

# National Action Plan for Energy Efficiency

[www.epa.gov/  
eeactionplan](http://www.epa.gov/eeactionplan)

Electricity Consumers Resource Council (ELCON)  
Nashville, TN  
June 3, 2008

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# Today's Energy Challenges- Motivation for Action Plan

- **Energy demand is growing**
- **Aging infrastructure**
- **Rising utility bills**
- **Increasing generation costs**
  - Gas and coal prices
  - Building cleaner generation
- **Reliability issues**
- **Natural gas prices increasing / volatile**
- **Carbon risk**
- **Pending large transmission and generation investments in uncertain investment world**



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# Action Plan Advances Energy Efficiency – a Key *Part* of the Solution

- Environmental
  - Lower carbon emissions and criteria pollutants
  - Lower water use
- Economic
  - Savings to customers
  - Lower cost (about half) compared to new G&T
  - Downward pressure on natural gas prices and volatility
  - Improved local economy, using local labor
  - Benefits low-income, seniors
- Utility System Benefits
  - Near-term tool with persistent, long-term benefits
  - Improved security of systems
  - Lower baseload and peak demand
  - Reduce need for “hard to site” G&T assets
  - Targeted, modular, manageable
- Risk Management
  - Diversifies utility resource portfolios
  - Zero carbon emissions

***Quick, cheap, and clean resource***



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# Persistent Barriers Can Hinder Efficiency Investments

- **Market barriers**
  - Split incentives
  - Transaction costs
- **Customer barriers**
  - Lack of information
  - Competing vendor claims
  - Lack of funding
- **Public policy and utility regulatory barriers**
  - Lack of good documentation on energy efficiency policy options
  - Misperception that energy efficiency is not a guaranteed, reliable cost effective resource
  - Ratemaking policies may financially discourage utilities from investing in efficiency
  - Resources planning processes may not consider energy efficiency resources
- **Program barriers**
  - Lack of good documentation and education on demand-side programs
  - Lack of knowledge about the most effective and cost-effective program portfolios



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# National Action Plan for Energy Efficiency

- Released on July 31, 2006 at the National Association of Regulatory Utility Commissioners meeting
- Goal: To create a sustainable, aggressive national commitment to energy efficiency through gas and electric utilities, utility regulators, and partner organizations
- Over 50 member **public-private Leadership Group** developed five recommendations and commits to take action – ***they own the Plan***
- Co-chairs: Jim Rogers, Duke Energy & Idaho PUC Comm. Marcia Smith
- Additional commitments to energy efficiency – exceeds 90 organizations
- Facilitated **only** by US DOE and EPA  
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## National Action Plan for Energy Efficiency Five Main Recommendations

1. Recognize energy efficiency as a high-priority energy resource.
2. Make a strong, long-term commitment to implement cost-effective energy efficiency as a resource.
3. Broadly communicate the benefits of and opportunities for energy efficiency.
4. Provide sufficient, timely and stable program funding to deliver energy efficiency where cost-effective.
5. Modify policies to align utility incentives with the delivery of cost-effective energy efficiency and modify ratemaking practices to promote energy efficiency investments.



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# Action Plan Leadership Group

- Sets tone and overall direction of the Action Plan
  - US DOE and US EPA facilitate ONLY, at direction of LG
- Released Action Plan Report and Recommendations
- Co-Chaired by:
  - Commissioner Marsha Smith, NARUC First Vice President and Member of Idaho Public Utility Commission
  - Jim Rogers, Chairman, President and CEO of Duke Energy
- Includes 60 leading electric and gas utilities, state utility commissioners, state air and energy agencies, energy services providers, energy consumers, and energy efficiency and consumer advocates





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# Leadership Group Members

The Leadership Group includes 30 electric and gas utilities, 18 state agencies, and 13 other organizations:

