



Australian Government
Department of Climate Change

AUSTRALIA'S NATIONAL GREENHOUSE ACCOUNTS



Quarterly Update of Australia's National Greenhouse Gas Inventory **March Quarter 2009**



thinkchange

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The Australian National Greenhouse Accounts are available on the Internet at the following address: <http://www.climatechange.gov.au/inventory>.

Suggestions and comments would be appreciated. They should be addressed to:

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August 2009

Australia's National Greenhouse Gas Inventory: Update

Quarterly Estimates of Australia's National Inventory: March Quarter 2009

- This report provides estimates of Australia's National Inventory for the March quarter of 2009. The quarterly National Inventory estimate does not include emissions under article 3.3 of the Kyoto Protocol, Land Use, Land Use Change and Forestry (LULUCF) activities.
- Over the four quarters to the March quarter of 2009, Australia's national inventory was an estimated 552 Mt CO₂-e (million tonnes of carbon dioxide equivalent). See table 1.

Table 1: National Inventory: for the four quarters to March quarter 2009

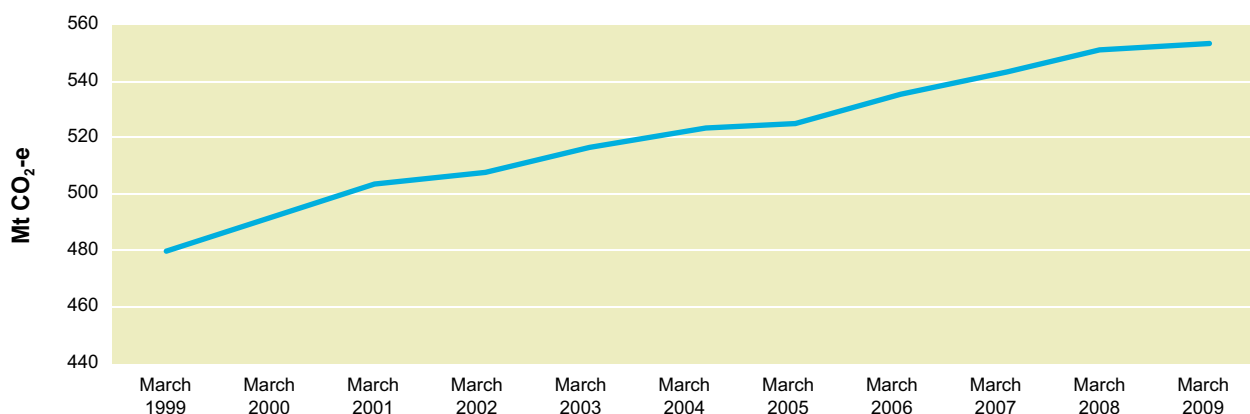
Category	Annual emissions through to the March quarter Mt CO ₂ -e ^a		Per cent change in annual emissions ^d
	March quarter 2008 ^c	March quarter 2009 ^c	
National Inventory - Annex A sectors			
Energy – Electricity	200	201	0.8%
Energy – Stationary energy excluding electricity	94	94	0.2%
Energy – Transport	80	80	-0.5%
Energy – Fugitive emissions	38	40	5.1%
Industrial processes	31	31	-0.4%
Waste	15	15	0.6%
Agriculture	90	91	0.5%
National Inventory total^b	548	552	0.7%

Source: Department of Climate Change preliminary estimates.

NOTES: (a) Carbon dioxide equivalent, CO₂-e; this concept enables the aggregation of individual greenhouse gases through the use of Global Warming Potentials (GWPs). (b) The national inventory total does not include estimates of net credits from the article 3.3 Land Use, Land Use Change and Forestry activities, which are estimated on an annual basis only. (c) Values are estimates of annual emissions through to the end of the March quarter. (d) The percentage change is the year on year growth rate for the March quarter (ie the increase in emissions for the four quarters to the March quarter over the corresponding period of the previous year).

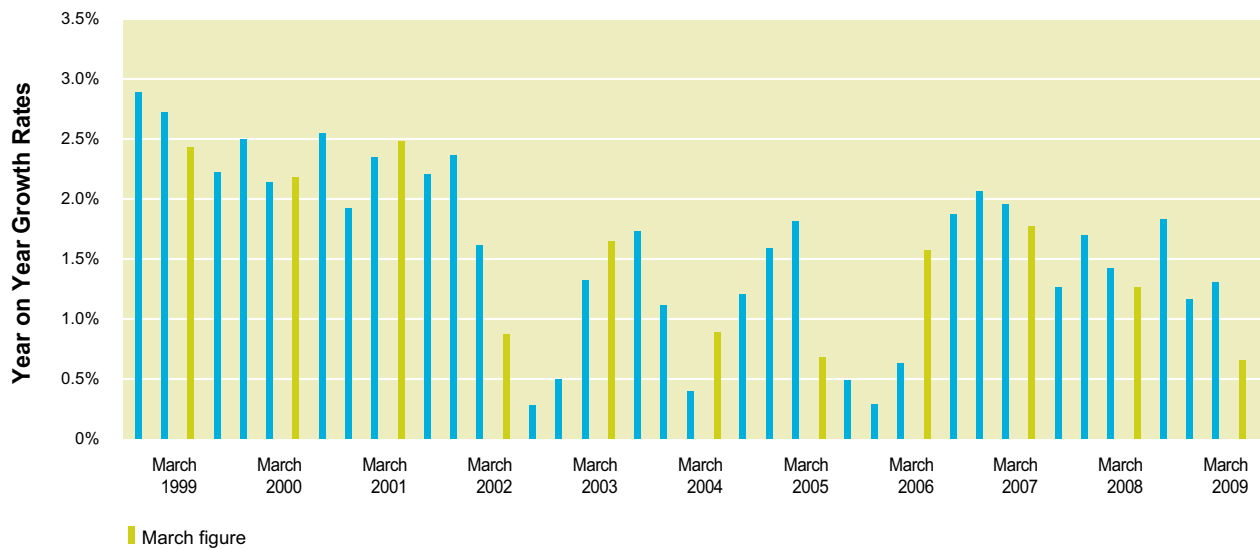
- Figure 1 presents the annual emissions estimate for the four quarters up to the March quarter for each year from 1999 to 2009. The national inventory has increased from 480 Mt CO₂-e in 1999 to 552 Mt CO₂-e in 2009.

