



# **Schedule 193 Discussion**

January 20, 2010

# Today's Discussion

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## **From 2009 PSC Notice of Inquiry Areas 09-035-T08 (August 31, 2009)**

“In addition to annual evaluation of individual DSM programs, the 2003 stipulation filed in Docket 02-035-T12 and our October 2003, report and order...Rocky Mountain Power shall review with the Division, the [Office], DSM Advisory Group, and any other parties, the appropriateness of the continuation, elimination, or modification of the schedules, and shall submit to the Commission a report and recommendations regarding the same” (2003 Stipulation: 02-035-T12)


It is the position of UCE and SWEEP that it is indeed appropriate, to not only continue, but also to expand energy efficiency investments allowed through Schedule 193, or other mechanism and we propose areas of discussion for modification with the end goal to ensure that the customers receive the benefits of all available cost-effective DSM while protecting both the interests of the consumer and the utility.

# Energy Efficiency Recognized Nationally as a Significant Resource

McKinsey & Company

McKinsey Global Energy and Materials

## Unlocking Energy Efficiency in the U.S. Economy

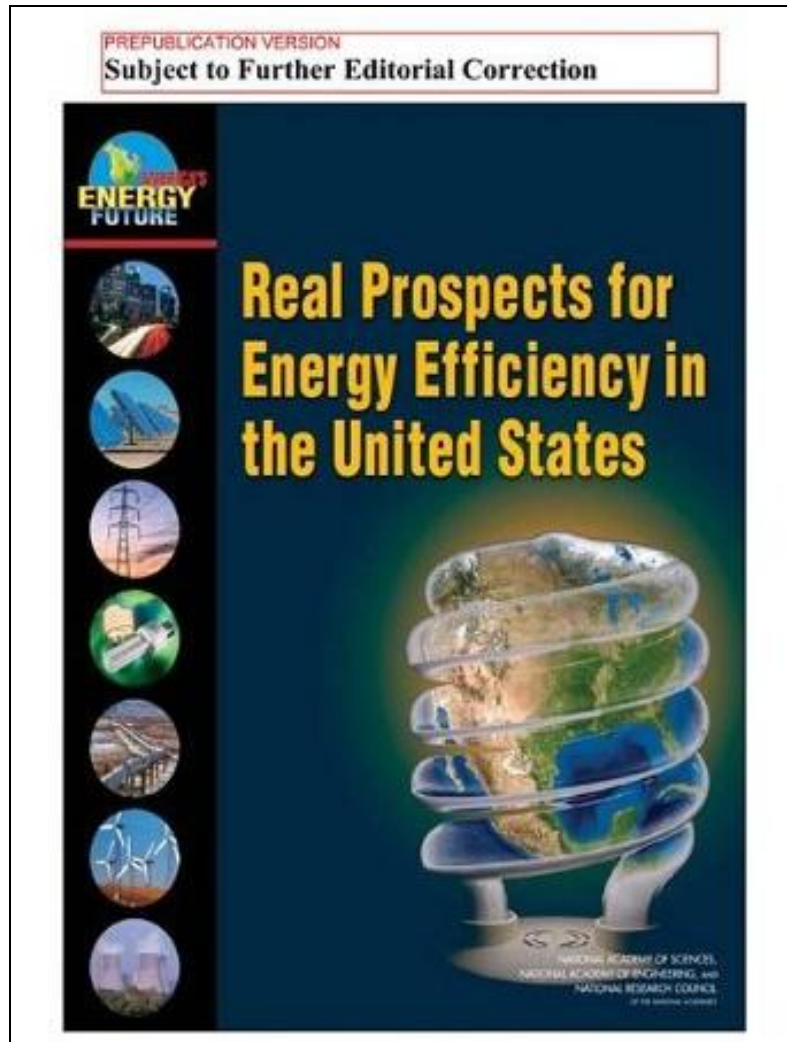


The image block contains three photographs. The top-left photo shows a construction worker in a brown shirt and safety glasses working on a wooden ceiling. The top-right photo shows a man in a white shirt looking at a large architectural model of a city skyline. The bottom photo shows a woman in a blue uniform and white hard hat working on industrial machinery with various pipes and valves.

