



**Residential, Commercial, and Industrial (RCI)
Technical Working Group**

Option No.	GHG Reduction Policy Option Name	GHG Reductions (MMtCO ₂ e)			Net Present Value (Million \$)	Cost-Effectiveness (\$/tCO ₂ e)	Level of Support
		2015	2025	Total (2008–2025)			
RCI-1	Maximize Savings from the Utility Conservation Improvement Program (CIP)						
RCI-1	1.5% savings level	6.0	14.7	133.8	-\$8,449	-\$63.2	Approved
RCI-1b	2.0% savings level	<i>Not quantified</i>					

The RCI TWG recommendations are in **bold** in the table above

RCI-1. Maximize Savings From the Utility Conservation Improvement Program (CIP)

Policy Description

Senate File 145 establishes an energy policy goal for the State of Minnesota to achieve annual savings equal to 1.5% of annual retail energy sales of electricity and natural gas. At least 1% of these sales should come directly through energy conservation improvement programs and rate design. The additional 0.5% of savings can come indirectly through energy codes and appliance efficiency standards, programs designed to transform the market or change consumer behavior, energy savings resulting from efficiency improvements to the utility infrastructure and system, and other activities to promote energy efficiency and energy conservation. These savings are based on the average of the last 3 years of sales for the utility.

The MCCAG recommends that the Department of Commerce work closely with the affected utilities and other parties to develop strategies and programs to achieve the increased energy savings goals in the new law. Much work is needed to support this achievement. Such strategies and programs should include:

- Development and implementation of a state policy of “decoupling”, or separation of utility sales from revenues,
- Development by utilities of a standardized portfolio of energy efficiency programs and program rebates that are designed to (1) overcome market barriers, such as lack of consumer knowledge of products and costs and (2) to capture overall system efficiencies - not just equipment efficiencies. For example, finding ways that the operation of entire class o equipment or entire systems can be made more efficient.
- Utilities should collaborate in joint efforts to achieve market transformation, to conduct market and product research and to change consumer behavior. For example, the utilities should act to stimulate industry-wide efficiency changes and energy savings in products that consume electricity.
- The Department of Commerce should develop a standardized method for evaluating the success of utility programs.
- The state should seek to remove disincentives or regulations that inhibit energy efficiency.

At its December meeting, the MCCAG asked the RCI TWG to consider a level of electric and natural gas utility energy conservation higher than the 1.5% annual energy savings goal in the recently passed 2007 legislation (see RCI-1). In addition, the RCI TWG notes that the Midwest Governor’s Association, on November 15, 2007, at its Midwest Energy Summit agreed upon a region-wide goal for energy efficiency savings as follows:

“Meet at least 2 percent of regional annual retail sales of natural gas and electricity through energy efficiency improvements by 2015, and continue to achieve an additional 2 percent in efficiency improvements every year thereafter.”

Achieving annual energy efficiency savings equal to 2% of annual retail energy sales of electricity and natural gas by 2015 in Minnesota is a desirable goal. However, the technical feasibility and cost-effectiveness of achieving a higher energy savings level than the current 1.5% Minnesota goal is uncertain for electric and natural gas utilities.

Therefore, the MCCAG recommends that the State immediately undertake a study of the technical feasibility and cost-effectiveness of achieving a 2 percent energy efficiency savings goal for electric and natural gas utilities by the year 2015, and adopt such a goal if the study provides assurance that the goal can be reasonably achieved. Such a study should be undertaken by an independent organization and should include input from relevant state agencies, electric and natural gas utilities, and other interested parties.

Policy Design

Goals: As noted above

Timing: The Department of Commerce program will begin June 1, 2008 with the exception of Xcel. The Department of Commerce will report back to the Legislature on CIP goals by 2010.

Parties Involved: The residential, commercial and industrial sectors are covered by the program

Other: Not applicable

Implementation Mechanisms

As noted above.

Related Policies/Programs in Place

Minnesota natural gas and electric utilities existing CIP programs.

Type(s) of GHG Reductions

Reductions from avoided fossil-fuel electricity generation and natural gas consumption as a result of energy conservation programs

Estimated GHG Reductions and Net Costs or Cost Savings

Data Sources: The following sources were used in the analysis

- Office of the Legislative Auditor, State of Minnesota, 2005, "Evaluation Report: Energy Conservation Improvement Program."
- Spreadsheet attachment in an email from Peter Ciborowski to Bill Dougherty dated October 26, 2007.
- Minnesota Legislation regarding the Conservation Improvement Program, 2007.

Quantification Methods: See Annex 1.

Key Assumptions: See Annex 2.

Key Uncertainties

Projected Sales, program costs

Additional Benefits and Costs

Reduced air pollution

Feasibility Issues

As noted above.

Status of Group Approval

Approved

Level of Group Support

Approved

Barriers to Consensus

None

Annex 2. Key Assumptions

RCI-1: Maximize Savings From the Utility Conservation Improvement Program (CIP)

Assumed start year for the new CIP legislation

2008

Total annual level of savings in electricity sales associated with new CIP legislation (%/yr)

1.5% source: MN legislation; see 216B.241 ENERGY CONSERVATION IMPROVEMENT

Current estimates of accumulated embedded energy efficiency and conservation in 2003 based on the previous CIP legislation (i.e., savings from previous CIP activities as a percentage of total sales):

2

1	0.8%	source: Office of the Legislative Auditor, State of Minnesota, 2005, "Evaluation Report: Energy Conservation Improvement Program", January, page 5
2	0.5%	source: RCI TWG estimate as proposed during the TWG meeting held on 23 October 2007 (default)
3	0.4%	source: spreadsheet attachment in an email from Peter Ciborowski to Bill Dougherty dated 26 October 2007

2003 expenditures in MN for demand side electricity savings associated with the previous CIP statute

\$52	2003 expenditures by regulated utilities (million \$)
325	2003 savings from utility expenditures (GWh)

Financial parameters

2.5%	projected inflation rate (2003-2005)
5%	real discount rate (%)
10	Levelization period (years)

Marginal resource associated with electricity savings

1

1	coal & natural gas, prorata (default)
2	100% coal
3	system average

Starting 2005 assumption for the full levelized cost-program costs, utility costs, and participant cost-of electric energy efficiency improvements

1

1	Value is	30	2005\$/MWh
2	Value is user-defined		

Adjustment in 2005 assumption for the full levelized cost-program costs, utility costs, and participant cost-of electric energy efficiency improvements to account for aggressiveness of new MN CIP

1

1	Value increases by 1%/year, or by	18%	on average over the planning period
2	User-defined		

Final 2005 assumption for the full levelized cost-program costs, utility costs, and participant cost-of electric energy efficiency improvements

35.5 2005\$/MWh

Estimated avoided costs, including the RES

156.5 2005\$/MWh