- Alliance to Save Energy
- American Council for an Energy-Efficient Economy
- Ameren
- American Electric Power
- Arkansas Electric Cooperative Corporation
- Arkansas Public Service Commission
- Austin Energy
- Baltimore Gas and Electric
- Bonneville Power Administration
- California Energy Commission
- California Public Utilities Commission
- Servidyne Systems
- Connecticut Consumer Counsel
- Connecticut Department of Environmental Protection
- Connecticut Department of Public Utility Control
- Delaware General Assembly
- District of Columbia Public Service Commission
- Duke Energy
- Entergy Corporation
- Environmental Defense
- Exelon
- Food Lion
- Great River Energy
- Idaho Public Utilities Commission
- ISO New England Inc.
- Johnson Controls
- Long Island Power Authority
- MidAmerican Energy Company
- Minnesota Public Utilities Commission
- National Grid
- Natural Resources Defense Council
- New Jersey Board of Public Utilities
- New Jersey Natural Gas
- New York Power Authority
- New York State Public Service Commission
- North Carolina Air Office
- North Carolina Energy Office
- Ohio Consumers' Counsel
- Pacific Gas and Electric
- Pepco Holdings, Inc.
- PJM Interconnection
- PNM Resources
- Public Advocate State of Maine
- Puget Sound
- Sacramento Municipal Utility District
- Santee Cooper
- Seattle City Light
- Servidyne Systems
- Southern California Edison
- Southern Company
- Tennessee Valley Authority
- Texas State Energy Conservation Office
- **The Dow Chemical Company**
- Tristate Generation and Transmission Association, Inc.
- USAA Realty Company
- Vectren Corporation
- Vermont Energy Investment Corporation
- Wal-Mart Stores, Inc.
- Washington Utilities and Transportation Commission
- Waverly Light and Power
- Xcel Energy



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## Observers to the Action Plan

- American Gas Association
- American Public Power Association
- Association of Energy Engineers
- Business Council for Sustainable Energy
- Consortium for Energy Efficiency
- Council of Energy Resource Tribes
- Demand Response Coordinating Committee
- Edison Electric Institute
- Electric Power Research Institute
- Energy Programs Consortium
- Gas Appliance Manufacturers Association
- Gas Technology Institute
- National Association of Energy Service Companies
- National Association of Regulatory Utility Commissioners
- National Association of State Energy Officials
- National Conference of State Legislatures
- National Council on Electricity Policy
- National Electrical Manufacturers Association
- National Rural Electric Cooperative Association
- North American Insulation Manufacturers Association
- Steel Manufacturers Association



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# Commitments to Energy Efficiency

- Commitments from 122 organizations
  - 6 Governors
  - 15 Utility Commission
  - 10 Other State Agencies
  - 11 Local Governments
  - 35 Utilities
  - 7 Large-end Users
  - 38 Others

Type of Commitment (sampling)	No. of Orgs.
State-level collaborative processes	15
Additional energy efficiency spending	4
New and expanded efficiency programs	17
Policies to align utility incentives	5
Efficiency in resource planning	24
Aggressive energy savings goals	26
Stakeholder education	63



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# Progress in Meeting Commitments

- **Commitment updates were released on November 12, 2007**
  - Full text and press releases from various organizations available on Action Plan website ([www.epa.gov/eeactionplan](http://www.epa.gov/eeactionplan)) under “Commitments”
  - To explore making a commitment contact Katrina Pielli ([pielli.katrina@epa.gov](mailto:pielli.katrina@epa.gov), 202-343-9610)
- **Examples include:**
  - **Entergy:** new programs in Arkansas; pursuing passage of PBF legislation in Louisiana; co-funding collaborative process in New Orleans
  - **Great River Energy (MN):** efficiency savings goal equal to 1.5% of annual energy sales
  - **Hawaii PUC:** EE Order determined cost recovery and incentives mechanisms
  - **NJ Board of Public Utilities:** With other state agencies, set goal to reduce projected energy use by 20% by 2020
  - **NY PSC:** Energy Efficiency Portfolio Standard (EPS) for a 15% reduction in electricity usage below the 2015 forecasted level; to establish goal for gas
  - **Seattle City Light:** Efficiency is "Resource of First Choice" in IRP—140 average MW of cost effective EE over the next 20 years
  - **Vermont Public Service Board:** 2008 budget is 76% higher than previous EE statutory cap; EE and DSM receiving capacity payments in ISO-NE



