 'EERS' and where did it come from?
- What's driving states to set targets?
- Snapshots of 15 leading states
- Summary of potential EERS impacts
- Implications for the energy services business



What is an 'EERS'?

- Different from traditional 'DSM'—high-level target rather than bottom-up programs
- Establishes a target for reductions in electricity and gas energy efficiency
- Obligation on retail utilities
- Utilities find least-cost routes to meet targets
- Options include traditional customer efficiency programs, combined heat and power, and recycled energy



EERS History

- First established in 1999 Texas restructuring legislation
- Target set at 10% of load growth
- Buy-out option for 2¢ per kWh (not used)
- Realized cost less than 1¢ per kWh
- Legislature raised target to 20% (minus industrial loads)
- Pressure to replace lost TXU coal capacity adding urgency

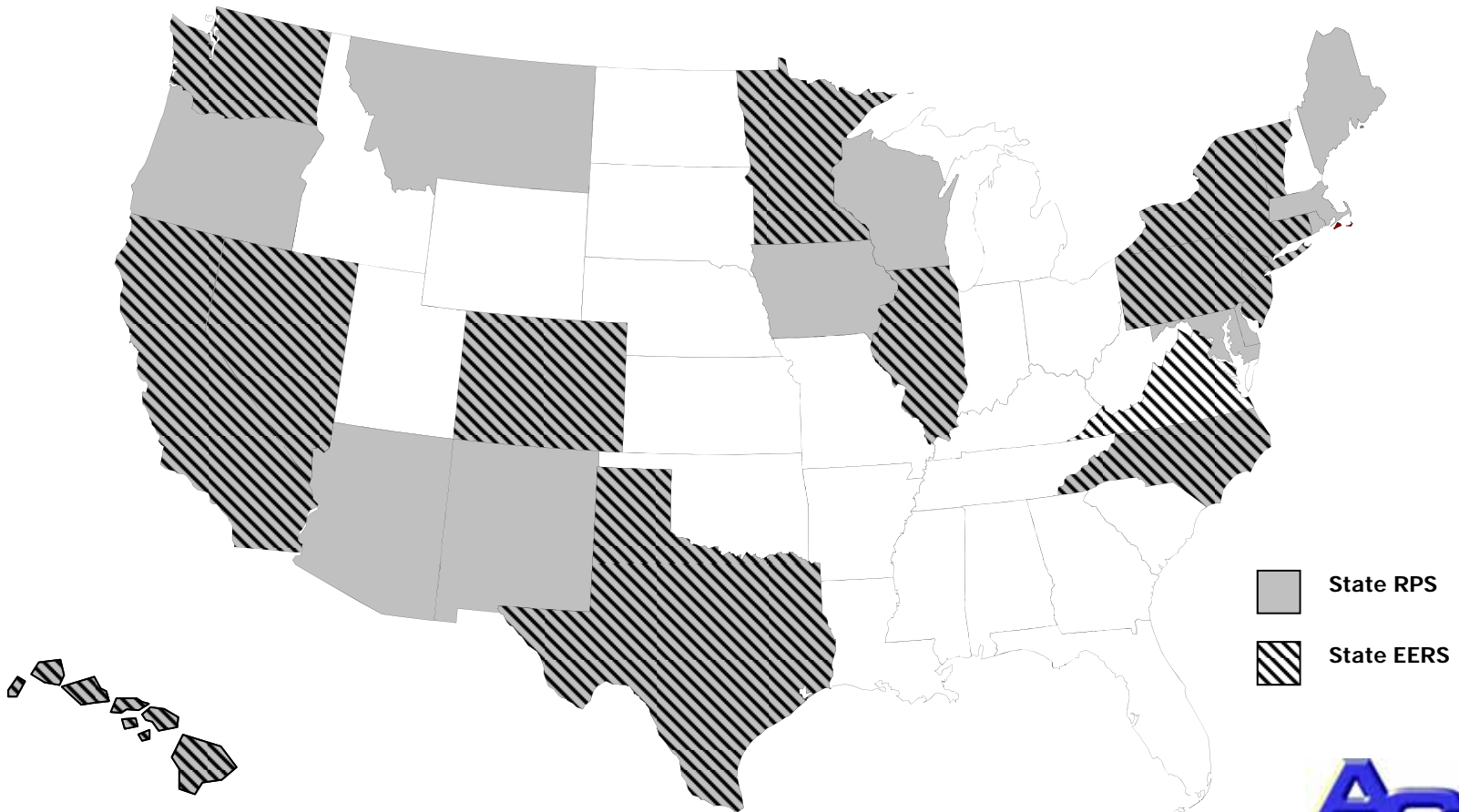


EERS in the States Today

- 17 states have or are developing EERS:
 - In place in HI, CA, NV, CO, TX, IL, PA, CT, VA, VT, NC, MN
 - In development in WA, MD, MA, NY, NJ
- 21 states and DC have RPS
- 10 states have both EERS and RPS
- 5 states have EERS integrated with RPS (HI, NV, PA, CT, NC)



