



Australian Government
Department of Climate Change

AUSTRALIAN NATIONAL GREENHOUSE ACCOUNTS



Quarterly Update of Australia's National Greenhouse Gas Inventory **June 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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October 2009

Australia's National Greenhouse Gas Inventory: Update

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

- This report provides estimates of Australia's National Inventory for the June 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 June quarter of 2009, Australia's national inventory was an estimated 544 Mt CO₂-e (million tonnes of carbon dioxide equivalent). See table 1.

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

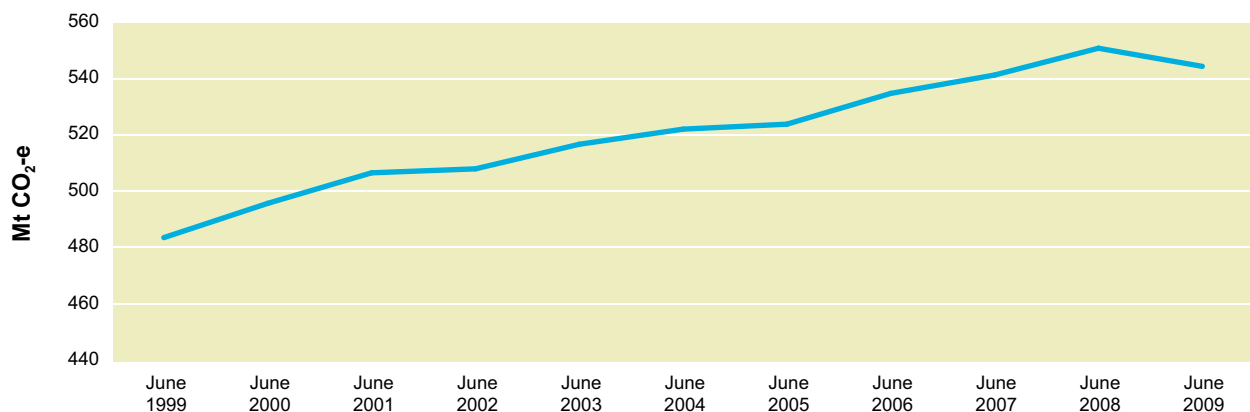
Category	Annual emissions through to the June quarter Mt CO ₂ -e ^a		Per cent change in annual emissions ^d
	June quarter 2008 ^c	June quarter 2009 ^c	
National Inventory - Annex A sectors			
Energy – Electricity	203	204	0.2%
Energy - Stationary energy excluding electricity	93	90	-2.4%
Energy – Transport	80	79	-1.4%
Energy - Fugitive emissions	39	39	0.3%
Industrial processes	31	29	-8.0%
Waste	15	15	0.5%
Agriculture	90	89	-1.4%
National Inventory total ^b	551	544	-1.2%

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 June quarter. (d) The percentage change is the year on year growth rate for the June quarter (ie the increase in emissions for the four quarters to the June quarter over the corresponding period of the previous year).

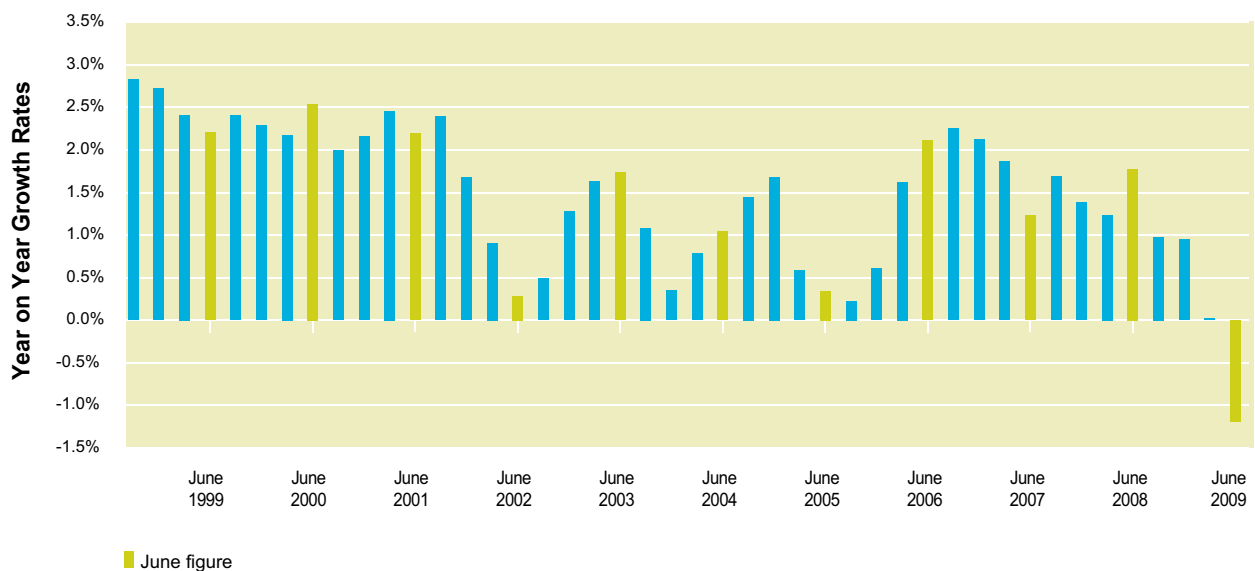
- Figure 1 presents the annual emissions estimate for the four quarters up to the June quarter for each year from 1999 to 2009. The national inventory has increased from 483 Mt CO₂-e in 1999 to 544 Mt CO₂-e in 2009.

