

Optimizing Energy in Michigan

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Michigan Public Service Commission
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EO Goals

- Electric energy savings in
 - 2008/ 2009 of 0.3% of total sales
 - 0.5% in 2010
 - .75% in 2011 &
 - 1.0% in years after
- Gas energy savings in
 - 2008/ 2009 of 0.1% of total sales,
 - .25% in 2010
 - .5% in 2011
 - .75% in years after

EOtopia

- Public Act 295 of 2008 established requirements for statewide energy efficiency
- Over 60 utilities filed EO plans with MPSC between February 16, 2009 and April 1, 2009.
 - investor-owned utilities (electric and gas)
 - electric cooperatives,
 - municipal electric companies
- All plans were approved on or before July 1, 2009, within the 90-day timeframe.

Optimizing Energy Optimization

- Incentives/Disincentives for utilities
 - Right mix of decoupling, \$ incentives, capitalization
 - Appropriate & timely cost recovery
 - State administrator option

State Administrator Option

- PA 295 created the option that a utility could have its EO program run by a state-wide agency
- MPSC selected a state administrator; had to be a qualified non-profit organization
- 11 smaller utilities chose this option
- Surcharge will be collected from customers and paid to administrator
- Administrator will develop and implement EO programs for the 11 utilities

Cost Recovery

- PA 295 provides for recovery of all costs in EO plans & additional costs that are reasonable, prudent & meet USRCT
- Plan cases resulted in setting up reconciliation process for costs
- EO plans can be reviewed during the reconciliation

USRCT

- Utility system resource cost test compares the costs of energy optimization on a life cycle basis, including administration, delivery and incentives, to the total avoided supply-side costs, including electricity or natural gas supply, transmission, distribution, and other associated costs

