



Australian Government
Productivity Commission

Study into emissions reduction policies in key economies

Productivity Commission
Background Paper

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Commissioners: Gary Banks and Warren Mundy

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Contact details:

By mail:

Productivity Commission
Locked Bag 2
Collins Street East
Melbourne VIC 8003
Australia

By fax:

+61 3 9653 2305

By email:

carbon-prices@pc.gov.au

Contacts:

For administrative matters: Yvette Goss +61 3 9653 2253

For other matters: Paul Belin +61 3 9653 2177

Freecall number (in Australia): 1800 020 083

Website

www.pc.gov.au

The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long-term interest of the Australian community.

The Commission's activities cover all levels of government and encompass all sectors of the economy, as well as social and environmental issues. The core function of the Commission is to conduct public inquiries on key policy or regulatory issues bearing on Australia's economic performance and community wellbeing. In addition, the Commission undertakes a variety of research at the request of government and to support its annual reporting, performance monitoring and other responsibilities.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website or by contacting the Media and Publications section on (03) 9653 2244 or email: maps@pc.gov.au.

Background Paper

This background paper

- The Commission has been asked to undertake a research study on the effective carbon prices that result from emissions reduction policies in place or committed in Australia and other key economies.
- This background paper sets out what the Commission has been asked to do, and the steps it will follow in order to complete this task.
- The research study, to be completed and published by the end of May 2011, must be undertaken in accordance with requirements set out in the Terms of Reference (attachment A), and the Productivity Commission Act of 1998.
- In undertaking the research study the Commission will seek the views of experts through a workshop to discuss methodology.
- The Commission will also consult with national and international industries, governments and non-government agencies in order to seek information about policies and gather required data.

1 What the Commission has been asked to do

The Australian Government has asked the Productivity Commission to undertake a study on the effective carbon prices that result from emissions reduction and other relevant policies in key economies — where effective carbon prices include both explicit carbon prices, such as taxes or prices arising from emissions trading schemes, and implicit carbon prices, such as direct regulation of technologies, renewable energy targets, or subsidies for low emissions technology.

In order to conduct this study, the Commission has been requested to develop a methodology for aggregating sectoral impacts across policies, and for making comparisons across key economies. Specifically, the Commission will:

- examine and detail key emissions reduction policies affecting relevant sectors in place or committed in Australia and in other key economies
- estimate the effective carbon price per tonne of carbon dioxide equivalent (CO₂-e) faced by a given sector or sectors as a result of measures to reduce greenhouse gas emissions
- report on the methodology, assumptions and data sources used.

The terms of reference are reprinted as attachment A.

2 Background to the Study

On 27 September 2010, the Prime Minister announced that a Multi-party Climate Change Committee would explore options for the introduction of a carbon price and help to build consensus on Australia's policy approach for climate change. The Committee will report to Cabinet, through the Minister for Climate Change and Energy Efficiency, with a range of possible policy positions informed by discussions with independent experts, the public and industry.

As stated in its terms of reference, the Climate Change Committee will 'consider the findings of an expert body, which will be tasked with calculating the carbon price equivalent of measures taken by other countries' (Combet 2010). On 15 November 2010, the Commission received terms of reference from the government to conduct this work.

The government intends this work to provide accurate and timely information on the extent of climate action in key economies and sectors.

3 Scope of the study

The Commission has been asked to examine and detail key emissions reduction policies in place or committed in Australia and other key economies; for example, China, Germany, India, Japan, New Zealand, South Korea, the UK and the USA.

Further, the Commission will estimate the effective carbon price per tonne of CO₂-e faced by the electricity generation sectors in these economies, and selected industries drawn from manufacturing and transport sectors, where relevant and data permitting. The terms of reference note that effective carbon prices include both:

- explicit carbon prices from emissions taxes and tradeable permits
- implicit carbon prices of other measures, such as direct regulation of technologies, renewable energy targets, or subsidies for low-emissions technology.

