Senate Finance and Public Administration Legislation Committee
ANSWER TO QUESTION ON NOTICE
Prime Minister and Cabinet Portfolio
Department of Climate Change
Budget Estimates Hearing–May 2009

Written question reference: CC59
Outcome/Output: Outcome 1, Output Group 1.1 – Response to climate change
Topic: Treasury modelling for the Carbon Pollution Reduction Scheme
Hansard Page: Not relevant for written QoN

Question: (Senator Cash**)**
Is it the case that Treasury modelling for the Government found the ETS would have only a small net effect on total employment over a decade. On what basis was that finding made?

Answer:

The Government has undertaken the largest and most detailed modelling project in Australia in order to assess the economic implications of climate change mitigation policy. The Government's *Australia's Low Pollution Future: The Economics of Climate Change Mitigation* report places substantial information in the public domain to inform the public of the likely economic implications of introducing emission pricing.

- The analysis included in the report draws on three computational general equilibrium (CGE) models and a further five sector-specific models. It presents integrated economic modelling of climate change policy across global, national, sectoral and household scales.

The Treasury modelling found that Australia's aggregate economic costs of mitigation are small, although the costs to sectors and regions vary. Growth in emission-intensive sectors slows and growth in low- and negative-emission sectors accelerates.

- The Government's climate change modelling report estimates that reducing emissions to reduce the risk of dangerous climate change would result in real gross national product (GNP) per capita growth slowing by around one-tenth of one per cent per year.

The distribution of future employment growth will reflect the structural shift necessary for the economy to transition to a low emission future. In general, employment shifts between industries will broadly reflect movements in industrial output.

- From an employment perspective, output from all major sectors grows over the years to 2020, delivering substantial increases in national employment from today's levels.

- The three CGE models used in the report make different assumptions about the short-run dynamics of the labour market. At one end of the spectrum, the Global Trade and Environment Model assumes that labour and capital are perfectly mobile across industries, at all times and at no cost. At the other end of the spectrum, the G-Cubed model assumes immobility of capital, slow adjustments to wages and liquidity constraints, and includes partial forward-looking behaviour. The Monash Multi-Regional Forecasting (MMRF) model assumes capital, labour and abatement technologies take time to adjust, capturing the majority of short-term adjustment cost mechanisms in the economy. In particular, the MMRF model assumes that it takes between seven and ten years for the labour market to adjust following an economic policy change. All three CGE models assume that in the long run, in the absence of any further change in policy, real wages will adjust such that aggregate employment levels return to their projected levels in the absence of the policy.

All three CGE models have been developed over time by independent researchers and have been used extensively in peer-reviewed literature. The Government's report drew on, and reported results from, a suite of economic models to encompass the wide variety of views about how the Australian economy responses to policy changes.