

# North Carolina

## Community Greenhouse Gas Emissions Reductions in 2010

### Target Year Measures Detailed Report

	Equiv CO <sub>2</sub> (tons)	Equiv CO <sub>2</sub> (%)	Energy (million BTU)	Energy Cost Savings (\$)
<b>Residential Sector</b>				
<i>Proposed - Energy Efficiency: Appliances and Equipment</i>				
Lighting Efficiency	364,450	0.3	1,970,000	49,250,000
Appliance Efficiency	281,200	0.3	1,520,000	38,000,000
HVAC Efficiency (part 1)	548,420	0.5	3,700,000	71,440,000
HVAC Efficiency (part 2)	159,850	0.2	2,040,000	15,750,000
Duct Sealing and Insulation	124,610	0.1	1,590,000	12,270,000
New Construction (Part 1)	12,766,410	12.0	77,310,000	1,695,045,000
New Buildings: Part 2	1,541,040	1.5	19,729,995	153,680,000
Water heating measures	570,570	0.5	3,990,000	73,815,000
Water heating measures	21,700	0.0	310,000	3,100,000
Solar water heating (part 1)	113,980	0.1	800,000	14,735,000
Solar water heating (part 2)	5,600	0.0	80,000	720,000
Solar Space Heating (2%)	58,210	0.1	410,000	7,520,000
Solar space heating (part 2)	21,210	0.0	270,000	2,070,000
<i>Proposed - Energy Efficiency: Buildings</i>				
Attic Insulation -- Existing/	1,563,420	1.5	10,140,000	197,480,000
Attic Insulation -- Existing/	367,460	0.3	4,689,999	36,220,000
Retrofit Wall and Floor	1,421,030	1.3	9,670,000	184,810,000
Retrofit Wall and Floor	433,300	0.4	5,529,999	42,700,000
Retrofit Windows: Storms	1,681,300	1.6	10,280,000	222,875,000
Retrofit Windows: Storms	260,120	0.2	3,319,999	25,640,000
Duct Sealing and Insulation	421,410	0.4	2,850,000	54,870,000
<b>Subtotal Residential</b>	<b>22,725,289</b>	<b>21.4</b>	<b>160,199,990</b>	<b>2,901,990,000</b>
<b>Commercial Sector</b>				
<i>Proposed - Change in Energy Source</i>				
Electric-Gas Fuel Switching	327,650	0.3	-1,430,000	56,820,000
Electric-Gas Fuel Switch for	75,320	0.1	-560,000	13,840,000
<i>Proposed - Energy Efficiency: Buildings</i>				
Envelope Upgrades Part 2 of	145,302	0.1	1,824,000	11,415,746
New Buildings -- Upgrades -	2,653,960	2.5	17,288,000	363,088,000
New Buildings -- Upgrades -	166,022	0.2	2,098,000	13,537,340
<i>Proposed - Energy Efficiency: Equipment and Lighting</i>				
Envelope Upgrades Part 1 of	1,239,035	1.2	9,289,000	165,414,000