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# Action Plan Offers Resources To Help Parties Meet Their Commitments

- **Papers:**
  - National Action Plan for Energy Efficiency Report -- 2006
  - Vision for 2025: Developing a Framework for Change
  - **Aligning Utility Incentives with Energy Efficiency**
- **How-To Guides:**
  - Model Energy Efficiency Program Impact Evaluation
  - Resource Planning with Energy Efficiency
  - Conducting Energy Efficiency Potential Studies
- **Regional Implementation Meeting Materials**
- **Education and Outreach:**
  - Online Resource database
  - Energy Efficiency Benefits Calculator
  - Communications Kit
  - Building Codes and Energy Efficiency Fact Sheet
  - Consumer Energy Efficiency Fact Sheet
  - Sample Educational Presentations
- **(Commercial) Sector Collaborative on Energy Efficiency Materials:**
  - Background Paper on Utility Data Availability
  - Commercial Customer Energy Consumption Profiles

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## “Aligning Utility Incentives with Investment in Energy Efficiency” Paper

- Describes the financial effects on a utility of its spending on energy efficiency programs, how those effects could constitute barriers to more aggressive and sustained utility investment in energy efficiency, and how adoption of various policy mechanisms can reduce or eliminate these barriers
- Provides a number of examples of such mechanisms drawn from the experience of utilities and states
- Intended audiences: utilities, state policy-makers, and energy efficiency advocates interested in specific options for addressing the financial barriers to utility investment in energy efficiency
- Menu of options to consider – does not promote/recommend any particular method!!



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## Why Should Aligning Utility Incentives be Considered?

- While opinions differ as to the appropriate level of national spending on energy efficiency, the general consensus is that it should be significantly higher than current levels
- While opinions differ on the appropriate role of utilities, state and federal government, retail electric providers, and third-party “efficiency utilities”, there is general consensus that both local distribution utilities and fully integrated utilities will play an “important role” in the funding and delivery of energy efficiency
- In many states, the ways investor-owned utilities are regulated, and the ways in which they plan and upgrade their systems, serves to put investment in energy efficiency at a significant disadvantage relative to supply-side investments
- Note: utilities not only way to deliver energy efficiency to ratepayers. Other means (3<sup>rd</sup> party admin; state pgms; codes & standards; EEPS) should equally be considered by states!!!



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# And the Problem to Some Is....

*Expenses drop right to the bottom line*

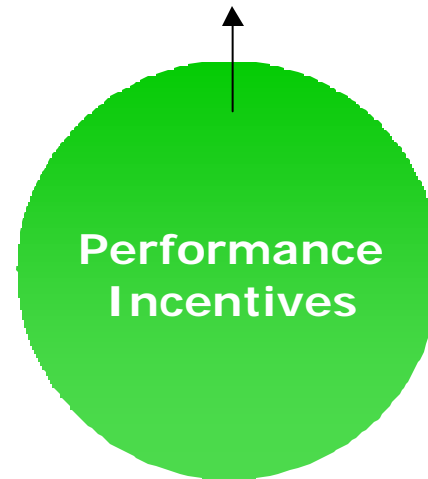


*Margin can be lost on every kWh saved by EE*



Earnings  
and Net  
Operating  
Margin

**It is the direction and magnitude of these combined effects that ultimately determines whether a utility's financial interest is aligned with a policy interest in promoting utility investment in EE**



