

Designing Utility Regulation to Promote Investment in Cost-Effective Energy Efficiency



Pennsylvania PUC Discussion

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Overarching Goals

- Safe, reliable, affordable energy service
- Minimize environmental impacts
- Economic efficiency
 - Customers and utilities invest in all cost-effective energy efficiency

Policy Context

- Rate Regulation/ Decoupling
- Portfolio Management
 - Portfolio Standards
- System Benefit Charge Programs
 - Secure minimum amount of energy efficiency
 - Market Transformation
- Codes and Standards
- Transmission and Distribution System Planning

Emerging Policy Context

- Regional Greenhouse Gas Initiative
- CA Emissions Cap on Electricity Sales/
Procurement
- New Requirements to Manage Carbon Risk

Traditional Regulation

- **Rewards sales / encourages consumption**
- **Discourages utility support for efficiency**
- **Recovery of fixed costs uncertain**

Decoupling

- **Severs link between profit and sales**
 - Modest true-ups in both directions vs. rate cap
 - Assures recovery of fixed costs
 - Removes incentive to increase sales
- **Rewards safe, reliable service; public goals**
 - Customizable to reward/ penalize based on performance

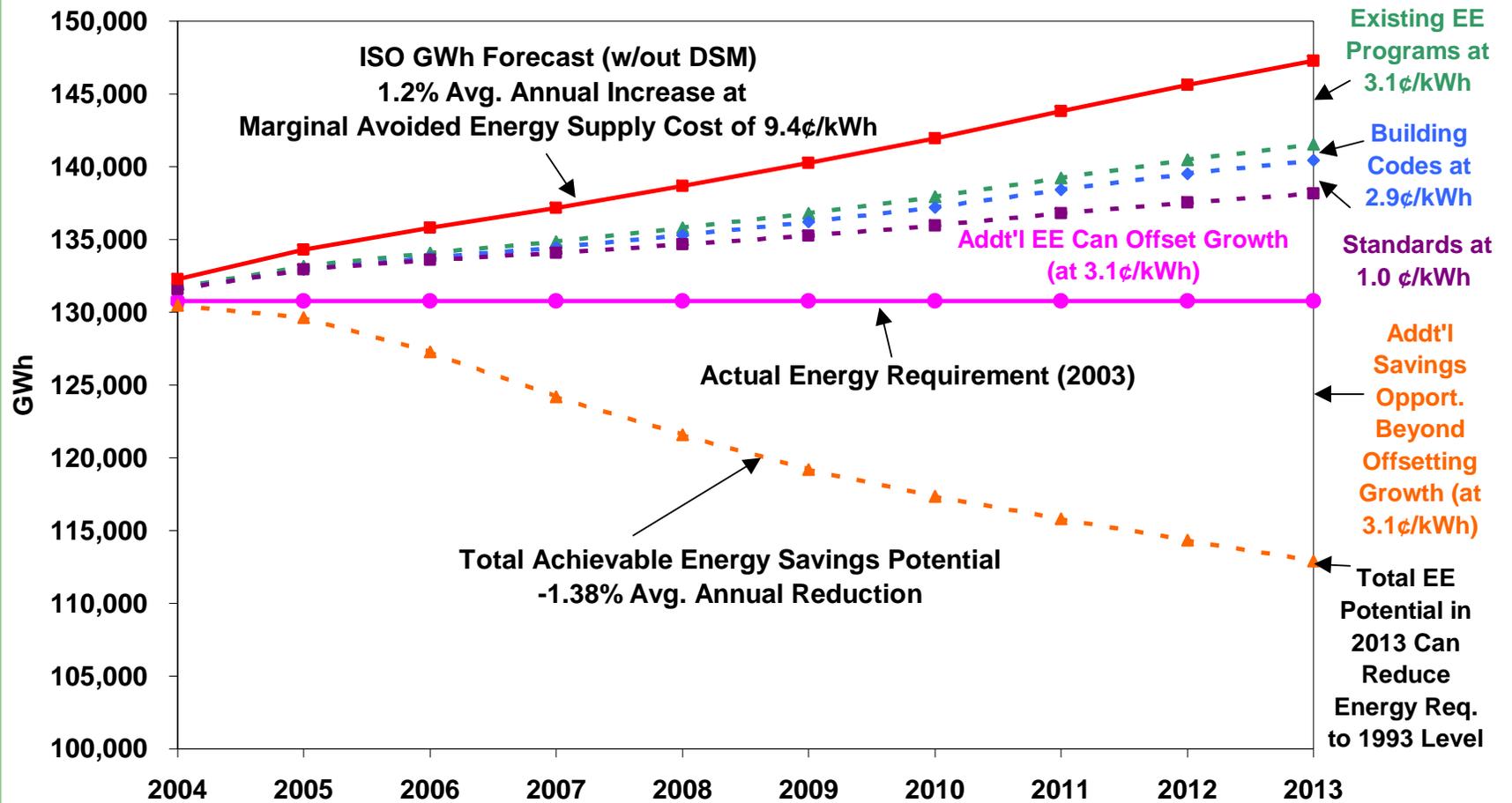
Decoupling Objectives

- **Align consumer and shareholder interests**
- **Promote investment in least cost efficiency**
- **Assure recovery of fixed costs**
- **Reduce gas prices by reducing demand**

Energy Efficiency: Benefits & Barriers

- **Cost-effective efficiency investments**
 - 5:1 cost benefit ratio
 - likely to reduce load by 1%/ year
- **Market barriers**
 - Lack of knowledge, access to efficient products
 - Split incentives
 - Customers require 40-100% return, < 3 yr payback

Energy Efficiency Potential



Decoupling Objectives

- **Environmental Benefit**
 - Energy efficiency competes directly with supply
 - Reduced consumption = reduced environmental impact
 - Lower gas prices put more competitive pressure on coal
- **Consumer Benefit**
 - Utilities more likely to help customers reduce demand, lower bills
 - Reducing demand reduces electric and gas prices for all (ACEEE study)
- **Utility Benefit**
 - Guaranteed fixed cost recovery
 - Reduced risks associated with economy, weather, efficiency standards
 - Better service to customers
- **Improved Reliability**
 - More efficiency means less strain on system

Alternatives to Decoupling

- Increase fixed customer charges
 - Reduces reward for end-use efficiency
 - More disruptive to rate structures than modest true-ups that decoupling would require
- Lost revenue recovery mechanisms
 - Asymmetrical; fails to recapture “found” revenues from excess sales
 - Does not address disincentive to promote efficiency beyond programs (e.g., codes and standards)
- Codes and standards; SBC programs
 - Current regulation discourages utility support
 - Funding uncertain
- Massive subsidies for coal gasification; LNG
 - Much more expensive than promoting efficiency