States with RPS and EERS



Note: New Jersey and New York have pending EERS requirements.
Source: ACEEE 2007. <http://www.aceee.org/energy/state/2pgEERS.pdf>

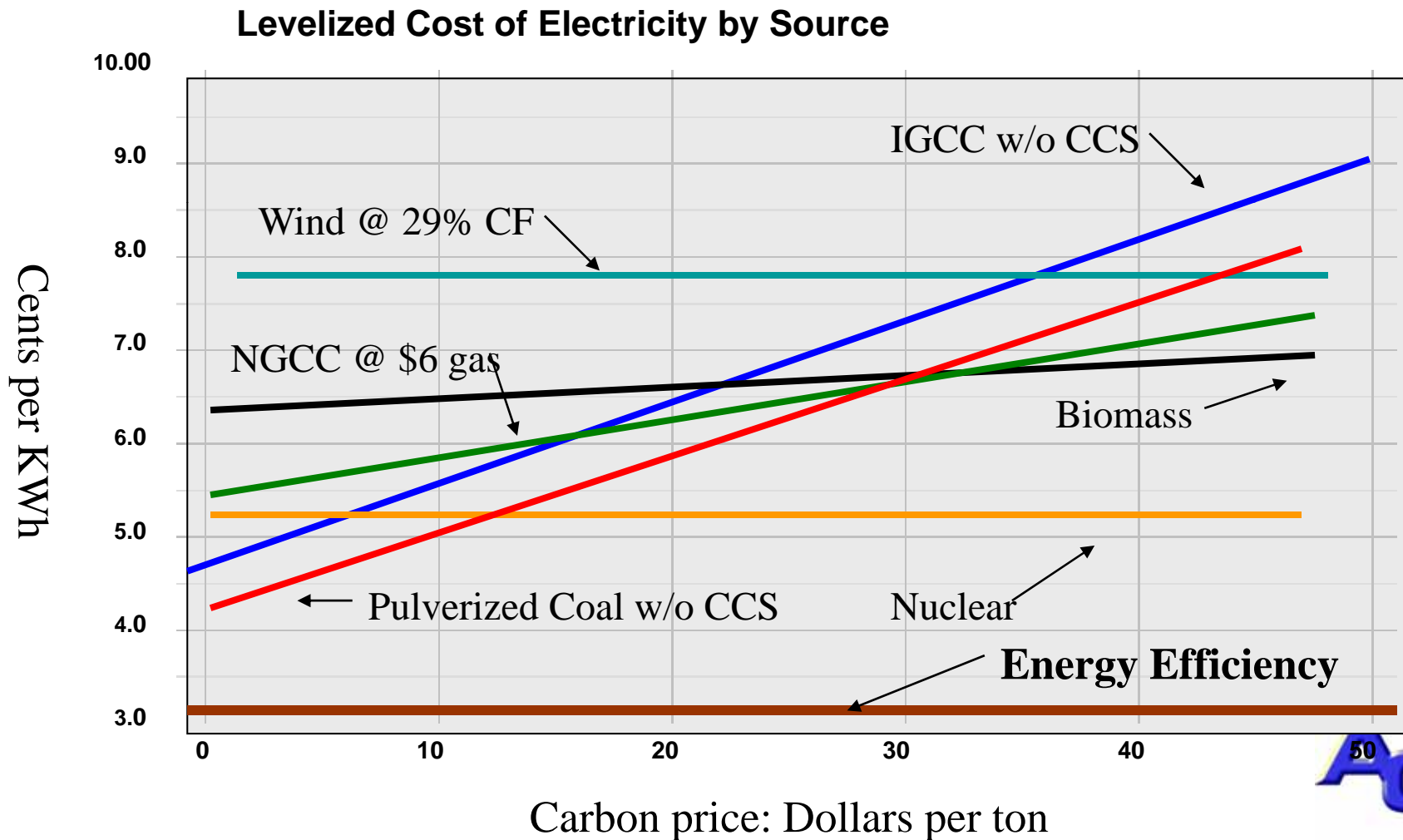


What's Driving State EERS?

