



## Catalog of State Actions Residential, Commercial, and Industrial (RCI) Technical Working Group

A catalog of state-level, GHG-reducing actions and policy options based on actions undertaken or considered by state, local and private actors.

### Key to Future Rankings of Options in the Tables that Follow:

Potential GHG Emission Reductions <u>1/</u>	Potential Cost or Cost Savings <u>1/ 2/</u>
<b>High (H):</b> At least 1.0 million metric tons (MMt) carbon dioxide equivalent (CO <sub>2</sub> e) per year by 2020	<b>High (H):</b> \$50 per metric ton CO <sub>2</sub> e (tCO <sub>2</sub> e) or above
<b>Medium (M):</b> From 0.1 to 1.0 MMtCO <sub>2</sub> e per year by 2020	<b>Medium (M):</b> \$5-50/tCO <sub>2</sub> e
<b>Low (L):</b> Less than 0.1 MMtCO <sub>2</sub> e per year by 2020, or 1 MMtCO <sub>2</sub> e by 2050	<b>Low (L):</b> Less than \$5/tCO <sub>2</sub> e
<b>Uncertain (U):</b> Not able to estimate at this time	<b>Negative (Neg):</b> Net cost savings
	<b>Uncertain (U):</b> Not able to estimate at this time
<p><u>1/</u> Several measures may overlap in terms of emissions reductions and/or cost impacts. Estimates assume measures would be implemented independently from other measures.</p> <p><u>2/</u> Costs are denoted by a positive number. Cost savings (i.e., “negative costs”) are denoted by a negative number.</p>	

#### Definition of “Priorities for Analysis”:

- **High:** High priority options will be analyzed first.
- **Medium:** Medium priority options will be analyzed next, time and resources permitting.
- **Low:** Low priority options will be analyzed last, time and resources permitting.

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes / Related Actions in MI
<b>RCI-1</b>	<b>ENERGY EFFICIENCY PROGRAMS, FUNDS, AND GOALS</b>					
1.1	Utility Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Electricity (including expansion of same)					
1.2	Demand-Side Management (DSM) Energy Efficiency Programs, Funds, or Goals for Natural Gas, Propane, and Fuel Oil					
1.3	Non-Utility Demand Side Management					
1.4	Energy Efficiency Funds (Public Benefits Charge)					
1.5	Regional Market Transformation Alliance					
1.6	Reduced Cost or Free residential Energy Audits					
1.7	Reduced Cost Energy Audits for Businesses					
1.8	Low-Cost Loans for Energy Efficiency Improvements					
1.9	Saving Energy, Saving Sales Tax					
1.10	Reduce Energy Use by 10% in State Owned Buildings					
<b>RCI-2</b>	<b>BUILDINGS</b>					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes / Related Actions in MI
2.1	Improved Building Codes for Energy Efficiency					
2.2	Training of Building Code and Other Officials in Energy Code Enforcement					
2.3	Improved Design and Construction in new and existing state and local government buildings, "Government Lead-by-example"					
2.4	Increased Use of Blended Cement (substituting fly ash or other pozzolans for clinker reduces CO <sub>2</sub> emissions)					
2.5	Support for Energy Efficient Communities Planning, "Smart Growth"					
2.6	Promotion and Incentives for Improved Design and Construction (e.g. LEED, green buildings) in the Private Sector					
2.7	Feebate Program to Encourage Energy Efficiency in Building Design					
2.8	Incentives for Retrofit of Existing Residential Buildings					

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2.9	Training and Education for Builders and Contractors (e.g. HVAC <sup>1</sup> sizing, duct sealing)					
2.10	Energy Management Training/Training of Building Operators					
<b>RCI-3</b>	<b>APPLIANCE STANDARDS</b>					
3.1	Expansion of State-level Appliance/Equipment Efficiency Standards					
3.2	Support for Federal-level Appliance Efficiency Standards					
3.3	Require high-Efficiency Appliances in New Construction and Retrofits					
<b>RCI-4</b>	<b>EDUCATION AND OUTREACH</b>					
4.1	Consumer Education Programs					
4.2	Energy Efficiency and Environmental Impacts Awareness in School Curricula					
4.3	Truth in Advertising Campaign					
4.4	In-Home Energy Displays					
4.5	Post-secondary Specialist Education and Certification for Building Energy Efficiency Experts and Related Trades					
4.6	Post-secondary College and					

<sup>1</sup> HVAC = Heating, Ventilation, and Air Conditioning

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	University Programs					
<b>RCI-5</b>	<b>PRICING AND PURCHASING</b>					
5.1	Green Power Purchasing for Consumers					
5.2	Net-metering for Distributed Generation and Combined Heat and Power					
5.3	Time of Use Rate					
5.4	Tiered Rates for Electricity and Natural Gas					
5.5	Bulk Purchasing Programs for Energy Efficiency or Other Equipment					
<b>RCI-6</b>	<b>CUSTOMER-SITED DISTRIBUTED ENERGY AND COMBINED HEAT AND POWER</b>					
6.1	Incentives to Promote Implementation of Renewable Energy Systems					
6.2	Incentives and Resources to Promote Combined Heat and Power (CHP, or “cogeneration”)					
6.3	Efficient Transformers on Customer Side of the Meter					
6.4	Incentives for Passive Solar Heating					
6.5	White Roofs, Rooftop Gardens and Landscaping (Including Shade Tree Program)					

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6.6	Focus on Specific End-Use Technologies					
6.7	Passive Solar Heating Design					
6.8	Passive Solar Water Heating					
6.9	Appliance Recycling/Pickup Programs					
<b>RCI-7</b>	<b>NON-ENERGY EMISSIONS (HFCS, PFCS, SF<sub>6</sub>, CO<sub>2</sub> PROCESS EMISSIONS)</b>					
7.1	Voluntary Industry-Government Partnerships					
7.2	Promotion and Funding for Leak Reduction/Capture of Process Gasses					
7.3	Promotion and Funding for Process Changes and Optimization					
7.4	Use of Alternative Gasses					
<b>RCI-8</b>	<b>GHG EMISSIONS-SPECIFIC GOALS AND POLICIES,</b>					
8.1	Support for Switching to Less Carbon-Intensive Fuels					
8.2	Industry-Specific Emissions Cap and Trade Program					
8.3	Negotiated Emissions or Energy Savings Agreements					
8.4	Local Government Program for Voluntary Emissions Targets by Businesses					

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8.5	Provide Tools and Information for Residents, Businesses and Communities to Perform GHG Inventories					
<b>RCI-9 OTHER</b>						
9.1	Government Agency Requirements and Goals					
9.2	Reduce Energy Use by 10% in State Owned Buildings					
9.3	State Building Carbon Neutral Requirement					
9.4	Municipal Energy Management					
9.5	Statewide Efforts to Retrofit Existing Buildings for Energy Efficiency					
9.6	Focus on Specific Market Segments					
9.7	Energy Efficiency Reinvestment Funds					
9.8	Industrial Audits					
9.9	Focus on Industrial Ecology / Byproduct Synergy					