

Japan's National Greenhouse Gas Emissions in Fiscal Year 2008 (The Preliminary Figures) <Executive Summary>

Concerning the estimation of the preliminary figures: The estimation of the final figures of greenhouse gas emissions is based on annual data from a variety of statistics; however, some of these data were not yet available, while the preliminary figures were being estimated. For those data, whose FY 2008 values were not available, the FY 2007 values were used. Therefore, there may be some errors in the preliminary figures reported here compared to the final figures to be reported in April 2010.

- Japan's total greenhouse gas emissions in FY 2008 were 1,286 million tons of carbon dioxide equivalents.
- Total emissions increased by 1.9 % compared to those of the base year under the Kyoto Protocol (FY 1990 for CO₂, CH₄, N₂O and calendar year (CY) 1995 for HFCs, PFCs, SF₆) as a result of increased energy-origin CO₂ emissions within sectors such as the Commercial and Other sector and the Residential sector.
- Total emissions decreased by 6.2% compared to the previous year as a result of decreased energy-origin CO₂ emissions within all the sectors including the Industries sector.

(Reference)

- The primary reason for the emission reduction in FY 2008 as compared to FY 2007 was the drop in energy demand within all the sectors including the Industries sector as the result of the severe economic recession induced by the financial crisis in the second half of FY 2008.
- If the equipment utilization rate for nuclear power plants in FY 2008 was at the same level as prior to their long-term shutdown (i.e., at the level of FY 1998), the total emissions in FY 2008 would be 3.1% lower than those of the base year.

Japan's Greenhouse Gas Emissions

Japan's greenhouse gas emissions in FY 2008 were +1.9% over the base year and -6.2% below the previous year.
 (If the equipment utilization rate for nuclear power plants was 84.2, -3.1% below the base year.)

