

Colorado Market Potential Assessment

Colorado DSM Informational Workshop

February 8, 2007

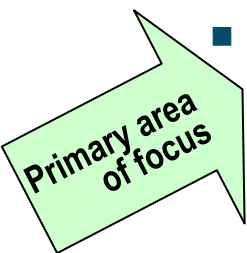
Deb Sundin, Xcel Energy

2006 DSM Potential Assessment

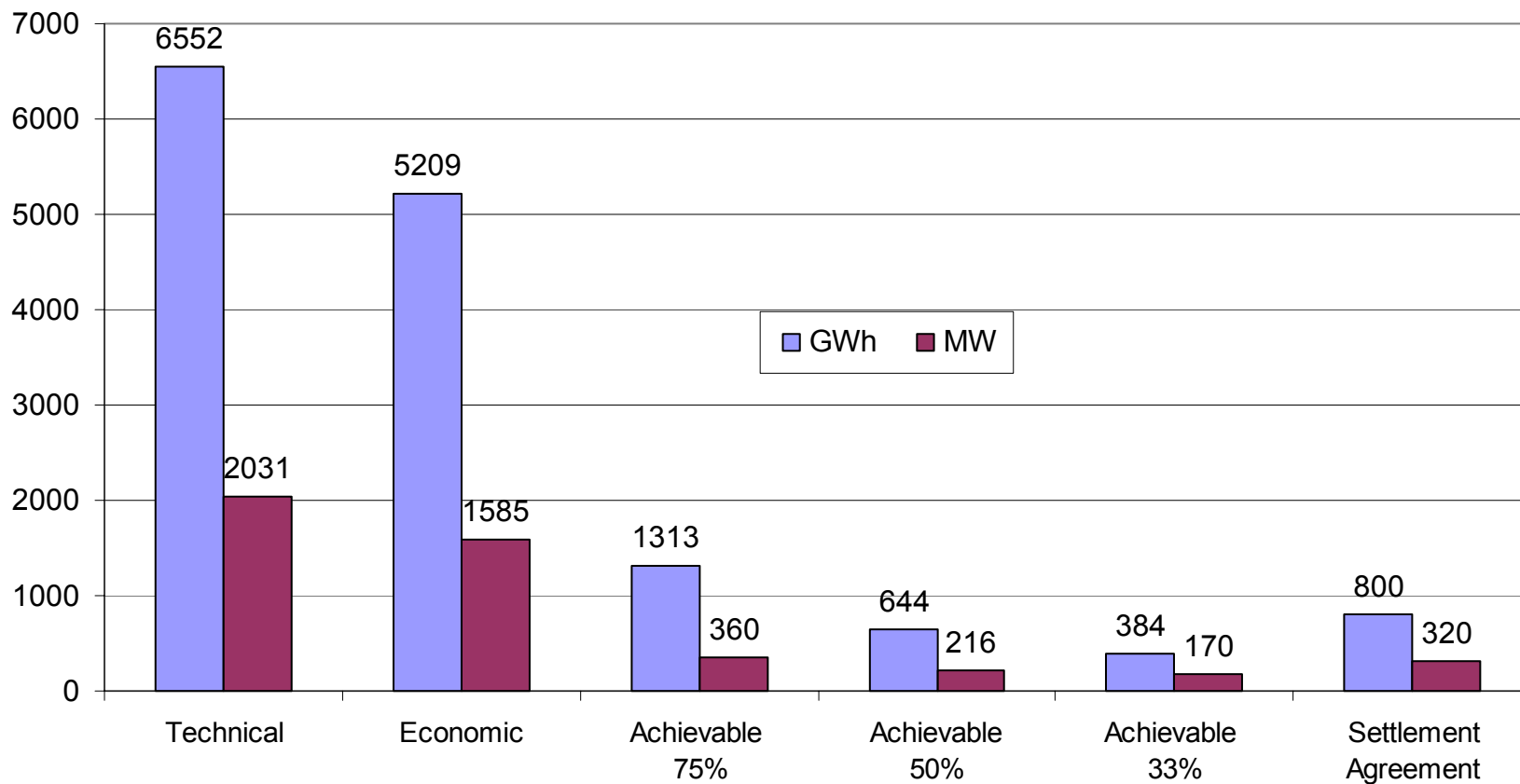
- **Goals of study were to:**
 - estimate levels of DSM available to customer classes,
 - the associated costs, and
 - the achievability of such levels of DSM in Colorado.
- **Quantity of DSM defined as sum of differences in energy use between base efficiency technologies (e.g. incandescent bulbs) and the more efficient option (e.g. compact fluorescent bulbs)**
- **Assumes use of traditional form of DSM – program administrator provides rebates to customers for purchasing energy efficient option; serves to reduce barriers**
- **The Assessment used surveys and secondary research to estimate DSM amounts for each of the categorized levels** 2

Categories – Technical, Economic, Achievable

- **Technical potential** represents an idealized scenario in which all base level energy efficiency measures are replaced with high efficiency measures
- **Economic potential** sums the energy savings from the subset of technical potential measures that are cost effective when compared to supply side alternatives (using the Total Resource Cost test).
- **Achievable potential** estimates the energy/demand savings the utility can procure based on different levels of rebates.
 - **Xcel Energy's study used 3 levels**
 - 33%, 50% and 75% rebates
 - Percentage is the portion of incremental measure cost the rebate covers



