

Mr Steve Palethorpe  
Senate Standing Committee on Environment, Communications and the Arts  
Parliament House  
Canberra ACT 2600

[eca.sen@aph.gov.au](mailto:eca.sen@aph.gov.au)

6 April 2010

Dear Mr Palethorpe

The Energy Efficiency Council welcomes the opportunity to comment on the Building Energy Efficiency Disclosure Bill 2010 (the Bill).

As the peak body for companies that deliver cutting-edge energy efficiency services, the Energy Efficiency Council has extensive on-ground expertise in the commercial reality of technology and policy relating to cogeneration and energy efficiency.

The Energy Efficiency Council supports the introduction of the Bill subject to some amendments. There is a strong justification for the Bill, and the Australian Labor Party, the Liberal Party and the Australian Greens have all committed to support the introduction of this type of scheme.

Encouraging companies to retrofit commercial buildings will deliver significant economic benefits to Australia, even in the absence of climate change. Energy efficiency retrofits are attractive investments, and by helping companies to save money it allows them to retain staff at the same time as building a new workforce specialising in energy efficiency. The benefits of retrofits are even greater once we consider climate change, with retrofits able to cut energy use in many commercial buildings by over 30 per cent.

There is scope to improve the design and implementation of the Building Energy Efficiency Disclosure scheme, partly through commitments made alongside the introduction of the Bill. These improvements include:

- All governments in Australia commit to participate in the scheme, with the Australian Government including its commitment in the Bill itself.
- All governments in Australia commit to require all buildings that they occupy to have 'Public Display Certificates' that indicate NABERS ratings in their foyers. The Australian Government must examine extending Public Display Certificates to the private sector.
- The Australian Government commit to review the scheme in 2011 with a view to extending it to smaller areas (>1,000 m<sup>2</sup>) and other classes of commercial building, such as hospitals.
- The Australian Government to establish a joint government-industry committee to oversee the implementation of the scheme and the design of the Energy Efficiency Guidance Information. The Energy Efficiency Council should co-chair this committee.

While the Building Energy Efficiency Disclosure Bill 2010 is vital, it needs to be accompanied by other key policies. These include a national energy efficiency goal, addressing failures in the National Electricity Market, establishing a national energy efficiency incentive scheme and specific policies in the industrial and commercial sectors.

Should you require further information on any of the issues raised in this submission please contact the Energy Efficiency Council on 03 8327 8422 or [info@eec.org.au](mailto:info@eec.org.au). The Energy Efficiency Council may also provide further input on NABERS Tenancy ratings to the Senate Committee.

Yours sincerely



Rob Murray-Leach  
Chief Executive Officer

## 1. The Energy Efficiency Council

The Energy Efficiency Council is the Peak body for commercial and industrial energy efficiency. The Council aims to build the market for energy efficiency products and services and ensure that energy efficiency is implemented with excellence and accountability.

## 2. The importance of energy efficiency

There are significant economic drivers for energy efficiency policy even in the absence of climate change. When a company invests in cost-effective energy efficiency it improves their overall efficiency and productivity. These savings help businesses save money, improve productivity and retain staff, while creating new jobs in energy efficiency. As a result tapping into Australia's full energy efficiency policy would increase GDP, even in the absence of a carbon price. As stated by US President Barack Obama:

*“One of the fastest, easiest and cheapest ways to make our economy stronger and cleaner is to make our economy more energy efficient.”*

The drivers for energy efficiency are more substantial in a carbon constrained economy. Energy efficiency is the largest and most cost effective source of greenhouse gas reduction. The Australian Bureau of Agricultural and Research Economics estimates that energy efficiency will account for around 55 per cent of Australian emission abatement to 2050 (Gurney et al 2007). Similarly, the International Energy Agency (IEA) estimates that energy efficiency will account for 65 per cent of global emission abatement to 2020 (and 54 per cent to 2030) in a scenario where global carbon dioxide levels stabilise at 450ppm.