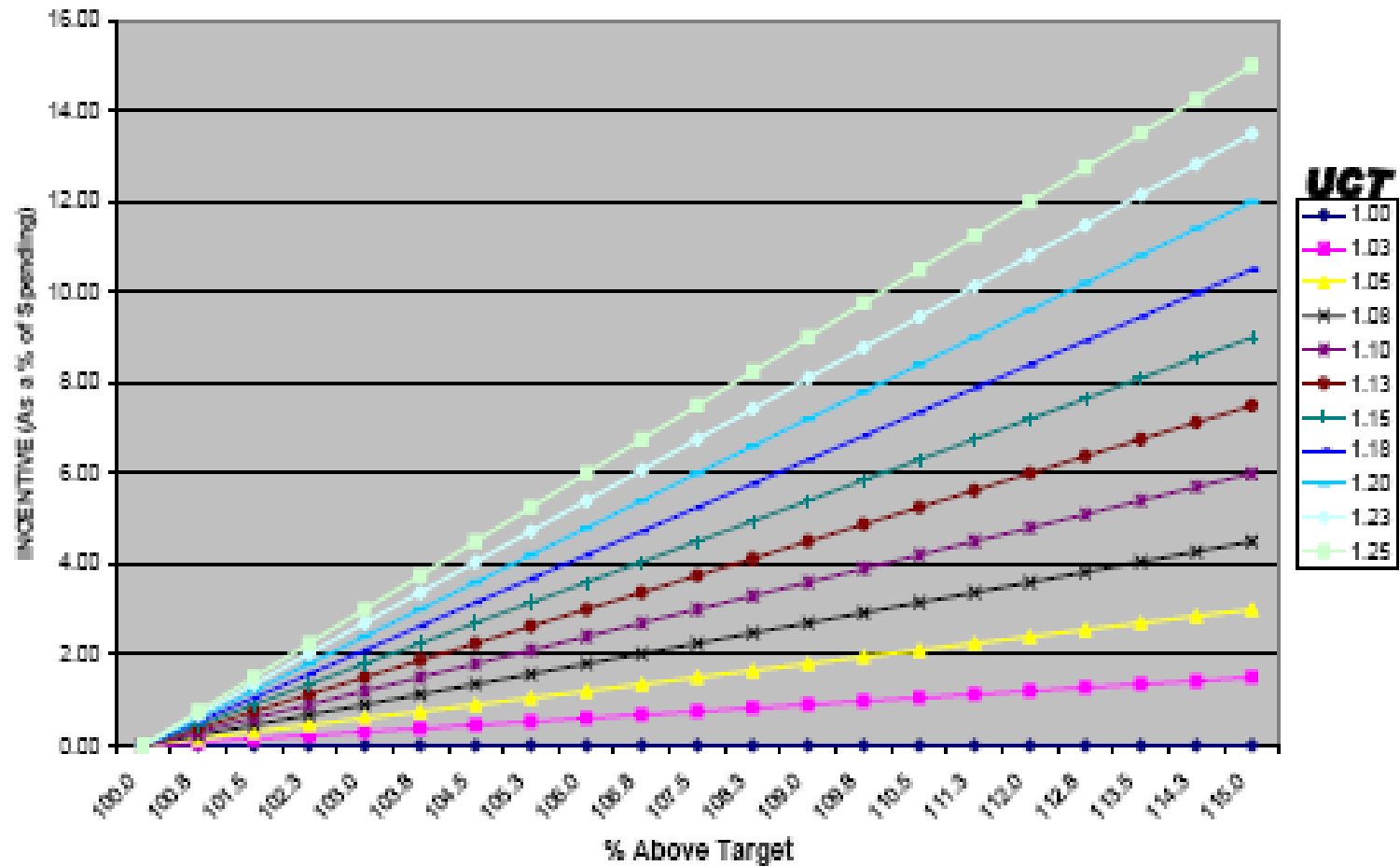
PA 295 Financial Incentive

- A regulated provider may receive a financial incentive for exceeding the energy optimization performance standard
- Payment is subject to the approval of MPSC
- The total amount of a financial incentive shall not exceed the lesser of the following amounts:
 - 25% of the net cost reductions experienced by the provider's customers
 - 15% of the provider's actual energy efficiency program expenditures for the year

MPSC Financial Incentive

- 3 Utilities, CE, DTE & MichCon, have an incentive mechanism
- The utility must exceed the savings targets and a USRCT of 1.0
- The incentive is a % of program spending; the % is determined through a linear interpolation of the savings target and the USRCT

EO Program Incentive Mechanism



EO Incentive Calculation

Target	UGT											
	1.00	1.03	1.05	1.08	1.10	1.13	1.15	1.18	1.20	1.23	1.25	
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.8	0.00	0.08	0.15	0.23	0.30	0.38	0.45	0.53	0.60	0.68	0.75	0.75
101.5	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	1.50	1.50
102.3	0.00	0.23	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.25	2.25