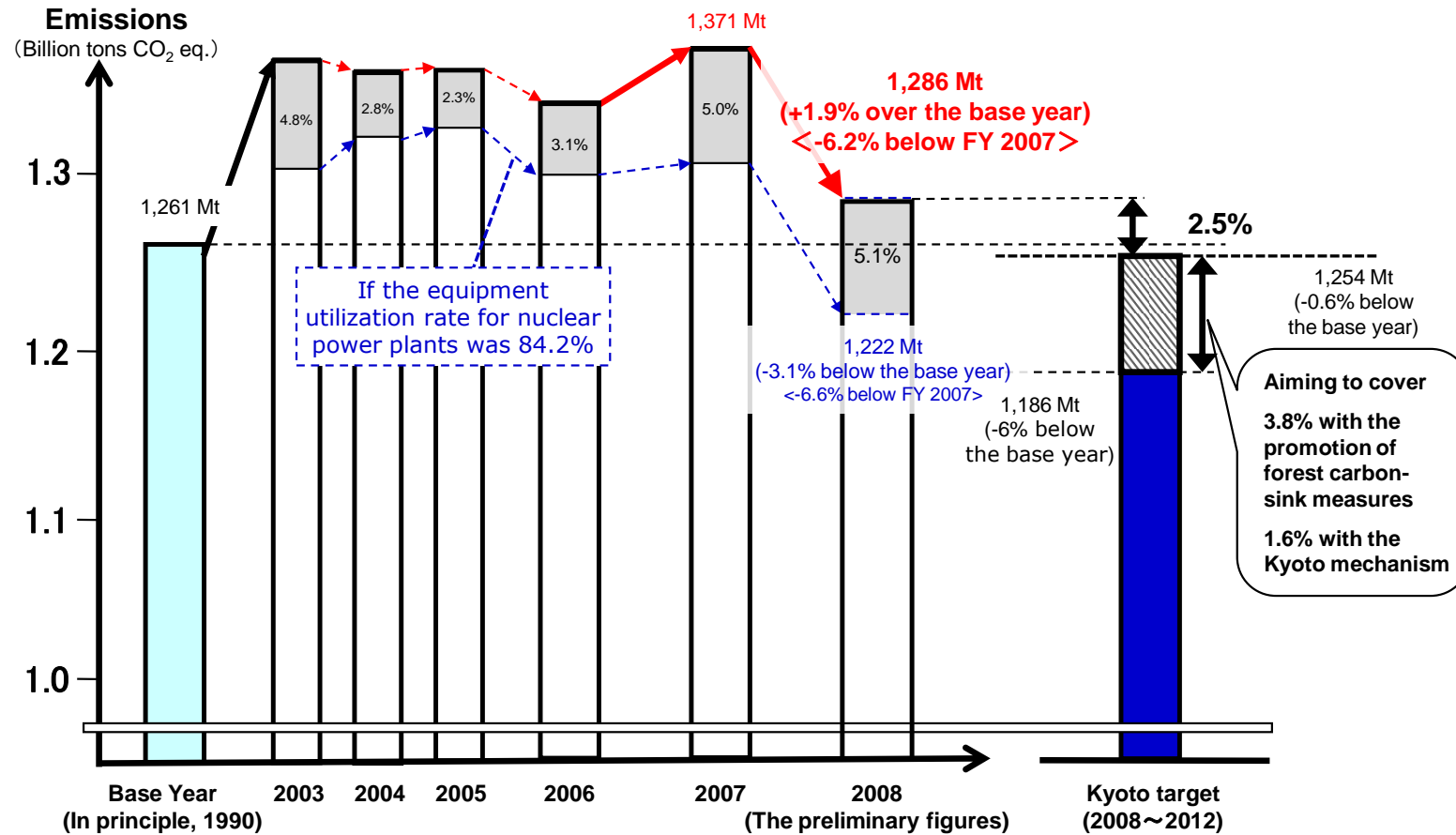


Figure 1 Japan's national greenhouse gas emissions

Table 1 Japan's national greenhouse gas emissions

	Base year under Kyoto Protocol [Share]	FY2007 (Compared to base year)	Changes from FY2007	FY2008 (Compared to base year)
Total	1,261 [100%]	1,371 (+8.7%)	→ <-6.2%> →	1,286 (+1.9%)
Carbon Dioxide (CO₂)	1,144 [90.7%]	1,301 (+13.7%)	→ <-6.5%> →	1,216 (+6.3%)
Energy-origin Carbon Dioxide	1,059 [84.0%]	1,219 (+15.1%)	→ <-6.7%> →	1,138 (+7.4%)
Non-Energy origin Carbon Dioxide	85.1 [6.7%]	81.8 (-3.8%)	→ <-3.9%> →	78.7 (-7.5%)
Methane (CH₄)	33.4 [2.6%]	22.4 (-33.0%)	→ <-2.1%> →	21.9 (-34.4%)
Nitrous Oxide (N₂O)	32.6 [2.6%]	23.7 (-27.4%)	→ <+1.3%> →	24.0 (-26.4%)
F-gases	51.2 [4.1%]	24.1 (-52.9%)	→ <-1.9%> →	23.6 (-53.8%)
Hydrofluorocarbons (HFCs)	20.2 [1.6%]	13.3 (-34.3%)	→ <+15.0%> →	15.3 (-24.5%)
Perfluorocarbons (PFCs)	14.0 [1.1%]	6.4 (-54.4%)	→ <-28.0%> →	4.6 (-67.2%)
Sulfur Hexafluoride (SF ₆)	16.9 [1.3%]	4.4 (-74.0%)	→ <-14.7%> →	3.8 (-77.8%)

(Unit: Mt-CO₂ eq.)

Table 2 Energy-origin CO₂ emissions within each sector

(With allocating CO₂ emissions from power generation and steam generation in each final demand sector)

	Base year under Kyoto Protocol [Share]	FY2007 (Compared to base year)	Changes from FY2007	FY2008 (Compared to base year)
Total	1,059 [92.6%]	1,219 (+15.1%)	→ <-6.7%> →	1,138 (+7.4%)
Industries (factory, etc)	482 [42.1%]	468 (-2.9%)	→ <-10.4%> →	420 (-13.0%)
Transport (cars, ships, etc)	217 [19.0%]	246 (+13.1%)	→ <-4.1%> →	236 (+8.5%)
Commercial and Other (commerce, service, office, etc)	164 [14.4%]	242 (+47.2%)	→ <-4.0%> →	232 (+41.3%)
Residential	127 [11.1%]	180 (+41.2%)	→ <-4.6%> →	172 (+34.7%)
Energy Industries (power plants, etc)	67.9 [5.9%]	83.0 (+22.2%)	→ <-5.5%> →	78.4 (+15.5%)

(Unit: Mt-CO₂)

【Details of increase/decrease in energy-origin CO₂ emissions compared to FY 2007】

- Industries sector (factories, etc.): 48.8 million tons (10.4%) decreased
 - Emissions from manufacturing and others decreased.
- Transport sector (cars, ships, etc.): 10.0 million tons (4.1%) decreased
 - Emissions from private cars and trucks/lorries decreased.
- Commercial and Other sectors (commerce, service, office, etc.): 9.7 million tons (4.0%) decreased
 - Emissions associated with consumption of oil products (e.g., fuel oil, kerosene) and electricity decreased.
- Residential sector: 8.3 million tons (4.6%) decreased
 - Emissions associated with consumption of oil products (e.g., kerosene, LPG) and electricity decreased.
- Energy Industries sector (power plants, etc.): 4.6 million tons (5.5%) decreased
 - Emissions associated with oil refinery and own use for power generation decreased.

【Details of increase/decrease in greenhouse gas emissions other than energy-origin CO₂ emissions compared to FY 2007 (CO₂ equivalents)】

- Non-energy origin CO₂ emissions: 3.2 million tons (3.9%) decreased
 - Emissions from the Industrial Processes sector (e.g., cement production) decreased.
- Methane (CH₄) emissions: 0.5 million tons (2.1%) decreased
 - Emissions from the Waste sector (e.g., solid waste disposal on land) decreased.
- Nitrous Oxide (N₂O) emissions: 0.3 million tons (1.3%) increased
 - Emissions from the Industrial Processes sector (e.g., adipic acid production) increased.
- Hydrofluorocarbons (HFCs): 2.0 million tons (15.0%) increased
 - Emissions from refrigeration increased as a result of substitution of HCFC, which is an ozone depleting substance, with HFC.
- Perfluorocarbons (PFCs): 1.8 million tons (28.0%) decreased
 - Emissions from the semiconductor manufacturing, cleaning agents/solvents and others decreased.
- Sulfur Hexafluoride (SF₆): 0.6 million tons (14.7%) decreased
 - Emissions from aluminium and magnesium foundries and semiconductor manufacturing decreased.