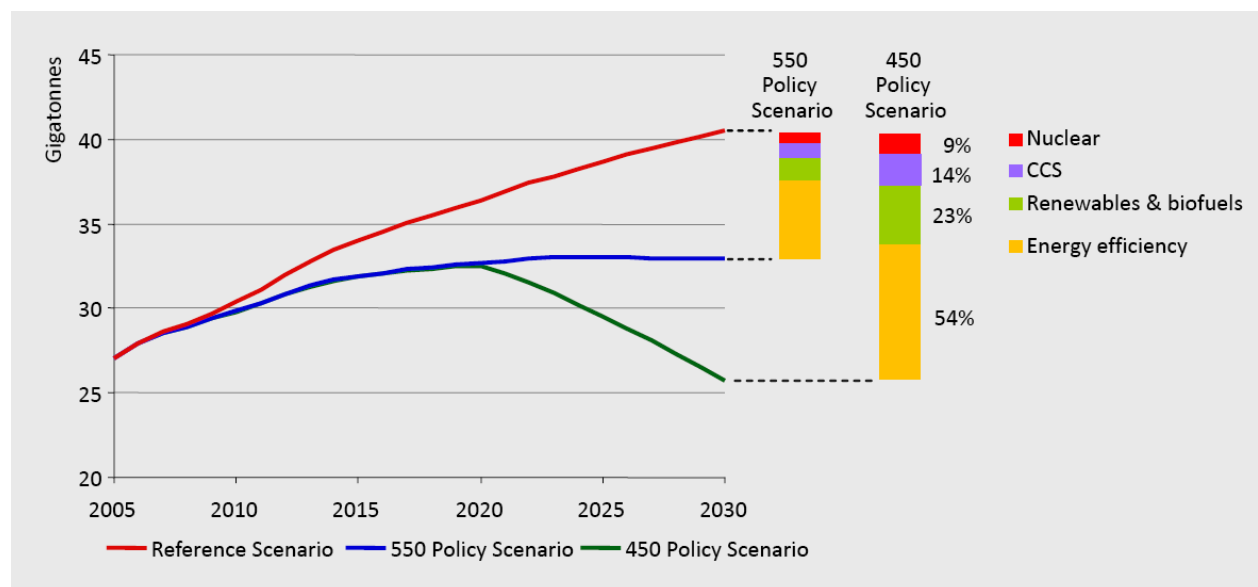


Figure 1: The proportion of global abatement from different sources, from IEA World Energy Outlook 2008

Both the ABARE and IEA reports are likely to underestimate the potential contribution of energy efficiency to emissions abatement. Many real-life energy efficiency projects have demonstrated significantly greater cost-effective energy efficiency opportunities than assumed in these projections. For example, the International Panel on Climate Change notes that its own estimate of the energy efficiency potential in buildings is likely to be lower than the real potential “due to the limited number of demand-side end-use efficiency options considered by the studies, the omission of non-technological options, the often significant co-benefits, as well as the exclusion of advanced integrated highly efficiency buildings.” (Metz et al 2007 p409).

In addition to being the largest source of emission abatement, energy efficiency is widely acknowledged as the most cost-effective form of abatement. The ‘McKinsey curve’ (below) indicates that the most cost-effective opportunities for abatement are in energy efficiency, to the left of the curve. As a result, the economic cost of tackling climate change in Australia will be substantially higher if we fail to mobilise the potential for energy efficiency.

While many forms of abatement policy need to be pursued in parallel, this means that governments should put the highest priority on delivering abatement over the next ten years through energy efficiency, as opposed to more expensive forms of abatement.