103.0	0.00	0.30	0.60	0.90	1.20	1.50	1.80	2.10	2.40	2.70	3.00	3.00
103.8	0.00	0.38	0.75	1.13	1.50	1.88	2.25	2.63	3.00	3.38	3.75	3.75
104.5	0.00	0.45	0.90	1.35	1.80	2.25	2.70	3.15	3.60	4.05	4.50	4.50
105.3	0.00	0.53	1.05	1.58	2.10	2.63	3.15	3.68	4.20	4.73	5.25	5.25
106.0	0.00	0.60	1.20	1.80	2.40	3.00	3.60	4.20	4.80	5.40	6.00	6.00
106.8	0.00	0.68	1.35	2.03	2.70	3.38	4.05	4.73	5.40	6.08	6.75	6.75
107.5	0.00	0.75	1.50	2.25	3.00	3.75	4.50	5.25	6.00	6.75	7.51	7.51
108.3	0.00	0.83	1.65	2.48	3.30	4.13	4.95	5.78	6.60	7.43	8.26	8.26
109.0	0.00	0.90	1.80	2.70	3.60	4.50	5.40	6.30	7.20	8.11	9.01	9.01
109.8	0.00	0.98	1.95	2.93	3.90	4.88	5.85	6.83	7.81	8.78	9.76	9.76
110.5	0.00	1.05	2.10	3.15	4.20	5.25	6.30	7.35	8.41	9.46	10.51	10.51
111.3	0.00	1.13	2.25	3.38	4.50	5.63	6.75	7.88	9.01	10.13	11.26	11.26
112.0	0.00	1.20	2.40	3.60	4.80	6.00	7.20	8.41	9.61	10.81	12.01	12.01
112.8	0.00	1.28	2.55	3.83	5.10	6.38	7.66	8.93	10.21	11.48	12.76	12.76
113.5	0.00	1.35	2.70	4.05	5.40	6.75	8.11	9.46	10.81	12.16	13.51	13.51
114.3	0.00	1.43	2.85	4.28	5.70	7.13	8.56	9.98	11.41	12.83	14.26	14.26
115.0	0.00	1.50	3.00	4.50	6.00	7.50	9.00	10.50	12.00	13.50	15.00	15.00

