Dr Martin Parkinson PSM
Secretary

Senator Mathias Cormann
GPO BOX B58
PERTH WA 6838

Dear Senator Cormann,

TREASURY EVIDENCE REGARDING MODELLING

Thank you for your letter of 11 April 2011 regarding evidence presented by Treasury at Senate Estimates on 24 February 2011 and to the Scrutiny of New Taxes Committee on 24 March 2011. You raised concerns about responses to questions you asked at Senate hearings regarding whether Treasury had undertaken any new economic modelling since 2008 on the impact of a carbon price. You also raised concerns about Treasury evidence that overall employment would continue to grow in the presence of a carbon price. I would like to clarify the responses that Treasury provided.

Economic modelling since 2008

The modelling released in 2008 and reported in the Government's *Australia's Low Pollution Future: The Economics of Climate Change Mitigation* (ALPF) report was the most extensive modelling exercise that the Treasury has ever undertaken and is now regarded as the international benchmark for exercises of this type. It took eighteen months, relied on resources drawn from across the public service and received support from domestic and international experts including the engagement of eight external consultants. The ALPF report presented integrated economic modelling of the effects of climate change mitigation policy across global, national, sectoral and household scales.

On 24 February 2011, when Senator Bushby asked Revenue Group officers about updated economic modelling on a carbon price, Treasury officers sought to clarify the type of information the Senator was seeking. In the course of clarifying the nature of Senator Bushby's queries, it became evident that they should be directed to another part of Treasury. Revenue Group officers then correctly directed Senator Bushby to the Macroeconomic Modelling Division which has primary responsibility for the macroeconomic and industry sectoral modelling related to carbon pricing within Treasury and has consistently taken questions on economic modelling related to carbon pricing (page E60). It is only the modelling of the impact of a carbon price on households and the implications for household assistance that is undertaken within the Tax Analysis Division in Revenue Group.

When you asked Treasury on 24 February 2011 whether there had been any new economic modelling on the impact of a carbon price since 2008, given the prior clarification, Ms Meghan

Quinn, General Manager of the Macroeconomic Modelling Division, correctly explained that "at this point, Treasury has not updated its analysis of carbon prices on the Australian economy. The last set of economic modelling that was done was done in 2008" (page E95). Ms Quinn reaffirmed that answer on 24 March 2011. Consistent with Ms Quinn's evidence, at that time, there had been no new modelling of the global, national or sectoral effects of policy scenarios.

On the separate issue of updating the impacts of carbon pricing on households, Treasury has done so on several occasions after the publication of the ALPF report in October 2008. Household impact analysis was updated for: the Carbon Pollution Reduction Scheme White Paper in December 2008; the Government's policy announcement *New measures for the Carbon Pollution Reduction Scheme* in May 2009; the 2009-10 Budget in May 2009; the explanatory memorandum of the Carbon Pollution Reduction Scheme Amendment (Household Assistance) Bill 2009 in May 2009; the 2009-10 Mid-Year Economic and Fiscal Outlook in November 2009; the package negotiated by the Government and the Opposition announced in November 2009; the explanatory memorandum of the Carbon Pollution Reduction Scheme Amendment (Household Assistance) Bill 2009 in November 2009. Estimates from the most recent published household analysis were referred to in the Scrutiny of New Taxes Committee on 24 March 2011.

The household analysis was subsequently updated in early 2011 to incorporate: 2005-06 input-output tables; consumer price data; and emissions data. The 1 February 2011 Executive Minute titled *Preliminary Carbon Price Households Price Impacts* released following an FOI request presented indicative estimates that were 'preliminary and subject to change' with the 'coverage and parameters from the policy design of the Carbon Pollution Reduction Scheme as negotiated by the Government with the Opposition in November 2009'.

Employment modelling

The Treasury economic modelling undertaken in 2008 did not assume full employment would be maintained at all points in time. Changes to aggregate and industry employment growth in response to carbon pricing were modelled. The modelling suggests that the impact from carbon pricing was modest compared to the underlying rates of employment growth that were assumed in the absence of a carbon price.

As Ms Quinn described in testimony before the Scrutiny of New Taxes Committee on 24 March 2011:

> *[I]f there is a transition between industries, it takes time for the economy to adjust. But the important thing to remember is that often this analysis is against a baseline or an underlying economy that has got continued jobs growth* (page SSNT 14).

Rather than assuming full employment, the modelling reflected a technical assumption that the Non-Accelerating Inflation Rate of Unemployment (NAIRU) is fixed in the long-run. For example, within the model, an increase in the demand for labour would lead to an initial increase in employment. Within the model, aggregate and industry real wages would adjust to restore aggregate employment over a period of around 5 years.

The result of this approach is that the modelling, as presented in the ALPF report, found that employment continues to grow strongly at a national level in the presence of a carbon price and that job growth continued in all major employment sectors in the Australian economy.

I hope that this information addresses the concerns you raised in your letter and helps to clarify the nature of the modelling Treasury has undertaken.

Yours sincerely

Martin Parkinson
19 May 2011