4 How the study will be conducted

In undertaking this study, the Commission will hold a workshop to discuss methodology. This workshop will be held in December and will enable the Commission to tease out specific areas of complexity with a multi-disciplinary group of experts. This will enable a broad range of perspectives to be brought to bear on the Commission's task and approach and help improve the rigour of the Commission's analysis.

In addition to conducting the workshop on methodological issues, the Commission will consult with national and international industries, governments and non-government agencies, in order to seek information about policies and / or gather required data. This will enable the Commission to draw on evidence both nationally and internationally by utilising local research expertise in the economies examined.

Moreover, the Commission expects to contract consultants that have particular experience in climate change and energy policies in the countries to be studied. Consultants will be requested to provide relevant information and data on specific policies and countries. The Commission will then use this information to conduct the analysis and quantitative work required.

The government has requested that the Commission submit a final report at the end of May 2011. Given the technical nature and tight timeline of the study, the Commission will not be seeking submissions, nor will it be able to publish a draft report. However, the Commission will test ideas and the accuracy of the information it collects with relevant participants. For example, foreign experts and agencies will be given an opportunity to verify the accuracy of information relating to policies in other countries.

5 Methodology and data

There are a range of methodological issues involved with conducting this study. This includes developing a process to determine the inclusion of programs, establishing baseline measures for programs and sectors, designing a methodology to aggregate prices and navigating the complexities of using and comparing average and marginal cost figures. The Commission will also need to select specific industries from the manufacturing and transport sectors for analysis.

The Commission intends to prepare a methodological paper that discusses these issues. This paper will be published on the Commission's website after the methodology workshop in December.

Another key challenge in undertaking this study will be sourcing reliable data. Given the range of countries and sectors to be considered it is likely that a significant amount of data will be required — at the national, provincial and industry level.

References

Combet, G. (Minister for Climate Change and Energy Efficiency) 2010, *Prime Minister Establishes Climate Change Committee*, Joint media release, 27 September.

Attachment A: Terms of reference

STUDY OF EMISSIONS REDUCTION POLICIES IN KEY ECONOMIES

Productivity Commission Act 1998

I, BILL SHORTEN, pursuant to Parts 2 and 4 of the *Productivity Commission Act 1998*, hereby request the Productivity Commission to undertake a research study on effective carbon prices that result from emissions and energy reduction policies in place or committed in Australia and other key economies.

This work is intended to provide accurate and timely information on the extent of climate action in key economies and sectors.

Context

Reducing greenhouse gas emissions to mitigate the worst effects of climate change is a global challenge. Various mitigation policies are available, though not all impose explicit carbon prices on businesses and households. While some policies such as carbon taxes or emissions trading schemes will involve explicit carbon prices others, such as direct regulation of technologies, renewable energy targets, or subsidies for low emissions technology, impose less transparent carbon prices.

Given this, comparing the impact of different policies on a given sector across economies can be difficult as their scope can vary considerably and their impacts are not always clear. In this context it is important to develop a methodology for aggregating sectoral impacts across policies, and for making comparisons across key economies.

Against this background, the Commission is requested to provide advice on the effective carbon prices that result from emissions reduction and other relevant policies in key economies, where effective carbon prices include both explicit carbon prices, such as taxes or emissions trading schemes, and implicit carbon prices.

Scope of the Study

The Commission is requested to:

- examine and detail emissions reduction policies, either in place or committed in Australia and in other key economies such as the UK, the USA, Germany, New Zealand, China, India, Japan and South Korea

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- estimate the effective carbon price per tonne of CO₂-e faced by the electricity generation sectors in these economies, and selected industries drawn from manufacturing and transport sectors in these and other countries where relevant and data permitting
 - report on the methodology, assumptions and data sources used, so as to inform further analysis in this area.

Key Considerations

In conducting the study and making recommendations the Commission would:

- consult with the business sector, government agencies and other interested parties as appropriate in Australia and internationally
- draw on credible evidence both nationally and internationally, including by utilising local research expertise in economies being examined.

The Commission is to report to the Government by the end of May 2011. The report will be published.

BILL SHORTEN

15 November 2010