PA 295 Investment Capitalization

- A regulated provider may request to capitalize all energy efficiency equipment, materials, and installation costs with an expected economic life greater than 1 year including costs that are paid to third parties, such as customer rebates and customer incentives
- The provider shall also propose depreciation treatment with respect to its capitalized costs
- A provider shall not capitalize payments made to a state-wide EO administrator

PA 295 Decoupling

- A natural gas provider that spends more than 0.5% of retail sales revenues per year on EO programs may have a symmetrical revenue decoupling true-up mechanism
- Decoupling for electric utilities is not mentioned in the act

Pilot Decoupling for Electric

- Key Principles:

- Decoupling is to remove the disincentive to encourage efficiency (sell more vs sell less vs indifferent)
- Decoupling is not to allow revenue adjustments for other items beyond efficiency, ie load loss, economy, etc.
- Decoupling needs to be tied to a serious commitment to helping customers use energy wisely and less

CE's Decoupling Mechanism

- CE proposed actual sales to the estimate used in the rate case; staff proposed one that tracked revenue lost due to EO; CE filed revised version using average use per customer
- MPSC found that decoupling should further the policy of customers' being energy efficient & reduce the disincentive to utilities
- CE must meet reporting requirements, exceed the PA 295 benchmarks, enhance EE & DS resources & surpass minimum reliability standards
- Reconciliation will compare actual sales per customer to estimate in rate case, difference \times non-fuel revenue per kWh, then \times the number of customers estimate in rate case

DE's Decoupling Mechanism

- DE proposed a mechanism that addressed all sales losses; staff proposed one that tracked revenue lost due to EO
- MPSC found decoupling should remove the disincentive of customers' energy efficiency, including actions outside of EO such as updated building codes
- DE must meet reporting requirements, exceed the benchmarks of PA 295 & commit to enhance its energy efficiency & demand resources
- Actual use per customer will be compared to the estimate in the rate case, then difference X the non-fuel revenue per kWh, then X the number of customers in the reconciliation period

Optimizing Energy Optimization

- Incentives/Disincentives for customers
 - Good mix of programs, including non-utility options
 - Correct \$ incentives
 - Proper rate structure

EO Plan Programs

- Utilities are offering all customers many ways to lower energy use:
 - Educational meetings and materials
 - Low cost/no cost CFL bulbs
 - Energy Star appliance rebates
 - Appliance recycling programs
 - Home energy audits
 - Weatherization programs
 - Multi-family rental property measures
 - Low income outreach
- More than 400,000 households have participated in the second half of 2009