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



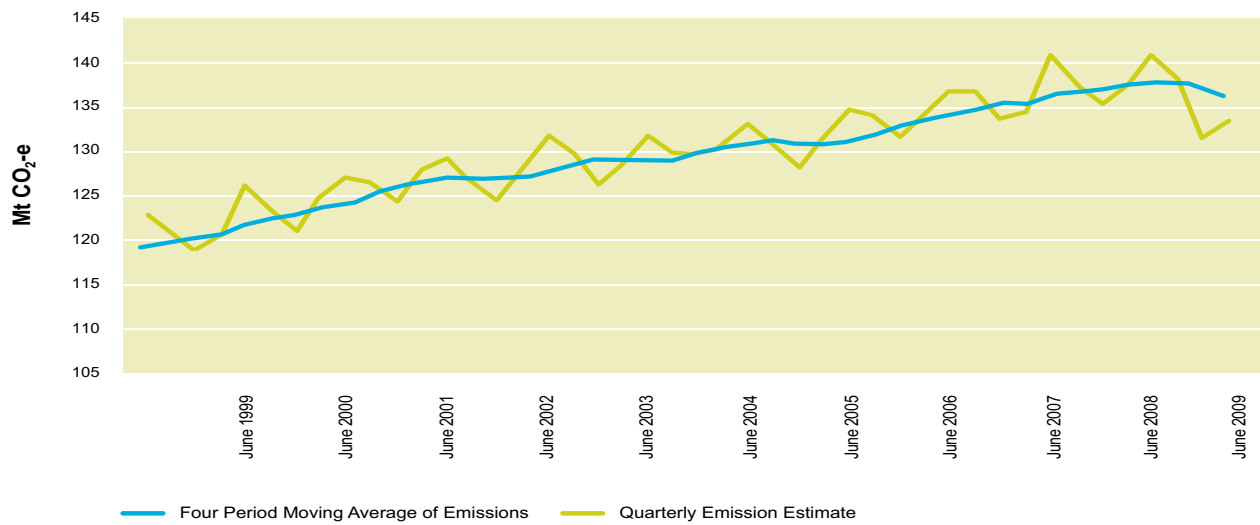
- Figure 2 presents the year on year growth rates of emissions, updated on a quarterly basis. Emissions contracted at -1.2% for the four quarters up to the June quarter 2009, compared to emissions in the same four quarters in the previous year. This is the first time the annual emissions growth has been negative since the series commenced in September 1998. Australia's average annual emissions growth rate since September quarter 1998 has been 1.5%.
- The negative emission growth recorded in the four quarters to June 2009 is considered temporary and is mostly attributable to relatively low emissions in the March and June quarters in key sectors, mainly reflecting the economic slowdown. Firstly, emissions from the steel industry have fallen in the March and June quarters as a result of a temporary reduction in production capacity at the Port Kembla steelworks (this estimate is based on production data reported in ABARE's mineral statistics). Secondly, emission estimates for agriculture and transport have declined by 1.4% each and, thirdly, industrial production in the March and June quarters has been below trend, affecting national demand for stationary energy.

Figure 2: National Inventory, year on year emissions growth rate – September quarter 1998 to June 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 June quarter 2009 the average quarterly emissions estimate for the previous four quarters was 136 Mt CO₂-e. The average estimate has declined in the June 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 June 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.