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Lighting Upgrades	401,080	0.4	2,168,000	56,368,000
HVAC Measures Package -	207,329	0.2	1,513,000	27,818,000
HVAC Measures Package -	21,831	0.0	274,000	1,712,120
Hot Water Heating Package	62,375	0.1	487,000	8,262,000
Hot Water Heating Package	3,793	0.0	49,000	347,990
Appliance Efficiency	22,295	0.0	123,000	3,118,000
Solar Water and Space	46,357	0.0	365,000	6,130,000
Solar Water and Space	4,023	0.0	51,200	341,182
Office Equipment Efficiency	27,861	0.0	150,600	3,915,600
<b>Subtotal Commercial</b>	<b>5,404,233</b>	<b>5.1</b>	<b>33,689,799</b>	<b>732,127,978</b>
<b>Industrial Sector</b>				
<i>Proposed - Change in Energy Source</i>				
Switch Coal to Natural Gas	642,840	0.6	0	-51,135,000
<i>Proposed - Energy Efficiency: Equipment and Lighting</i>				
Modernized Mfg Processes	1,673,001	1.6	13,662,000	138,404,970
Modernized Mfg Processes	605,799	0.6	7,479,000	39,244,500
Modernized Mfg Processes	295,654	0.3	3,190,498	12,971,243
New Machine Technology	1,673,001	1.6	13,662,000	138,404,970
Automation - Part 1 of 3	1,115,334	1.1	9,108,000	92,269,980
Renewables - Part 1 of 3	743,556	0.7	6,072,000	61,513,320
New Machine Technology -	1,211,598	1.1	14,958,000	78,489,000
New Machine Technology -	295,654	0.3	3,190,499	12,971,250
Automation - Part 2 of 3	403,866	0.4	4,986,000	26,163,000
Automation - Part 3 of 3	197,103	0.2	2,126,999	8,647,500
Renewables - Part 2 of 3	269,244	0.3	3,324,000	17,442,000
Renewables - Part 3 of 3	131,402	0.1	1,418,000	5,765,000
Energy Efficiency - Part 1 of	4,833,114	4.6	39,468,000	399,836,580
Energy Efficiency - Part 2 of	1,750,086	1.7	21,606,000	113,373,000
Energy Efficiency - Part 3 of	854,113	0.8	9,216,997	37,472,500
<b>Subtotal Industrial</b>	<b>16,695,366</b>	<b>15.7</b>	<b>153,467,993</b>	<b>1,131,833,813</b>
<b>Transportation Sector</b>				
<i>Proposed - Car/Van Pooling</i>				
Metropolitan Van Pooling	28,061	0.0	355,208	0
<i>Proposed - Increase in Fuel Efficiency</i>				

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Speed Limits	390,444	0.4	4,942,330	46,655,596
CAFE Standards	273,099	0.3	3,456,955	32,633,651
<i>Proposed - Other VMT Reduction</i>				
Per Capita VMT Target	4,079,018	3.8	51,633,143	487,416,866
Road Pricing Strategy	48,239	0.0	610,625	5,764,300
VMT Fees	3,755,117	3.5	47,533,125	448,712,700
Fuel Tax	3,755,117	3.5	47,533,125	448,712,700
VMT-Based Land Use	28,061	0.0	355,197	3,353,059
<i>Proposed - Switch to Public Transport</i>				
	27,427	0.0	348,792	0
<b>Subtotal Transportation</b>	<b>12,384,584</b>	<b>11.7</b>	<b>156,768,499</b>	<b>1,473,248,871</b>

### Waste Sector

<i>Existing - Waste Recycling</i>				
Existing Plastics Recycling	169,499	0.2		0
Existing Glass Recycling	70,764	0.1		0
Existing Paper Recycling	2,474,057	2.3		0
Steel Cans - Recycling	146,199	0.1		0
Aluminum Recycling -	741,137	0.7		0
<i>Proposed - Methane Recovery</i>				
Installation of Methane	7,000,000	6.6		0
<i>Proposed - Waste Recycling</i>				
Proposed Increase in Paper	4,513,958	4.3		0
Proposed Increase in	549,203	0.5		0
Proposed Glass Recycling	69,655	0.1		0
Aluminum - Program	370,569	0.3		0
<i>Proposed - Waste Reduction</i>				
Proposed Paper Reduction	4,820,899	4.5		0
Proposed Plastics	920,920	0.9		0
Proposed Glass Reduction	125,915	0.1		0
Aluminum - New and	285,031	0.3		0
<b>Subtotal Waste</b>	<b>22,257,806</b>	<b>21.0</b>		<b>0</b>

### Other Sector

#### *Absolute Emissions Reduction*

Agriculture - Methane	86,610	0.1		
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Agriculture - Fuel switching	113,000	0.1		
Electricity Utility Supply	21,390,000	20.2		
Forestry Carbon Sink	4,950,000	4.7		
<b>Subtotal Other</b>	<b>26,539,610</b>	<b>25.0</b>		
<b>Total</b>	<b>106,006,887</b>	<b>100.0</b>	<b>504,126,282</b>	<b>6,239,200,662</b>