EO Plan Costs

- ❑ Customers will pay in proportion to their class' program costs
- ❑ Low income customers will receive specialized programs that all customers will pay
- ❑ Average impact on residential customer bills:
 - ❑ Consumers Energy- \$1.72 per month gas, 71¢ per month electric
 - ❑ Detroit Edison/MichCon- \$1.12 per month gas, 64¢ per month electric

Self-Directed EO Programs

- Under PA 295, largest customers eligible
- Must have multi-year plan & report savings every two years
- Energy Optimization Service Companies (EOSCs) will manage plans for customers with < than 2MW per location or 10MW in aggregate
- Exempt from utility's EO charge (except for low income & evaluation)

Getting the Signals & Tariffs Right

- Example: LED technologies are being used in street lighting, area lighting and traffic signals
 - Tariffs for unmetered service are often based on the wattage of the type of light
 - No tariff exists for unmetered LED
 - Customers on these tariffs will not see the benefit of installing LED lights
- MPSC issued an order requiring utilities to submit new tariffs that will reflect the energy saving potential of LED

Michigan Saves

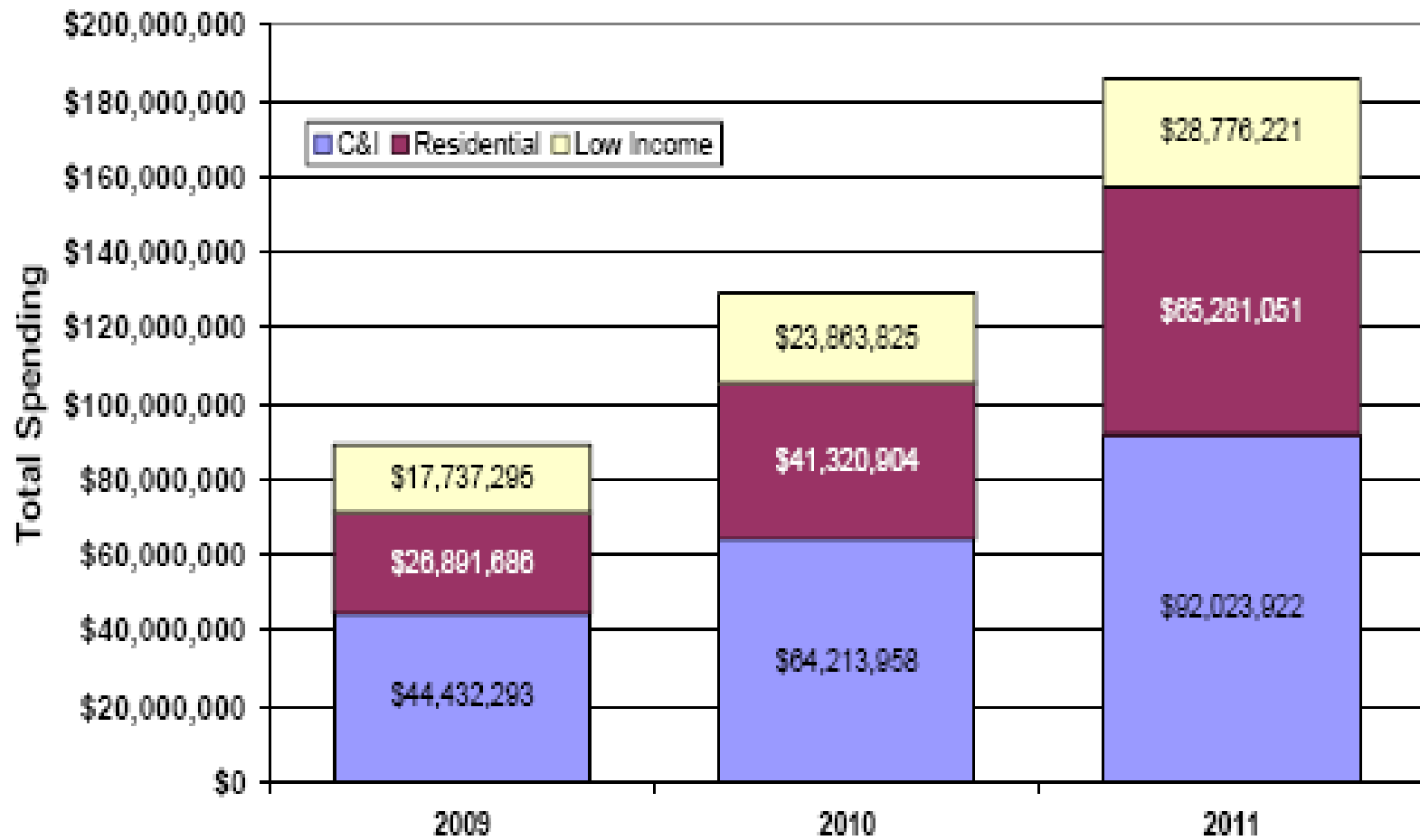
- Michigan Saves will finance the installation of energy efficiency measures & renewable energy systems with no upfront cost to the customer; money will be paid back over time using utility bill savings
- Available to businesses, local governments, schools and residents
- Public Sector Consultants & Delta Institute were awarded a grant by MPSC to design and implement Michigan Saves, including setting up an initial capital pool
- Pilots will begin in the first half of 2010

