What is working in Energy Efficiency in the US

A Webinar
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The Regulatory Assistance Project
Vermont ♦ Maine ♦ New Mexico ♦ California ♦ Illinois ♦ Oregon ♦ Washington
About the
Regulatory Assistance Project

- RAP is a non-profit organization providing technical and educational assistance to government officials on energy and environmental issues. RAP Principals all have extensive utility regulatory experience.
  - Richard Sedano was commissioner of the Vermont Department of Public Service from 1991-2001 and is an engineer.

- Funded by foundations and the US Department Of Energy. We have worked in nearly every state and many nations.

- Also provides educational assistance to stakeholders, utilities, advocates.
Focus

- Regulatory incentives and initiatives help to induce increased energy efficiency

We know that regulatory incentives are stronger if there is a foundation of clear statutory intent
Implicitly then, we are talking about utilities

– How do statutes and regulation motivate utilities regarding energy efficiency?
– And how is it going?

Preview: There are many positive developments, but few places where the regulatory system supporting energy efficiency is well-tuned and harmonized. Low expectations are wide-spread, and where expectations are high there remain in many places internal conflicts that dampen progress.
Utilities and Energy Efficiency

- Utilities: Could be EE administrators
  - Responsible for budgets and performance

- Utilities: Could be supporters
  - Utilities have critical role in community
  - Utilities can convey support, indifference or disdain for energy efficiency

- Utilities: Are Utilities
  - EE will effect utilities in many ways…
Ways Energy Efficiency Affects Utilities

- Sales
- Resource Planning
- Capital Planning
- Management of Complex Organization
- Customer Relationship
- Regulatory Risk
- Earnings
Sales and the throughput incentive

- Bring revenue for **coverage of fixed costs**
  - Fixed costs were assessed in last rate case
  - Why should varying sales make utility and customers concerns that recovery is either too little or too much? *Decoupling is an answer*

- Ego about the size of the company
- Gross Wall Street metrics
Resource Planning

➢ Supply is risky
  – Construction, siting/permitting, interest rates, changed assumptions

➢ Energy Efficiency can avoid power resources (and associated wires)
  – If EE itself is reliable
  – EE is generally reliable, sound regulation makes sure, proof in geo-targeting and capacity markets
Capital Planning

A utility has a cash flow to support a capital budget – for utilities with EE administration responsibility:

- Energy efficiency is one among many potential uses for these funds (*resource std forces issue*)
- Utilities also want to know **how quickly they will recover** money that they spend (prudently, of course) on energy efficiency and if there is **earning potential** to compare with other uses
Management of Complex Organization

Connections to energy efficiency in utility

– Demand response
– Customer relations
– Distribution planning
– Transmission planning
– Resource planning
– Investor relations

Energy Efficiency is not a silo!
Customer Relationship

- Utility has a ubiquitous relationship with customers
  - Relationship is not always helpful to customer
  - Energy efficiency tends to be popular with both retail customers and “trade allies,” business which support energy efficiency like wholesalers, contractors and architects

- Is the Utility #1 job “delivery” or “service?”
Regulatory Risk

- Relying just on supply and transmission can be risky to shareholders
- Energy efficiency can be risky also – cost recovery disallowances and penalties due to
  - Meeting savings goals is not a sure thing
    - Moving goalpost phenomenon
  - Irritating customers with bad programs
  - Interfering with programs with mixed messages
  - Relying on contractors can bring disappointment if management is inadequate
  - Capricious regulation
Earnings - 1

➢ Throughput incentive typical in traditional regulation means earnings go up and down with sales – **EE reduces sales**

➢ Regulation can neutralize the throughput incentive

➢ Earnings can go up with superior energy efficiency performance with incentives
  – Wall St will notice *cents toward EPS*
  – CEO will notice, CFO will notice
Earnings - 2

➢ Do utilities have a reasonable expectation to build assets for the purpose of delivering earnings to shareholders?
  – Wires assets, of course, but generation can be built or bought, so is this really a concern?

➢ Does energy efficiency meet resistance from utilities because of a cumulative negative effect on earnings as fewer large assets are needed?
Government can Provide Alignment, Leadership

- Comprehensive, coherent **vision** for energy
- Oversight that **aligns** utility interests with EE (regardless of administration responsibility) helps utility be a champion for EE
- Statutes **guiding** regulators to produce good results aligning with vision
  - With appropriate balance of generality and direction to account for changed circumstances
Examples of Useful Statutes from Leading States

- CA: Legislation supports stable funding for EE, RE, climate action, building codes, appliance standards, decoupling, pricing, planning, includes environment
- VT: Legislation supports stable funding for EE (whole building) including from carbon revenue, 3rd party admin, local clean energy, bldg codes, stds, decoupling, planning/geo-targeting, includes environment, smart grid
- MA: Green Communities Act a comprehensive clean energy bill
- MN: Legislation supports stable EE funding, a resource standard, planning, and decoupling
- WA: Legislation directs “all cost effective EE,” planning
Examples of Legislation Influence States New to EE

- States with energy efficiency resource standards adopted in statute in recent years:
  - Ohio, Pennsylvania, Illinois
  - All are at 2% savings as a percentage of sales
  - So a structural 2% load growth is neutralized

- Legislation in Missouri directs “all cost effective energy efficiency”
Do States Need Explicit Legislation Supporting EE?

- No, but it helps
  - And direction on “how much EE?” addresses doubts PUCs might have

- Problem: added cost today for benefits delivered over more than a decade, however

- Statutes generally support low cost & risk management in the long run, but PUCs are often cautious absent more explicit direction
Indicators of Successful Energy Efficiency Oversight

- Clear decision on **administration**
- Clear direction on savings **goals or targets**
- Stable commitment to **funding**
- **Cost recovery** process is clear
- **Throughput incentive** is gone
- Financial **performance incentives** on target
- Utility **Planning and Budgeting** sees EE
Statutes Can

- Declare savings targets by year
  - Focusing on outputs is superior to inputs ($$) though stabilizing funding is also helpful
  - Or describe objective (“all cost effective”)

- Nudge toward decoupling

- Authorize financial performance rewards

- If process seems stalled, require PUC rules

- Guide definition of cost effectiveness

- Promote innovation, program efficiency
Statutes Can

- Resolve uses of funds associated with energy efficiency and clean energy
  - Carbon revenues: how much goes to support energy efficiency?
  - Wholesale market revenues from sales of energy efficiency capacity: does this revenue go back into the energy efficiency pot?

- Encourage moving away from flat rates
Statutes Can

- Enact complementary policies
  - Building energy codes
  - Appliance and equipment efficiency standards
    - Updating provisions
  - State buildings to a higher standard
  - Fiscal support (tax policy)
  - Renewables and distributed energy provisions
  - Support “whole building” energy efficiency
  - Reporting to the Legislature on performance

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Beware

➢ Sending mixed messages which can confuse customers and supporting businesses and discourage utilities
  – By disrupting funding
  – By promoting short term financial evaluation
  – By starving successful programs
  – By moving goal posts
Links to Statutes

- Energy Efficiency Policy Database from RAP
- Massachusetts Green Communities Act
  - Implementation by MA DOER
- Report on Energy Efficiency to Iowa Legislature
- Vermont Statutes (see 218c, for example)
- California Public Utilities Code
  - (enter 701, 454.5, 9615)
Thanks for your attention

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- RAP Mission: RAP is committed to fostering regulatory policies for the electric industry that encourage economic efficiency, protect environmental quality, assure system reliability, and allocate system benefits fairly to all customers.