Technical, Economic, & Achievable Potentials



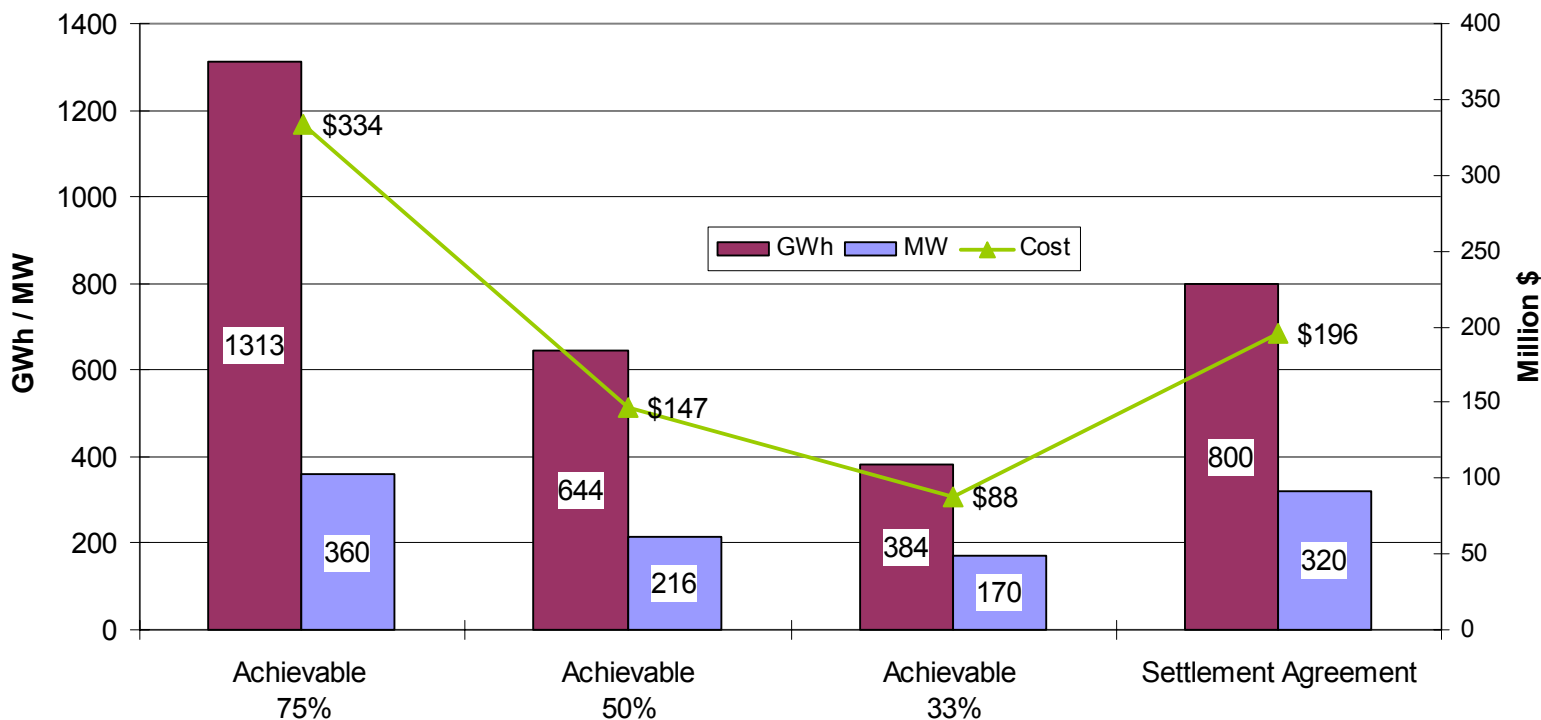
Discussion of Economic & Achievable Potential

- **Large differences between economic and achievable result from estimated barriers to customer implementation in Colorado**
 - Barriers to customer implementation of energy efficient measures include: higher first cost, concerns about quality, lack of information, small role energy plays in total budget, among other reasons
 - Markets like Colorado with lower historical investments in DSM tend to have higher barriers
 - Potential studies measure customer “awareness” of measures and “willingness” to purchase and install – also use “adoption curves” to show how customers adopt over time
- **For example, Colorado contrasts with Xcel Energy’s Minnesota service territory, where levels of awareness/willingness are higher and differences between economic and achievable are also smaller**

Colorado Market Potential Study

Summary of Achievable Potential Results: 2006–2013 Result	Base Case 1			Base Case 2		
	33% Incentive	50% Incentive	75% Incentive	33% Incentive	50% Incentive	75% Incentive
Gross Energy Savings - GWh	639	899	1,568	674	983	1,879
Gross Peak Demand Savings - MW	206	252	396	215	273	500
Net Energy Savings – GWh (800 GOAL)	384	644	1,313	418	727	1,623
Net Peak Demand Savings – MW (320 GOAL)	170	216	360	177	236	462
Program Costs - Real, \$ million						
Administration	\$14	\$27	\$50	\$14	\$27	\$50
Marketing	\$30	\$37	\$45	\$30	\$37	\$45
Incentives	\$84	\$135	\$330	\$86	\$142	\$372
Total	\$128	\$199	\$425	\$130	\$206	\$467
PV Avoided Costs (\$ mil.)	\$554	\$707	\$1,090	\$575	\$758	\$1,295
PV Annual Program Costs (\$ mil.) (\$196 mil. BUDGET)	\$88	\$147	\$334	\$90	\$153	\$370
PV Participant Costs (\$ mil.)	\$122	\$150	\$200	\$124	\$155	\$216
TRC Ratio	2.6	2.4	2.1	2.6	2.4	2.1

Market Potential Study Settlement Goals



Are there opportunities for growth?

- Yes, but likely will take time in the market to develop
- As awareness of programs and EE opportunities grow, adoption curves can shift as in MN experience, especially beyond 8 years
- Industrial potential in Market Potential Assessment may be light
- City and business partnerships are quickly emerging – greater market involvement can increase adoption rates
- Increased local government and business interest in combating global warming
- Legislation to allow gas programs can also increase cross-fuel program opportunities