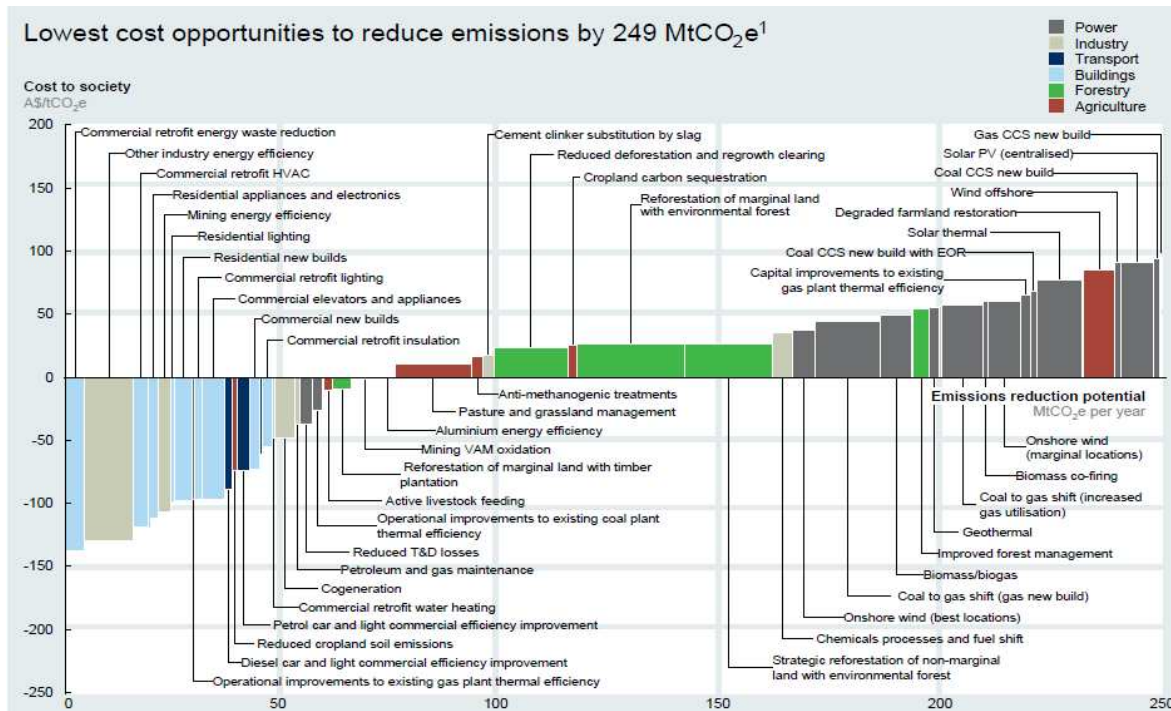


Figure 2: An abatement cost curve for Australia, from ClimateWorks 2010

Energy efficiency is not only critical for protecting the economy, it is also a substantial economic opportunity. One of the world's largest financial institutions, HSBC, estimates that global revenue from energy efficiency reached US\$164 billion in 2009. HSBC also state that revenue from energy efficiency more than doubled between 2008 and 2009, increasing by 126 per cent in one year. If Australia can position itself as a regional hub for exporting energy efficiency technology and services it would significantly benefit the economy. However, to become an export market it will need to have a strong domestic market for energy efficiency.

### 3. The Commercial Building Sector

The commercial building sector must be a priority area for climate change policy as, along with industry, it is one of the largest and most cost-effective sources of abatement in the economy:

- Commercial buildings account for around 10 per cent of Australia's emissions.
- The ClimateWorks modelling found that energy efficiency in commercial buildings would actually save \$90 for each tonne of  $\text{CO}_2\text{e}$  abatement. In addition to these direct savings, pursuing energy efficiency means that we don't have to use more expensive forms of abatement. As a result, the Centre for International Economics (2007) estimates that tackling energy efficiency in the building sector would save the Australian economy \$38 billion per annum by 2050.
- Davis Langdon (2009) estimated that a major refit of Australia's commercial buildings would create 27,000 jobs each year over the next decade.
- Energy efficiency upgrades deliver improved indoor environments and a number of studies have indicated this increased staff productivity by 5 to 10 per cent.

Energy efficiency policies must focus on retrofitting existing buildings. Standards for new buildings are important, but the energy used in existing buildings over the next 20 years will dwarf the energy from buildings constructed after 2009. Long-term historical trends suggest that existing buildings will account for over 65 per cent of the building stock in 2030.

## 4. Policy Overview

A range of market distortions and market failures means that range of policies are required to mobilise Australia's energy efficiency potential, in addition to a price on carbon.

Dedicated energy efficiency policies are critical for four main reasons:

1. There are substantial market distortions and market failures that impede energy efficiency
2. Even in the absence of climate change, improving Australian businesses' energy efficiency will improve their competitiveness and grow the economy.
3. If Australia fails to tap into the largest and most cost-effective form of abatement it will significantly increase the economic impact of tackling climate change.
4. Fostering cost-effective domestic abatement will demonstrate that emissions reductions and economic growth can go hand-in-hand. This is critical for global negotiations.

Energy efficiency policies and programs need to:

1. Drive as much cost-effective energy efficiency as possible. The level of energy efficiency that is cost-effective will be affected by all costs (capital, labour and program costs) and all benefits (energy savings, energy infrastructure savings, productivity improvements, health and greenhouse reductions).
2. Focus on tackling market failures and existing market distortions.
3. Address the full range of market failures and distortions to unlock the full potential for energy efficiency. Where multiple barriers impede energy efficiency, each barrier needs to be addressed to deliver energy efficiency at the lowest cost.
4. Have sufficient funding to drive cost-effective energy efficiency, but be cost-effective so that each dollar invested in a program drives the maximum amount of energy efficiency.