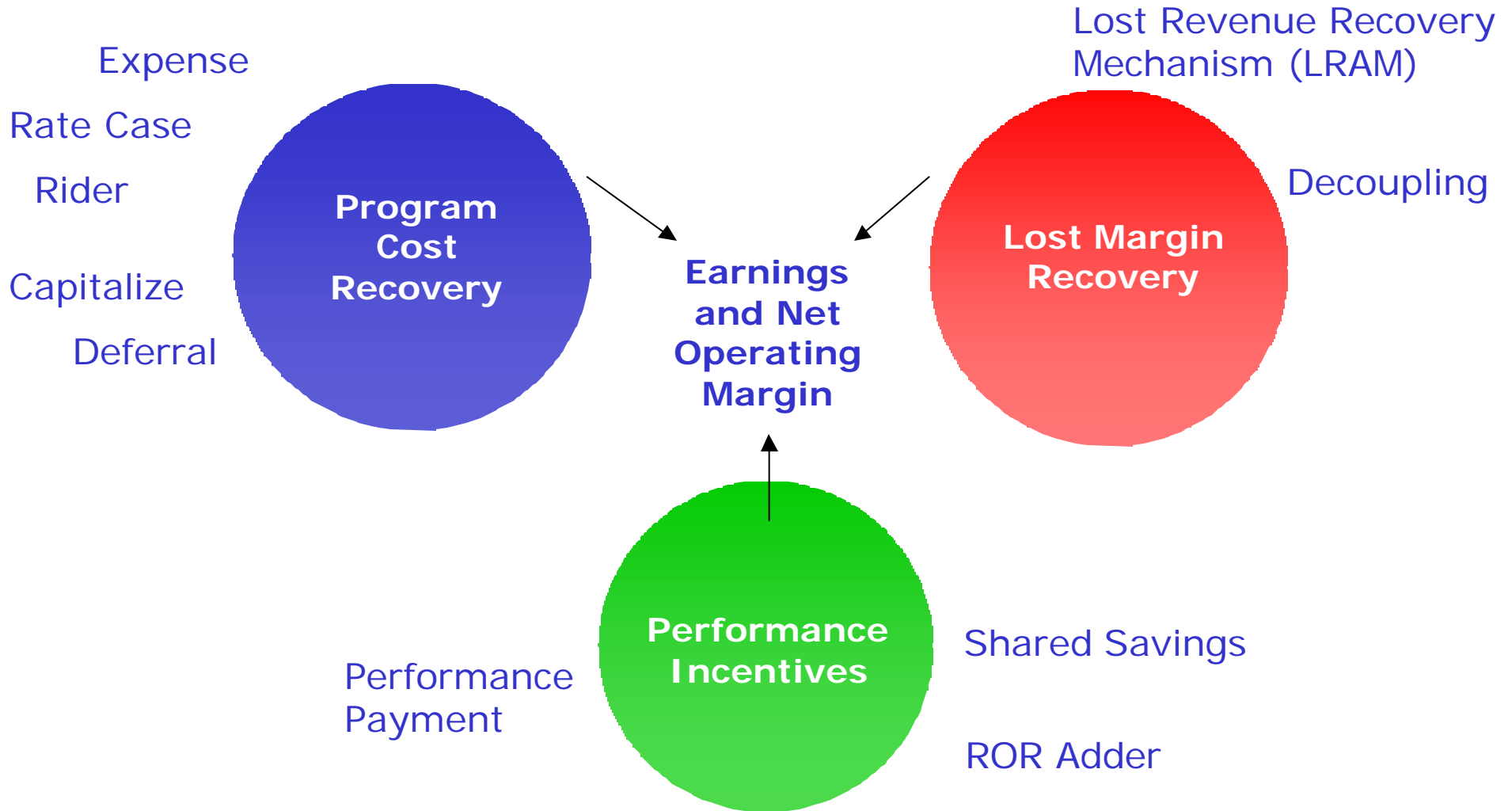
*Even if costs and margins are recovered, shareholders are better off with a new power plant*

*Note: Largely applies, but not exclusively, to investor-owned utilities*



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# Several "Tools" Exist for Addressing Each Problem



*Note: Largely applies, but not exclusively, to investor-owned utilities*



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# State Activity on Utility Incentives