## ▶ McKinsey Study Central Conclusions:

- ▶ Energy efficiency offers a vast, low-cost energy resource for the U.S. Economy
- ▶ By 2020 can reduce BAU energy consumption by 23% through cost-effective investments in EE (assumes no carbon cost)
- ▶ Gross energy savings **worth more than \$1.2 trillion**, well above \$520 billion needed for upfront capital costs
- ▶ If carbon cost of \$50/ton CO<sub>2</sub> – then 36% reduction by 2020

# National Academy of Sciences



## ▶ Central Conclusions:

- ▶ Energy efficiency technologies can save 30% of energy used in the U.S. economy
  - ▶ 15% by 2020
  - ▶ 30% by 2030
- ▶ Savings from cost-effective energy efficiency in the building sector could exceed EIA forecast for new generation in 2030
- ▶ Requires significant public and private support and sustained initiative



# Utah Recognizes Energy Efficiency is a Priority Resource

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- ▶ *HJR 09 S01 (2009) Joint Resolution on Cost Effective Energy Efficiency and Utility Demand Side Management*
  - ▶ recognizes energy efficiency as a priority resource,
  - ▶ urges state and local governments and utilities companies to promote and encourage all available cost-effective energy efficiency and conservation,
  - ▶ voluntary energy savings goals for Rocky Mountain Power and Questar Gas, and
  - ▶ expresses support for regulatory mechanisms, such as decoupling, performance based incentives, and innovative rate designs
- ▶ *Utah's Energy Efficiency Goal established in 2006 - 20% improvement in energy efficiency by 2015*
- ▶ *Docket 09-035-27: DSM Program Performance Standards – UCT threshold test – DSM resources more comparable to supply side resources*

# Utah Recognizes Energy Efficiency is a Priority Resource (continued)

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- ▶ **ARRA Requirement:** *(1) The applicable State regulatory authority will seek to implement ... a general policy that ensures that:*
  - ▶ *utility financial incentives are aligned with helping their customers use energy more efficiently*
  - ▶ *provide timely cost recovery for DSM expenditures*
  - ▶ *timely earnings opportunity for utilities associated with cost-effective measurable and verifiable efficiency savings*
  - ▶ *in a way that sustains or enhances utility customers' incentives to use energy more efficiently.*
- ▶ **Utah ARRA Assurance to U.S. DOE:**

“Utah's regulated electricity and natural gas utilities already have Demand Side Management programs, established through the Utah Public Service Commission, which meet the requirements of Section 410(1) of ARRA. I am writing the Utah Public Service Commission to encourage their continued implementation of energy efficiency, consistent with ARRA.”

- Former Governor Huntsman to Secretary of Energy Stephen Chu, March 2, 2009

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# DSM Programs Continue to Deliver

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- ▶ Average Cost: under \$0.03 cents/kWh levelized
- ▶ Total peak demand reduction: 335 MW (2008)
- ▶ Total electricity savings: 757,525 MWh<sup>a</sup> (86.5 MWa) from measures installed 2001-2008
  - ▶ Avoided CO<sub>2</sub> emissions: 461,459<sup>b</sup> tons in 2008 (from measures installed 2001-2008)
    - ▶ Potential annual cost savings at \$15/ton CO<sub>2</sub> \$ 6,921,885
    - ▶ Potential annual cost savings at \$25/ton CO<sub>2</sub> \$ 11,536,474
    - ▶ Potential annual cost savings at \$40/ton CO<sub>2</sub> \$ 18,458,359
  - ▶ Potential savings will escalate as DSM savings expand and compound
    - ▶ a- RMP response to UCE data request, dated January 15, 2010
    - ▶ b- Emission factor of 1.218 lb/kWh calculated from RMP Blue Sky webpage [http://www.mypoweroptions.com/environ\\_impact\\_calc/](http://www.mypoweroptions.com/environ_impact_calc/)