## 5. Market distortions and market failures that impede energy efficiency

The failure to internalise the cost of carbon in the cost of energy is only one of the barriers to energy efficiency. Extensive studies have identified a range of other market failures and market distortions that are well accepted by experts.

The current National Electricity Market (NEM) rules and regulations create substantial market distortions. The NEM rules attempt to create a competitive market in a complex situation involving monopoly grid supply and semi-competitive generation and retail markets. A wide variety of experts, including the Parer Review and Professor Garnaut, have identified flaws in the current NEM rules that favour established supply-side options (i.e. expanding centralised generation and the grid) over demand-side options (energy efficiency and distributed generation).

One flaw centres on the opportunity to acquire new electricity distribution capacity through energy efficiency and distributed generation sources. Where there is a need for new capacity in the grid, distributors have the option of either investing in increased network infrastructure or investing in energy efficiency and distributed generation to reduce peak demand. Although investing in energy efficiency and distributed generation would often provide the same capacity at much lower costs to the public, the NEM rules strongly favour investing in networks and centralised supply.

Even in the absence of climate change these flaws should be tackled, as they distort the energy market, increasing energy supply costs for households and businesses. With climate change, the imperative to address these flaws is even stronger.

Addressing the failures in the NEM is critical to helping Australia lower the cost of meeting its greenhouse targets. Tackling these failures is strongly complementary to the CPRS, as it will remove existing distortions rather than create an additional driver for emissions reduction. Completely resolving the full range of these complex issues will not occur overnight. However, governments can make significant inroads now through a number of core programs.

There are also a range of well-established market failures, which are discussed in more detail in the Garnaut Review and the sources listed in the references at the end of this submission. The following list of market failures affecting energy efficiency is not exhaustive:

<b>Externalities</b>	In addition to the carbon externality, energy efficiency has spillover benefits such as reduced network infrastructure costs. As noted above, the NEM rules currently fail to reward companies for delivering these benefits.
<b>Early mover spillovers</b>	Support for research and development is required to extend the potential of energy efficiency
<b>Principal agent problems</b>	The incentives facing landlords, tenants and building managers are frequently not aligned, resulting in sub-optimal outcomes
<b>Public good information, information spillovers &amp; information asymmetry</b>	Many homeowners, companies and specialists lack information on energy efficiency due to a range of market failures. With information asymmetry this can impede coordination between parties. Information gaps are not minor problems; they can entirely impede otherwise cost-effective energy efficiency
<b>Bounded rationality and organisational failures</b>	Even with access to information, individuals and organisations can fail to recall, process or use information effectively

These market failures interact to create emergent problems. For example, bounded rationality and gaps in knowledge within companies and financial institutions can impede access to capital for energy efficiency projects. In particular, governments' budgetary policies can be a significant impediment to cost-effective energy efficiency projects. Therefore, directly addressing access to capital can overcome multiple market-failures.

Similarly, principal-agent problems, serious gaps in knowledge and bounded rationality create barriers throughout a supply chain, impeding the entry and diffusion of novel technologies. For this reason, market transformation approaches that consider the whole supply chain can be more effective than addressing each part of the chain separately.

## 7. Building Energy Efficiency Disclosure Bill 2010

The Energy Efficiency Council supports the introduction of the Building Energy Efficiency Disclosure Bill 2010 (the Bill) with the amendments discussed on page 6.

The Bill has strong bipartisan support in Australia. Both the Liberal and Labor Parties have committed to introduce a building disclosure scheme on numerous occasions since 2000. The previous Government committed to a scheme in the 2004 "Energy White Paper" and the current Government committed to a scheme through the Council of Australian Governments in July 2009.

There is a clear and urgent rationale to introduce this Bill. Numerous studies have found that energy efficiency is impeded by "information asymmetries". This means that potential buyers and tenants of buildings are unable to compare the energy efficiency of buildings before they buy / lease, which means that they can't factor energy efficiency into their price decisions. This market failure can result in 'adverse selection', where buildings become less efficient over time (Akerlof 1970).

The Productivity Commission (2005) highlighted that disclosure schemes need to be mandatory, as building owners will be unlikely to voluntarily apply labels to either average or poorly performing buildings. This would mean that prospective buyers and tenants would be unable to distinguish between properties in the lower end of the market.

