



# Department of Environmental Protection

## New Jersey Greenhouse Gas Inventory and Reference Case Projections 1990-2020 (2008 Edition)

**Table 1. Historical and Reference Case GHG Emissions (100-year GWP)**

Values are in million metric tons CO<sub>2</sub>e.

SECTOR	1990	2000	2005	2010	2020	Notes
<b>ENERGY</b>	<b>111.9</b>	<b>118.4</b>	<b>130.4</b>	<b>131.2</b>	<b>145.1</b>	
<b>Electricity</b>						
<b>Electricity, Production-Based</b>	<b>12.4</b>	<b>20.2</b>	<b>20.3</b>	<b>17.9</b>	<b>31.7</b>	
Coal	6.9	10.7	9.6	12.4	15.6	*1
Natural Gas	3.6	7.4	8.3	4.1	13.4	
Oil	1.7	0.9	1.1	0.0	0.0	
Wood (CH <sub>4</sub> and N <sub>2</sub> O)	0.01	0.03	0.0	0.0	0.0	
Refuse and biomass	0.2	1.3	1.3	1.4	2.7	*2
Net Imported Electricity	14.1	7.3	13.1	18.8	10.9	
<b>Electricity, Consumption-Based</b>	<b>26.5</b>	<b>27.5</b>	<b>33.4</b>	<b>36.7</b>	<b>42.6</b>	
<b>Residential/Commercial/Industrial</b>	<b>46.3</b>	<b>43.4</b>	<b>45.1</b>	<b>39.4</b>	<b>41.4</b>	
Coal	0.7	0.033	0.029	0.029	0.030	*3
Natural Gas	20.5	25.6	26.2	22.9	26.0	*4
Oil	25.0	17.7	18.8	16.4	15.3	*3*4
Wood (CH <sub>4</sub> and N <sub>2</sub> O)	0.14	0.09	0.08	0.08	0.08	*3
<b>Transportation</b>	<b>36.6</b>	<b>45.2</b>	<b>49.5</b>	<b>52.7</b>	<b>58.6</b>	
On-Road Gasoline	29.8	35.6	38.9	41.1	44.3	*5
On-Road Diesel	4.22	6.76	7.63	8.54	11.0	*5
Marine Vessel	1.01	1.35	1.48	1.56	1.79	
Rail, Natural Gas, LPG, other	0.63	0.48	0.48	0.51	0.55	*5
Jet Fuel and Aviation Gasoline	1.00	1.00	1.00	1.00	1.00	*6
<b>Fossil Fuel Industry</b>	<b>2.5</b>	<b>2.2</b>	<b>2.4</b>	<b>2.5</b>	<b>2.6</b>	
Natural Gas Industry	2.45	2.23	2.40	2.45	2.55	

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<b>Industrial Processes</b>	<b>1.3</b>	<b>2.9</b>	<b>4.0</b>	<b>5.5</b>	<b>8.6</b>	
Nitric Acid Production	0.203	0.001	0.001	0.001	0.001	*7
Limestone and Dolomite Use (CO <sub>2</sub> )	0.000	0.003	0.005	0.005	0.004	*7
Soda Ash (CO <sub>2</sub> )	0.08	0.08	0.08	0.08	0.08	*8
ODS Substitutes (HFC, PFC)	0.01	2.41	3.59	5.16	8.37	*9
Electric Power T&D (SF <sub>6</sub> )	0.63	0.40	0.40	0.21	0.12	*10
Semiconductor Manufacturing (HFC, PFC, SF <sub>6</sub> )	0.01	0.03	0.03	0.02	0.01	*10
Laboratory use of SF <sub>6</sub>	0.33	0.02	0.02	0.02	0.02	*11
<b>Waste Management</b>	<b>15.9</b>	<b>7.8</b>	<b>5.9</b>	<b>5.1</b>	<b>4.6</b>	
Waste Combustion	0.0	0.0	0.0	0.0	0.0	*12
Landfills	15.4	7.3	5.4	4.5	4.0	*13
POTWs	0.45	0.52	0.54	0.57	0.64	*14
<b>Agriculture</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	
Enteric Fermentation	0.13	0.09	0.08	0.07	0.06	
Manure Management	0.04	0.03	0.03	0.03	0.02	
Agriculture Soils	0.45	0.43	0.39	0.39	0.35	
Released through Land Clearing	1.1	1.1	1.1	1.1	1.1	*15
<b>TOTAL GROSS EMISSIONS</b>	<b>130.8</b>	<b>130.8</b>	<b>142.1</b>	<b>143.4</b>	<b>159.9</b>	
<b>Sequestered</b>	<b>-7.5</b>	<b>-7.0</b>	<b>-6.7</b>	<b>-6.5</b>	<b>-5.9</b>	*15
<b>TOTAL NET EMISSIONS</b>	<b>123.2</b>	<b>123.8</b>	<b>135.3</b>	<b>136.9</b>	<b>154.0</b>	
<b>Increase in net emissions relative to 1990</b>		<1%	10%	11%	25%	

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#### **Notes:**

- \*All numbers are estimates; 1990 and 200 values are believed accurate to within 5%; projections are much less certain.
  - \*1 All electricity values based on NJBPU projections, see assumptions in Appendix A.
  - \*2 Under review; subject to revision
  - \*3 Based on USDOE data
  - \*4 Based on NJBPU projections
  - \*5 Based on USDOE regional projections
  - \*6 Estimated in-state portion of emissions only
  - \*7 Based on State's modeling forecast of manufacturing employment for 2006-2020
  - \*8 Based on 2004 and 2009 projections for U.S. production
  - \*9 EPA 2004 ODS cost study report
  - \*10 Based on national projections (USEPA)
  - \*11 Assumed no change from 2005 levels.
  - \*12 Captured under electricity production sector.
  - \*13 Includes waste landfilled out of state
  - \*14 Projections based on historical 1990 to 2005 average annual growth rate.
  - \*15 Based on NJDEP methodology; See Appendix H
- MSW - municipal solid waste  
SF<sub>6</sub> - sulfur hexafluoride  
T&D - transmission and distribution  
MMT - million metric tons  
POTW - Publicly Owned Treatment Works  
CO<sub>2e</sub> - carbon dioxide equivalent

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