- Rising electricity prices
- Looming capacity shortages
- Recognition of the climate challenge
- Need for a new approach in a fragmented post-restructuring world
- Need to overcome the short-term mentality that has limited EE in the past



EE: Still the Least-Cost Resource



State Snapshots

- California: CEC-PUC set 10-year (2004-2013) goals:
 - 30 billion kWh, 7760 MW by 2013
 - ~10% of forecast 2013 usage, ~12% of peak demand
 - 2004-7 results about 34% of total target
 - Administration/cost recovery/decoupling issues settled, shareholder incentives pending



State Snapshots

- Colorado: 2 parts—Xcel settlement and 2007 legislation
 - Xcel settlement: 800 million kWh, 320 MW by 2013, spending ~\$196 million
 - Energy savings = 0.38% of 2004 sales
 - Legislation: PUC to set targets, spending floor set at 0.5% of revenues



State Snapshots

- Connecticut: 2005 amendment to RPS created Tier III EE-CHP requirement
 - 1% of sales each year 2007-2010
 - Existing PBF program savings qualify
 - Third-party credits allowed, cost range set at 1 to 3.1 cents/kWh
 - New ‘DSM Focus’ procurement policy enabled in 2007 legislation may dramatically increase EE targets



State Snapshots

- Hawaii: 2004 RPS law includes EE
 - 8% in 2005 rising to 20% in 2020
 - No min-max for EE
 - Legacy DSM impacts unclear
 - 2005 reports indicates RE-EE resources reached ~12% of total sales
 - ~ 65% RE, 35% EE



State Snapshots

- Illinois: 2007 law sets RPS and EERS targets
 - EERS 0.2% sales in 2008, rising to 2% in 2015
 - Utilities accountable for 75% of target—state must find rest via codes, etc.
 - Rate impact cap of 0.5% per year, 2% cumulative



State Snapshots

- Minnesota: 2007 law sets 1.5% EERS
 - Utilities must meet at least 1% annually
 - Remainder can come from codes, standards, etc.
 - Off-ramp based on cost-effectiveness
 - Significant increase expected beyond current CIP impacts



State Snapshots

- Nevada: 2005 RPS amendment added EE to RPS mix
 - Total target 20% by 2015
 - EE can meet $\frac{1}{4}$ of total requirement
 - Utility filings indicate intent to fully use EE option by 2008-2010



State Snapshots

- New Jersey: PDF admin targets plus leg-authorized EERS
 - BPU 2003 reorg of PBF programs sets electricity and gas energy savings targets for new program administrators
 - Elec target = 0.33% sales, gas 0.09%
 - Incentives for exceeding
 - 2007 legislation authorizes EERS up to 20% by 2020
 - BPU draft discusses options for linking PBF programs and EERS requirements



State Snapshots

- New York: Governor's 15-15 goal in implementation process
 - 15% of electricity sales in 2015
 - Largest state target in total kWh
 - DPS report 8/07 recommends mix of utility, state programs, and codes/standards
 - Fast-track programs to be launched 2008
 - Proceeding to detail full implementation



State Snapshots

- North Carolina; 2007 leg sets blended RPS-EERS targets
 - 12.5% target for 2021 and beyond
 - As in NV, EE can meet up to $\frac{1}{4}$ of target
 - EE can meet 40% in 2021 and beyond
 - PUC opened docket in fall 2007



State Snapshots

- Pennsylvania: 2004 AEPS law includes EE
 - AEPS includes EE in Tier 2, along with many existing resources
 - Current/planned capacity for other Tier 2 resources expected to exceed target
 - Discussion of Tier 3 similar to CT law
 - Governor calls for PBF funding



State Snapshots

- Texas: where it all began
 - Utilities exceeding 10% EERS target
 - Current cumulative impacts at 756 MW, 2 billion kWh
 - 2007 increased target to 20% (baseline reduced by industrial sales)
 - Study required to examine targets of 30% of load growth in 2010, 50% in 2015



State Snapshots

- Vermont: home of the Energy Efficiency Utility
 - EEU created in 1999; performance targets set by contract terms
 - 2006 savings = 1% of total sales
 - Cumulative impacts = 5% of sales
 - 2007-8 contract targets call for expanded impacts



State Snapshots

- Virginia: 2007 bill amendments set 10% EERS target for 2022
 - Details not spelled out in bill
 - SCC held stakeholder process in summer 2007 for input
 - SCC report sent to legislature 12/07
 - Decisions on key details still open



State Snapshots

- Washington: 2006 ballot initiative requires all cost-effective EE
 - Covers IOUs and public utilities
 - By 2010, utilities must complete analysis and set biennial targets through 2019
 - NWPCC methodology required: latest regional Power Plan shows 270 aMW potential, = 10.6% of 2025 forecast sales



Summary of Potential Impacts

- These 15 states' targets, *if fully realized*, would total about 0.8% of total U.S. electricity sales in 2019
- The EIA 2008 Annual Energy Outlook forecasts average annual growth in electricity sales at 1.3%
- Our assessment is that AEO largely does not take these EERS into account
- State EERS could thus make a large dent in total U.S. load growth



Implications for the Energy Services Business

- Be careful what you wish for!
- Demand for program design, program delivery, and program evaluation likely to reach unprecedented levels
- Conventional program designs may not do the job
 - Deeper per-customer impacts needed
 - Third-party markets may be needed
 - Complementary approaches may be needed



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