# All sectors are being served and are delivering significant savings

Customer Class			Cost Effectiveness Results from 2008 (Benefit/Cost Ratio by test)					2008 levelized costs \$/kWh		
	kWh <sup>a</sup>	Utility Cost	PTRC	TRC	UCT	RIM	PCT	PTRC	TRC	UCT
Schedule 192 self direction	48,523,027	\$ 964,111	2.037	1.852	1.652	1.416	-18.564	0.0437	0.0437	0.049
C & I (Includes Schedule 192)	478,009,537	\$ 56,514,877	2.270	2.063	3.833	2.811	4.946	0.0376	0.0376	0.0202
Residential	279,515,839	\$ 51,484,061	1.755	1.595	2.093	1.597	11.782	0.0451	0.0451	0.0344
<b>Total</b>	<b>757,525,376</b>	<b>\$107,998,938</b>	<b>2.080</b>	<b>1.891</b>	<b>3.046</b>	<b>2.274</b>	<b>6.523</b>	<b>0.0414</b>	<b>0.0414</b>	<b>0.0257</b>

a - Cumulative kWh savings in 2008 from 2001-2008 program implementation

Source: RMP response to UCE Data Request, January 15, 2010





# Economics of energy efficiency

- ▶ ACEEE Study: average cost of EE is \$0.025/kWh (utility cost) for 14 leading utility companies (Friedrich, K. et al, 2009)
- ▶ Levelized Utility Cost for RMP 2008 DSM - Compared to 2008 IRP Costs for Supply Side Resources

Resource	Cost with \$8/ton CO2 \$/MWH	Cost with \$45/ton CO2 \$/MWH
UT PC w/out CCS	\$ 62.14	\$ 85.36
UT PC w CCS	\$ 100.43	\$ 103.76
Intercooled Aero 174 MW, Utah	\$ 133.68	\$ 149.62
CCCT (Wet "F" 1x1)	\$ 89.07	\$ 101.45
<i>Source: 2008 IRP Tables 6.4 and 6.6</i>		
<b>Class 2 DSM Levelized UCT</b>	<b>\$ 25.70</b>	<b>\$ 25.70</b>
<i>Source: RMP response to UCE Data Request, January 15, 2010</i>		



# We still have a long way to go to meet full DSM potential

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- ▶ Electricity savings in 2008 from cumulative programs was equal to about 3.3% of RMP's retail electricity sales
- ▶ By 2009, savings from cumulative programs will equal about 4% of sales
- ▶ But the cost-effective energy efficiency potential is around 25% of sales
- ▶ Utah Energy Efficiency Strategy (2007) calls for saving 4.1 million MWH by 2020, we are currently only about 25% of the way towards this goal

# Mechanisms to Advance Utility EE

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1. Continue timely cost recovery for utility DSM investment
2. Encourage all cost-effective investments in DSM (no spending cap)
3. Remove financial disincentives that RMP faces
4. Provide incentives for aggressive energy efficiency
5. Adopt energy savings standard or goal consistent with HJR 09 (S01)

# **Mechanisms are supported by Utah's policies that the PSC found to be comparable to PURPA 111(d) Standard (17)**

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## **PURPA 111(d) Standard (17)**

### **(17) RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS.**

**IN GENERAL.—**The rates allowed to be charged by any electric utility shall-  
**Align utility incentives with the delivery of cost-effective energy efficiency; and**  
**Promote energy efficiency investments.**

**POLICY OPTIONS.-** In complying with subparagraph (A), each State regulatory authority and each nonregulated utility shall consider-

- ▶ **Removing the throughput incentive and other regulatory and management disincentives to energy efficiency;**
- ▶ **Providing utility incentives for the successful management of energy efficiency programs;**
- ▶ **Including the impact on adoption of energy efficiency as 1 of the goals of retail design, recognizing that energy efficiency must be balanced with other objectives;**
- ▶ **Adopting rate designs that encourage energy efficiency for each customer class;**
- ▶ **Allowing timely recovery of energy efficiency-related costs; and**
- ▶ **Offering home energy audits, offering demand response programs, publicizing the financial and environmental benefits associated with making home energy efficiency improvements, and educating homeowners about all existing Federal and State incentives, including the availability of low-cost loans, that make energy efficiency improvements more affordable.**

# Comparable Policies

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Also, we find legislative support for the purposes of PURPA applicable to the Rate Design Standard in the form of recent revisions to Utah Code 54-4-4.1 by 2009 Senate Bill 75, 2009 HJR 9, and Utah Code Utah Code 54-3-1. Utah Code 54-4-4.1 now allows the Commission to adopt any method of rate regulation that is: consistent with Utah Code Title 54, in the public interest, and just and reasonable. Accordingly, methods of rate regulation may include: rate designs utilizing volumetric, demand, fixed rate, and variable rate components; rate stabilization methods; decoupling methods; incentive-based mechanisms; and other components, methods, or mechanisms approved by the commission.

