

Estimate of Mitigation Option Costs and Benefits for Michigan Energy Supply GHG Analysis
GHG Emissions Totals for Michigan ES and RCI-6 and RCI-8

Date Last Modified: 10/21/2008 G. Powell

	Option Name	GHG Reductions (MMtCO ₂ e)		Cost-Eff (\$/tCO ₂ e)	NPV 2009-2025 (\$million)	Cumulative Emissions Reductions (MMt CO ₂ e, 2009-2025)
		2015	2025			
ES-1	Renewable Portfolio Standard	4.9	25.0	\$ 4.29	\$ 990	230.7
	Wind	3.9	18.9	\$ 0	\$ 14	178.5
	Solar Thermal	na	na	na	na	na
	Biomass	0.9	5.0	\$ 16	\$ 711	45.0
	Photovoltaic	0.0	0.7	\$ 49	\$ 230	4.7
	Geothermal	na	na	na	na	na
	Plasma gasification	0.0	0.5	\$ 15	\$ 35	2.4
ES-3	Energy Efficiency Portfolio Standard	<i>see RCI (EE-1)</i>				
ES-6	New Nuclear Power	0.0	6.4	\$ 2.23	\$ 86	38.7
ES-10	Co-Fired Coal Facility	0.2	0.2	\$ 1.8	\$ 6	3.3
ES-11	Power plant replacement, EE and repowering	4.6	6.4	\$ 8.1	\$ 622	76.9
ES-12	Distributed renewable energy incentives, barrier removal, and development issues including grid access	0.8	2.2	\$ 62.0	\$ 1,145	18.5
	Solar Hot Water	0.0	0.2	\$ 22.3	\$ 29	1.3
	Geothermal	0.1	0.3	\$ 34.1	\$ 70	2.0
	Wind (distributed)	0.2	0.6	\$ 90.6	\$ 463	5.1
	Solar PV (distributed)	0.1	0.3	\$ 204.2	\$ 588	2.9
	Biogas	0.4	1.1	\$ 7.2	\$ 66	9.2
ES-13	Combined Heat and Power (CHP) standards, incentives and/or barrier removal	0.4	0.8	\$ (66.27)	\$ (688.42)	10.4
	Total	11.6	43.5			629.6
RCI-6	Incentives to Promote Renewable Energy Systems Implementation	2.0	15.3	\$117	\$ 14,773	125.9
	Wind	1.4	10.0	\$76	\$ 6,420	84.6
	Solar Thermal	na	na	na	na	na
	Biomass	na	na	na	na	na
	Solar PV	0.6	5.3	\$202	\$ 8,353	41.3
	Geothermal	na	na	na	na	na
RCI-8	Net Metering for Distributed Generation	1.5	1.7	\$ 72.18	\$ 1,733	24.0
	Solar Hot Water	na	na	na	na	na
	Geothermal	na	na	na	na	na
	Wind (distributed)	0.4	0.5	\$ 97	\$ 691	7.1
	Solar PV (distributed)	0.3	0.3	\$ 228	\$ 916	4.0
	Biogas	0.8	0.9	\$ 10	\$ 126	12.9