Optimizing Energy Optimization

- Incentives/Disincentives for utilities
- Incentives/Disincentives for customers

- Oversight by regulator
 - Reconciliations
 - Evaluation

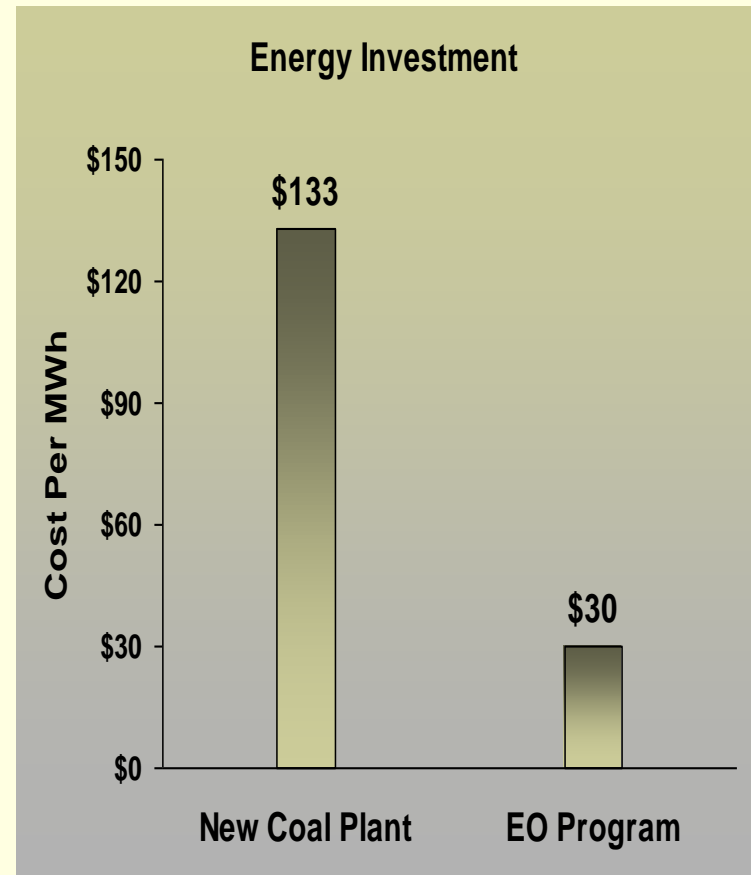
Electric & Gas Program Costs



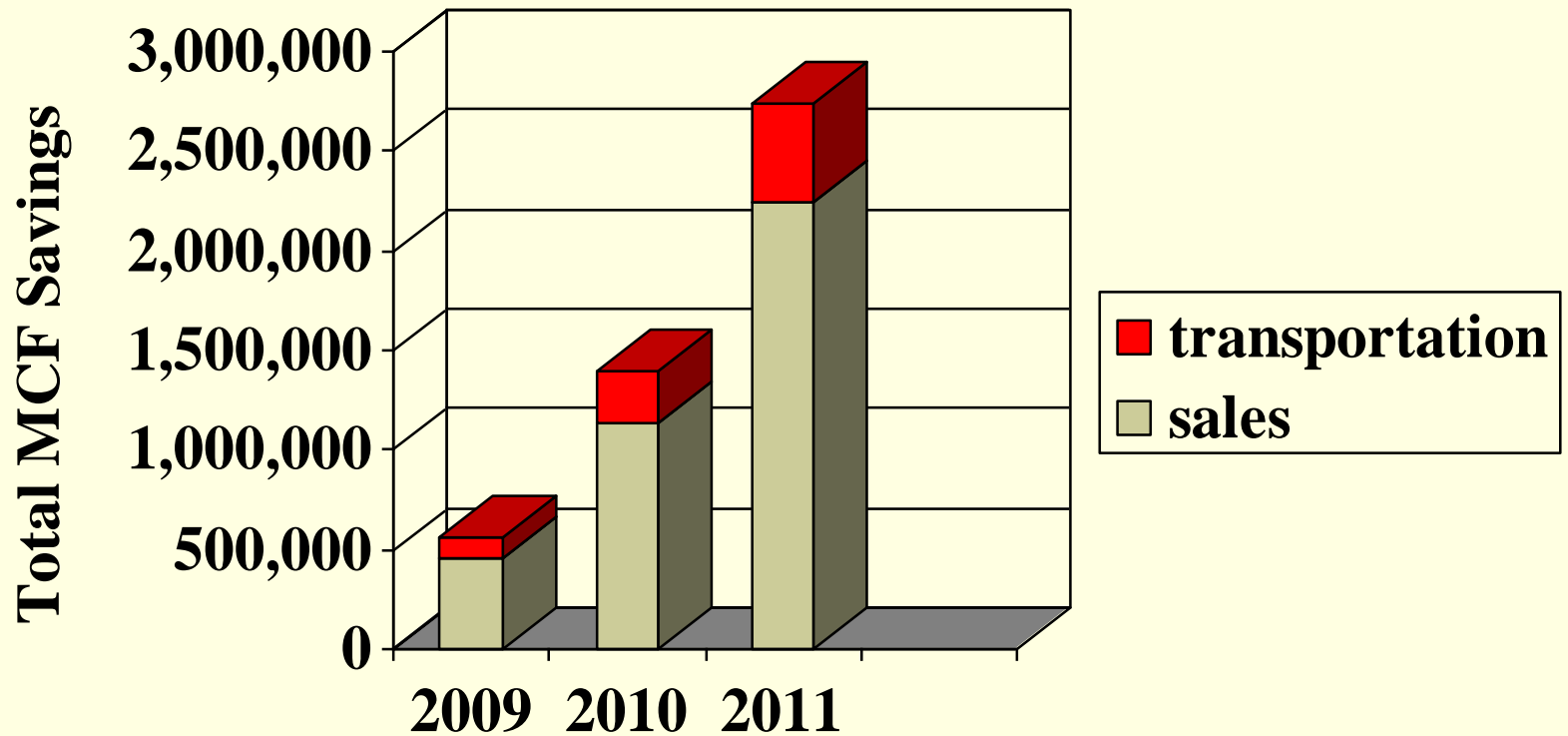
Energy Efficiency Impact

An investment in MI's energy future

- The levelized cost of a new super-critical coal-fired power plant is \$133 per MWh.
- The levelized cost of energy efficiency program savings is \$30 per MWh.



Gas Savings



Electric Savings