Figure 1: National Inventory, annual emissions – four quarters to March quarter 1999 to 2009



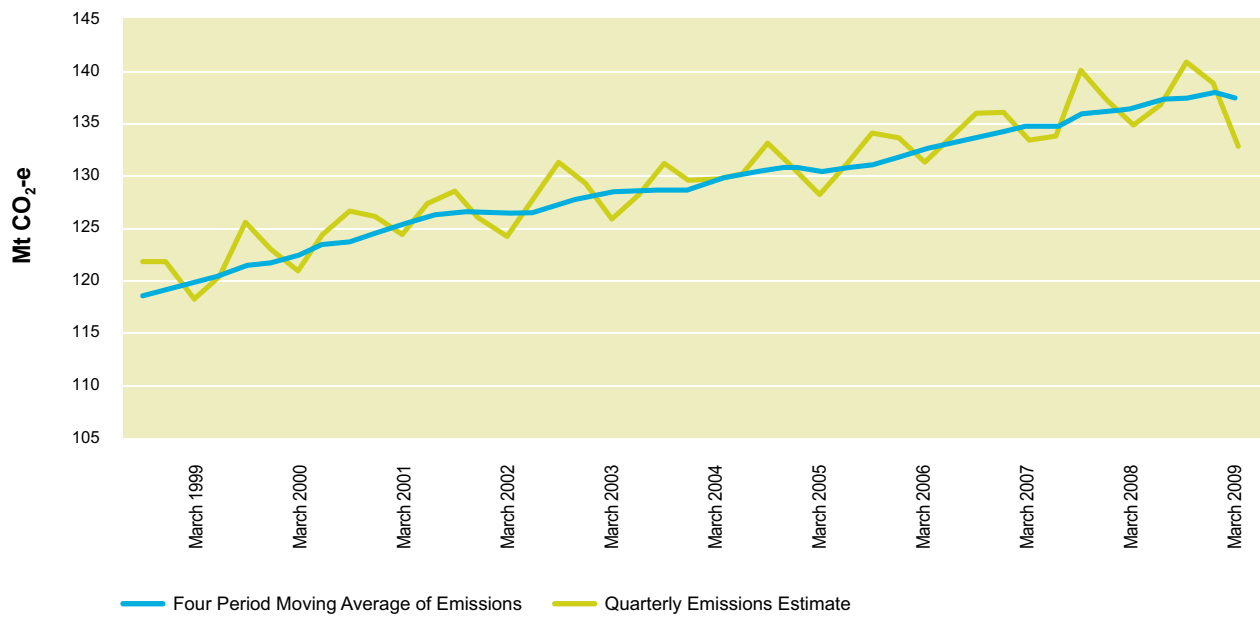
- Figure 2 presents the year on year growth rates of emissions, updated on a quarterly basis. Emissions have continued to grow over the period, although the rate of emissions growth in the four quarters to the end of March 2009 has slowed from the recent highpoint of the September quarter in 2006. Emissions grew at an annual rate of 0.7% for the four quarters up to the March quarter 2009, compared to emissions in the same four quarters in the previous year. Australia's average annual emissions growth rate since September quarter 1998 has been 1.6%.

Figure 2: National Inventory, year on year emissions growth rate – September quarter 1998 to March quarter 2009



- In Figure 3, the actual emissions estimates for each quarter and the four period moving average of the quarterly emission estimates are shown. In the March quarter 2009 the average quarterly emissions estimate for the previous four quarters was 138 Mt. The average estimate has declined in the March quarter of 2009, indicating that the emissions in this quarter were lower than emissions in the corresponding quarter of the previous year.
- Figure 3 also shows how emissions fluctuate during a year. This is a result principally of seasonal weather patterns and variations in economic activity. The September quarter corresponds to the winter months and generally has higher emissions due to a higher level of electricity use. The March quarter tends to have a relatively low level of economic activity which influences emissions directly, particularly as a result of lower activity in manufacturing, commodities and transport. Higher emissions from a relatively high level of economic activity in the December quarter tend to be offset by relatively low emissions from electricity production in that quarter.

Figure 3: National Inventory, quarterly emissions estimate and four period moving average – September quarter 1999 to March quarter 2009



NOTE: Emission estimates have been compiled by the Department of Climate Change using the estimation methodologies incorporated in the Australian Greenhouse Emissions Information System (AGEIS) and preliminary activity data obtained from a range of publicly available sources – principally ABARE, the ABS, the National Electricity Market Management Company and the Department of Innovation, Industry, Science and Research. As data becomes available from the Department’s reference sources – in particular the National Greenhouse and Energy Reporting System – these preliminary activity data will be replaced and the estimates of emissions revised before submission to the UN. The Department’s assessment is that the 90 per cent confidence interval for the national inventory (before taking account of article 3.3 activities) is ± 1 per cent (ie there is a 90 per cent probability that future revisions will be limited to ± 1 per cent of the current estimate). Note that Figure 3 displays actual quarterly emissions data and a trend-line (moving average) of the quarterly emissions estimates whereas Figure 2 displays year on year growth rates of emissions.