- ▶ Public Service Commission of Utah, Determination Concerning the PURPA Rate Design Standard, December 16, 2009

# 1: Continue Timely Cost Recovery

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- ▶ Timely cost recovery is a central element that contributes to utility investment in cost-effective energy efficiency
- ▶ The National Action Plan for Energy Efficiency (2006) recommends “sufficient, timely, and stable program funding” for delivering cost-effective energy efficiency
- ▶ Tariff Rider provides timely recovery (may be other mechanisms)
- ▶ Could potentially develop a balancing account through single item rate making for DSM
- ▶ Need to balance timely recovery with rate stability

## 2: Why UCE and SWEEP Oppose a Spending Cap

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- ▶ DSM resources are cost-effective and in the public interest
- ▶ Limiting investment in cost-effective DSM will result in more investments more costly supply side resources and ultimately higher rates for all customers
- ▶ Counter to HJR 09
- ▶ Counter to ruling in Docket 08-999-05 and activities that were deemed “equal and comparable” with PURPA Standard
- ▶ Spending cap does not apply to other resources

### **3: Remove Disincentives for utility DSM investments Consistent with HJR 09**

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- ▶ **Company may be harmed financially when it implements ambitious DSM programs**
  - ▶ Cannot recover lost revenues that result from implementation of cost-effective DSM programs
  - ▶ Loses potential ROI from supply side resources
- ▶ **The Company should have the opportunity to earn a reasonable profit through investment in cost-effective DSM resources, just as it does when it invests in supply side resources**
- ▶ **DSM should be win-win for the company and their customers**



## Remove Disincentives (cont.)

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- ▶ Evaluate need for innovative regulatory mechanisms to align financial interest of utility with that of the customer with respect to energy efficiency
- ▶ **Sales-Revenue Decoupling**
  - ▶ Has been implemented on a pilot basis for Questar Gas
  - ▶ Removes the risk that company will not recover their approved fixed costs and at the same time protects customers from over-recovery of approved fixed costs
  - ▶ More states are adopting sales-revenue decoupling:
    - ▶ California, Connecticut, Idaho, Maryland, New York, Oregon, Vermont, Washington D.C., and Wisconsin (7 other states pending) (2009 State Scorecard, ACEEE)

# 4. Adopt Utility Incentives for DSM Investment Consistent with HJR09

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- ▶ Incentives could include:
  - ▶ Cash award for meeting energy saving and/or peak reduction goals
  - ▶ Earn a share of “net benefits” from the programs
  - ▶ Earn a rate of return on EE/DSM expenditures (tied to program performance)
  - ▶ Bonus rate of return for the company (tied to performance)
  - ▶ Performance based incentives have been adopted in CO,AZ, and are required by law in NM (rulemaking underway)

## 5: Energy Savings Standard or Goal

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- ▶ The Commission should set a goal for Rocky Mountain Power's DSM programs consistent with the energy savings goal set out in HJR 09 S01 (2009):
  - ▶ Reduce projected electricity sales by “not less than 1% of its annual retail sales”

# Energy Savings Standards – What Have Nearby States Done?

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- ▶ AZ: 20% savings by 2020 with inclusion of savings from CHP and partial credit for building codes; also adopted performance incentives for APS, with incentive tied to level of savings and net economic benefit
- ▶ NM: requires utilities to save 5% of 2005 sales in 2014 and 10% in 2020 through their DSM programs
- ▶ CO: PUC has adopted an energy savings goal of 10% by 2018 for investor-owned utilities, with performance incentives tied to achievement of goals

# Summary

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- ▶ DSM offers the least expensive resource option
- ▶ Schedule 193, or equivalent, should be continued and modified to allow greater investments in demand side reduction
- ▶ National studies show the potential for energy efficiency far exceeds current programs
- ▶ Existing Utah policies and ARRA requirements support continued investment in energy efficiency
- ▶ Mechanisms to continue/increase investments in energy efficiency should be pursued:
  - ▶ Timely cost recovery
  - ▶ Avoid use of spending caps
  - ▶ Remove disincentives & provide incentives
  - ▶ Adoption of energy saving goal or standard