This Bill is complementary to both a carbon price and an abatement purchasing scheme, as it allows building owners and tenants to identify the impact of the carbon price and respond to it.

Despite the long-term commitment to mandatory disclosure, its introduction has been subject to significant delays. Given that all the tools are available to immediately commence a mandatory disclosure scheme, further delay in introducing mandatory disclosure would be unacceptable. The European Union has had a mandatory disclosure scheme in place since 2002.

## 8. Scope to improve the Building Energy Efficiency Disclosure Bill 2010

There is scope to improve the Building Energy Efficiency Disclosure Bill 2010 both in its introduction and implementation. These improvements should not delay the introduction of the Bill. Therefore, the Energy Efficiency Council recommends that the Bill be introduced with the amendments discussed below, and that the Australian Government review options to strengthen the Bill in 2011.

Firstly, it is critical that the scheme should be applied to governments as well as the private sector. Governments occupy 32 per cent of the commercial building market, and must be subject to the same provisions as the private sector. Experience around the world has demonstrated that government action on energy efficiency is critical pre-requisite to private sector investment in energy efficiency. The Bill should bind the Australian Government, and the Bill should be complemented by a simultaneous commitment by the Australian Government and State and Territory governments to apply the mandatory disclosure scheme to their own buildings.

Secondly, governments should further commit to “public display certificates” in their own buildings. This would require all buildings over 2,000m<sup>2</sup> that are occupied by governments to clearly advertise their NABERS energy efficiency rating in their lobby (either a NABERS rating for the whole building, or separate NABERS ratings for the base-building and the area tenanted by government). Public display certificates:

- Enhance the effectiveness of mandatory disclosure in reducing information asymmetry, because the information is continuously disclosed.
- Address other information failures, raising awareness of building energy efficiency and creating demand for more energy efficiency. This is particularly important in the government sector, where the rate of building turnover is very low.

The European Union has required buildings that are occupied by the public sector to have public display certificates since 2002 and is now considering extending this requirement to the private sector (Department for Communities and Local Government 2010). The Energy Efficiency Council recommends that governments should immediately commit to public display certificates for the buildings that they occupy and the Australian Government should examine the benefits of public display certificates for the private sector in a review of the scheme in 2011.

Third, while the Energy Efficiency Council supports the proposal that when the scheme is introduced it should only apply to building areas over 2,000m<sup>2</sup>, the Australian Government should commit to extend the energy efficiency disclosure scheme to all building areas over 1,000m<sup>2</sup> in 2011 subject to a detailed regulatory impact statement.

Fourth, the Bill should be expanded to cover other classes of commercial buildings as soon as possible. Currently, the Bill only applies to office buildings, because the NABERS scheme can only rate office buildings. Recent work by ClimateWorks has demonstrated that there are substantial energy savings in other types of commercial buildings, including hospitals, schools and hotels. The Australian Government should invest in expanding the NABERS scheme to these classes of building as soon as practicable, to allow their future inclusion in the energy efficiency disclosure scheme.

Finally, the Bill requires NABERS assessors to provide building owners, buyers and tenants with Energy Efficiency Guidance Information (EEGI) to help them improve the energy efficiency of their building. The content of the EEGI could either help building owners to implement energy efficiency, or confuse them and prevent effective action. As the peak body for energy efficiency, the Energy Efficiency Council should co-chair an industry panel that determines the content of the EEGI.

These changes will significantly improve the effectiveness of the Bill over time. However, the bill also needs to be complemented by other dedicated energy efficiency policies.

## 9. Additional policies

Section five (pages 6-7) notes that there are several market failures that impede investment in cost-effective energy efficiency. All of these barriers need to be addressed to unleash the potential for energy efficiency in commercial buildings. The Building Energy Efficiency Disclosure Bill 2010 will address some, but not all of these barriers.

The Energy Efficiency Council recommends a suite of policies to drive energy efficiency in the commercial building sector and across the economy. These include:

### 1. Set an energy efficiency goal

Set a goal for Australia to reduce stationary energy demand by 20 per cent below business as usual by 2020.

### 2. Require Electricity Distributors to invest in energy efficiency

Where distribution networks are constrained, investing in energy efficiency and distributed generation can offset more expensive investment in expanding the network. However, well-known regulatory problems in the National Electricity Market limit the incentive to invest in energy efficiency and distributed generation. The Energy Efficiency Council recommends that distributors be required to invest 10 per cent of the \$42 billion that they have been allocated over the next 5 years in demand-side measures.