- Increased interest in broad topic by many stakeholders (Commissions, utilities, legislators, non-profits, etc.)
- Renewed interest in exploring decoupling
  - Idaho Power pilot in **ID**
  - Legislation in **CT, NY, MN**
  - Filing by Pepco in **MD** and **DC**
  - Docket in **IA**
- Lost Margin Recovery Mechanism (LRAM) less prevalent but still being explored
- Large variety of approaches for performance incentives
  - **CA** – Rewards and penalties based on a) how well the utility met CPUC established energy savings targets; b) the economic benefits generated from the utility's EE portfolio
  - **NV** – Enhanced ROR
  - **TX** – Shared Savings



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## Vision for 2025

- Released November 12, 2007
- Long-term Aspirational Goal: To achieve all cost-effective energy efficiency by the year 2025
- Framework for implementing Action Plan recommendations
  - Puts the 5 recommendations into Action
  - Is a living document; open to new ideas; will be refined
  - Is a plan – need to know where you want to go in order to get there
  - A challenge for new thinking
- 10 Implementation Goals
  - Action needed over next 10-15 years to help lay policy foundation by 2025
  - Highlights need for new technology
- Offers initial approach to measure progress
  - Currently being refined by Leadership Group
- Not a mandate; respects state processes – not one size fits all



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# Vision's 10 Implementation Goals

- Goal One: *Establishing Cost-Effective Energy Efficiency as a High-Priority Resource*
- Goal Two: *Developing Processes to Align Utilities Incentives Equally for Efficiency & Supply Resources*
- Goal Three: *Establishing Cost-Effectiveness Tests*
- Goal Four: *Establishing Evaluation, Measurement, and Verification Mechanisms*
- Goal Five: *Establishing Effective Energy Efficiency Delivery Mechanisms*



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## Vision's 10 Implementation Goals (cont'd)

- Goal Six: *Developing State Policies to Ensure Robust Energy Efficiency Practices*
- Goal Seven: *Aligning Customer Pricing and Incentives to Encourage Investment in Energy Efficiency*
- Goal Eight: *Establishing State of the Art Billing Systems*
- Goal Nine: *Implementing State of the Art Efficiency Information Sharing and Delivery Systems*
- Goal Ten: *Implementing Advanced Technologies*



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## Future Work Requested by Leadership Group

- **Updated “Vision for 2025”**
- **Issue Papers on Various Topics**
  - Role of Energy Efficiency as a Low-cost Resource for Reducing Carbon Emissions
  - Coordinating Demand Response & Energy Efficiency Policies & Programs
  - Defining Cost-effectiveness of Energy Efficiency Programs
  - Advancing Building Energy Codes through Energy Efficiency Programs
  - Rate design to provide customer incentives for efficiency
  - Recommendations for availability of customer energy bill data to customers
- **How-to Guides**
  - Guide to Energy Efficiency Program Filings (with links to best practices program information)
  - Guide to Designing/Implementing State and Local Lead-By-Example Programs
- **Scoping Document on “Most Energy Efficient Economy in the World” Concept**
- **Communication Tools**
  - Updated website
  - Electronic newsletter
  - Updated outreach tools, including Communications Kit & Resource Database



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## New Federal Energy Law Lowers the Bar on Electricity Energy Efficiency

- H.R.6, “Energy Independence and Security Act of 2007”
- Increases efficiency in appliances, building & home use, eventual phase out of incandescent bulbs
- Alliance to Save Energy estimates *just* the light bulb standards total more than EPACK 05 savings
- Quick estimate (ACEEE) of 2020 impact of EISA:
  - Consumption: 198 TWh reduction
    - (~5% of EIA 2020 projection 4571 TWh\*)
  - Peak Demand: 44 GW reduction
    - (5% of EIA summer 2020 peak demand projection of 878 GW\*)

\*Note: EIA AEO 2008 reference case projection of 2020 already assumes bulb phaseout & other efficiency improvements possibly in H.R. 6. EIA’s revision to AEO to include H.R. 6 impacts not included here.



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## For More Information

**[www.epa.gov/eeactionplan](http://www.epa.gov/eeactionplan)**

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