

## Analysis of S.139, the Climate Stewardship Act of 2003

**Table 4.1. Household Appliances Targeted by Corporation Rebates (year 2010, except where noted)**

Appliance	Percent Increase in Efficiency Over Least Efficient Unit	Percent Increase in Price Without Rebate	Equipment Price Without Rebate (2001 dollars)	Rebate Amount (2001 dollars)
Air-Source Heat Pump 1 (2020-2025, cooling efficiency cited).....	16	11	3,881	191
Air-Source Heat Pump 2 (cooling efficiency cited).....	25	30	4,563	532
Air-Source Heat Pump 3 (cooling efficiency cited).....	50	60	5,600	1,050
Central AC 1 (2020-2025).....	16	10	2,540	120
Central AC 2.....	25	26	2,900	300
Central AC 3.....	50	52	3,500	600
Ground-Source Heat Pump (cooling efficiency cited).....	58	18	12,320	961
Gas Furnace 1.....	15	31	1,700	200
Gas Furnace 2.....	21	88	2,450	575
Gas or Distillate Boiler 1.....	11	24	3,065	293
Gas or Distillate Boiler 2.....	21	47	3,650	585
Distillate Furnace.....	9	46	1,900	300
Room AC 1 (2020-2025).....	14	10	595	27
Room AC 2.....	24	41	760	110
Clothes Washer (motor efficiency cited).....	27	10	850	40
Dishwasher 1 (motor efficiency cited).....	54	129	800	225
Dishwasher 2 (motor efficiency cited).....	104	271	1,300	475
Gas Water Heater.....	43	426	2,000	810
Electric Water Heater 1.....	6	10	550	25
Electric Water Heater 2.....	189	120	1,100	300
Distillate Water Heater.....	5	7	780	27
Refrigerator.....	16	58	950	175
Freezer.....	23	31	500	60

Source: Energy Information Administration, Office of Integrated Analysis and Forecasting, based on technology data from Arthur D. Little, Inc., EIA – Technology Updates – Residential and Commercial Building Technologies – Reference Case, October 2001.

**Table 4.2. Market Share for Selected Commercial Technologies in the Reference and S.139 Cases, 2010 and 2025 (percent)**

Technology	2010		2025	
	Reference	S.139	Reference	S.139
High-Efficiency Boiler Share of All Boilers .....	8	12	14	26
High-Efficiency Chiller Share of All Electric Chillers.....	3	4	5	15
Heat Pump Water Heater Share of Electric Water Heating Market.....	3	3	3	7
Compact Fluorescent Share of Incandescent-Style Lighting Market .....	66	68	77	96
Reflectors, Lighting Controls, and Advanced Technology Share of 4 Foot Fluorescent Lighting Market.....	14	15	19	48

Source: Energy Information Administration, Office of Integrated Analysis and Forecasting, National Energy Modeling System runs MLBASE.D050303A and MLBILL.D050503A.

**Table 4.3. Industrial Sectors**

Industry	NAICS Codes
<b>Energy-Intensive Manufacturing</b>	
Food .....	311
Pulp and Paper .....	322
Bulk Chemicals .....	32B
Glass .....	3272
Cement .....	32731
Steel .....	331111
Aluminum.....	3313
<b>Non-Energy-Intensive Manufacturing</b>	
Metal-Based Durables .....	332-336
Balance of Manufacturing .....	All remaining manufacturing NAICS
<b>Nonmanufacturing</b>	
Agriculture.....	111-115
Coal Mining.....	2121
Oil and Gas Extraction.....	211
Other Mining .....	2122-2123
Construction.....	233-235

NAICS: North American Industry Classification System.

Note: 32B includes 325110, 325120, 325181, 325188, 325192, 325199, 325211, 325212, 325222, 325311, and 325312.

Source: Energy Information Administration, *Industrial Sector Demand Module of the National Energy Modeling System, Model Documentation 2003*, DOE/EIA-MO64(2003) (January 2003), web site [http://tonto.eia.doe.gov/FTP/ROOT/modeldoc/m064\(2003\).pdf](http://tonto.eia.doe.gov/FTP/ROOT/modeldoc/m064(2003).pdf).

**Table 4.4. Estimated Emissions and Facility Coverage Under S.139**

NAICS Code	Manufacturing Sector	Total Number of Establishments	Total Annual CO <sub>2</sub> Emissions (million metric tons CO <sub>2</sub> equivalent)	Number of Establishments Covered	Percentage of Sector's CO <sub>2</sub> Emissions Covered
311	Food	26,302	46.1	1,353	51.8
322	Paper	5,868	66.1	457	81.1
324110	Petroleum Refineries	244	168.0	227	100.0
32B	Bulk Chemicals	2,935	226.7	1,605	97.9
3272	Glass	2,269	8.7	300	94.6
327310	Cement	279	25.8	279	100.0
331111	Steel	279	98.3	181	99.9
3313	Aluminum	400	11.7	211	95.2
332 - 336	Metal Based Durables	130,235	42.4	501	29.2
31-33 nec <sup>a</sup>	Balance of Manufacturing	194,018	94.1	1,843	38.0
	<b>Manufacturing Total</b>	<b>362,829</b>	<b>787.9</b>	<b>6,957</b>	<b>83.6</b>

<sup>a</sup>nec=not elsewhere classified.

Sources: Energy Information Administration (EIA), *1998 Manufacturing Energy Consumption Survey*, <http://www.eia.doe.gov/emeu/mecs/MECS98/datatables/contents.html>; Energy Information Administration, *Annual Energy Outlook 2003*, DOE/EIA0383(2002) (Washington, DC, January 2003); and U.S. Census Bureau, *1997 Economic Census – Manufacturing*, EC97M31S-GS, U.S. Department of Commerce, Economics and Statistics Administration (Washington, DC, 2001).