### 3. Establish a national energy efficiency scheme

Set up a national incentive scheme to invest in energy efficiency in commercial buildings, industry and households. The scheme would replace or harmonise existing schemes in New South Wales, Victoria and South Australia.

### 4. Drive energy efficiency in industry

There are potentially billions of dollars worth of energy savings available from just the top 200 energy users in Australia. However, there is overwhelming global and local evidence that industry won't invest in energy efficiency without a combination of the national energy efficiency scheme and goals for major energy users. The Energy Efficiency Council is about to release detailed policy recommendations for industry.

### 5. Drive energy efficiency retrofits of existing commercial buildings

Energy efficiency retrofits in commercial buildings could reduce Australia's emission by around 16 Megatonnes per annum by 2020 (ClimateWorks 2010). The national demand-management scheme and national energy efficiency scheme will play a key role in driving these retrofits, but governments will also need to implement a scheme to finance energy efficiency retrofits and build the capacity of the property and energy efficiency sectors. The Energy Efficiency Council is about to release detailed policy recommendations for commercial buildings.

### 6. Cogeneration

The Energy Efficiency Council is currently finalising its policy recommendations around cogeneration

### 7. Government leadership

The Australian Government could save \$130 million *each year* through energy efficiency in its own operations. Investing in energy efficiency is not just prudential financial management, it could transform the market for energy efficient services and products, with governments occupying 32 per cent of Australia's commercial building market. Driving energy efficiency in governments requires a number of steps, including a clear funding path for agencies to access capital for efficiency upgrades.

## Reference and resources

- Bjornstad, D.J. & Brown, M.A. 2004, *A Market Failures Framework for Defining the Government's Role in Energy Efficiency*, Joint Institute for Energy and Environment, Knoxville, Tennessee.
- Centre for International Economics 2007, *Capitalising on the building sector's potential to lessen the costs of a broad based GHG emissions cut*. Centre for International Economics, Sydney.
- CimateWorks Australia 2010, *A Low Carbon Growth Plan for Australia*, Climate Works Australia, Melbourne.
- Davis Langdon 2009, *Retrogreening Offices in Australia*, Davis Langdon Research Report, Davis Langdon
- Department for Communities and Local Government 2010, *Impact Assessment: Proposals for extending Display Energy Certificates (DEC) to commercial buildings*, Department for Communities and Local Government, London. <http://www.communities.gov.uk/publications/planningandbuilding/extendingdecia>
- Garnaut, R. 2008, *The Garnaut Climate Change Review: Final Report*, Cambridge University Press, Melbourne.
- Golove, W.H. & Eto, J.H. 1996, *Market Barriers to Energy Efficiency: A critical reappraisal of the rationale for public policies to promote energy efficiency*, Lawrence Berkeley National Laboratory, Berkeley, California, <http://eetd.lbl.gov/EA/EMS/ee-pubs.html>
- Gurney, A., Ford, M., Low, K., Tulloh, C., Jakeman, G. and Gunasekera, D. 2007, *Technology: Toward a Low Emissions Future*, ABARE Research Report 07.16 prepared for the Australian Government Department of Industry, Tourism and Resources, Canberra, September.
- HSBC 2009, *Climate Annual Index Review September 2009*, HSBC.
- International Energy Agency 2008, *Energy Technology Perspectives 2008: Executive Summary*, International Energy Agency, Paris.
- McKinsey and Company 2008, *An Australian Cost Curve for Greenhouse Gas Reduction*, McKinsey and Company, Sydney.
- Metz, B., Davidson, O.R., Bosch, P.R., Dave, R. and Meyer L.A. 2007, *Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Jaffe, A.B, Newell, R.G and Stavins, R.N. 2005, 'A tale of two market failures: Technology and environmental policy', *Ecological Economics* 54: 2-3 p164-174
- McKinsey & Company 2008, *An Australian Cost Curve for Greenhouse Gas Reduction*, McKinsey & Company, Sydney.
- Paton, B. 2001, 'Efficiency gains within firms under voluntary environmental initiatives', *Journal of Cleaner Production* 9: 167-78.
- Sorrell, S., O'Malley, E., Schleich, J. & Scott, S. 2004, *The Economics of Energy Efficiency*, Edward Elgar Publishing Ltd, Cheltenham, United Kingdom.