Energy Efficiency Opportunities (Repeal) Bill 2014

Kai Swoboda
Economics Section

Contents

Purpose of the Bill ................................................................. 3
Background ................................................................................. 3
Committee consideration .............................................................. 4
  Senate Economics Legislation Committee .................................. 4
  Senate Standing Committee for the Scrutiny of Bills ............... 4
Policy position of non-government parties/independents ......... 4
Position of major interest groups ................................................. 5
Financial implications ............................................................... 5
Statement of Compatibility with Human Rights ....................... 6
Key issues and provisions.......................................................... 6
  Repeal of the Energy Efficiency Opportunities Act 2006 ....... 6
  Economics of energy efficiency identification and implementation ......................................................... 7
  Australia’s relative energy efficiency performance and energy efficiency opportunities ........................... 8
EEO program background ......................................................... 10
  2004 Energy white paper ......................................................... 10
  Productivity Commission inquiry into energy efficiency ..... 10
  Parliamentary consideration of the EEO Bill ....................... 11
EEO program extensions ......................................................... 12
  Remove exemption for electricity generators ................... 12
  Extension to energy transmission and distribution networks and major Greenfield and expansion projects ......................................................... 13
EEO program reviews and reports ............................................ 13
  Mid term review outcomes ................................................. 14
  Full cycle review outcomes ......................................... 15

Date introduced: 15 May 2014
House: House of Representatives
Portfolio: Industry
Commencement: 29 June 2014 (retrospective)

Links: The links to the Bill, its Explanatory Memorandum and second reading speech can be found on the Bill’s home page, or through http://www.aph.gov.au/Parliamentary_Business/Bills_Legislation
When Bills have been passed and have received Royal Assent, they become Acts, which can be found at the ComLaw website at http://www.comlaw.gov.au/.
Five year results reports.......................................................... 16
Energy efficiency and energy price trends............................... 17
Red tape reduction and benefits of repealing the EEO Act................................................................. 18
Avoided compliance costs (benefit)............................................. 18
Foregone energy savings (cost).................................................. 19
Uptake of energy efficiency opportunities through the Emissions Reduction Fund................................. 19
Purpose of the Bill
The purpose of the Bill is to repeal the *Energy Efficiency Opportunities Act 2006* (*EEO Act*) in its entirety with effect from 29 June 2014. This would have the effect of curtailing the program, which required large energy using businesses to assess their energy use and identify cost effective energy savings opportunities.

Background
The Energy Efficiency Opportunities (EEO) program commenced in 2006 and is governed by the *EEO Act*. The *EEO Act* establishes broad arrangements for the EEO program including the energy threshold for participation (0.5 petajoules (PJ) per annum) and penalty provisions for non-compliance.¹

The main object of the *EEO Act* is ‘to improve the identification and evaluation of energy efficiency opportunities by large energy using businesses and, as a result, to encourage implementation of cost effective energy efficiency opportunities’.²

Regulations made under the *EEO Act*, the Energy Efficiency Opportunities Regulations 2006, establish detailed arrangements for compliance with the program, including reporting, verification and assessment activities.³

The rationale for the EEO program at the time of its inception was generally that businesses had failed to recognise cost effective energy efficiency opportunities for a range of economic and financial reasons (including relatively low energy prices). By requiring firms to undertake energy efficiency audits, firms would discover projects that were financially attractive to the firm but which would also lead to beneficial environmental outcomes.

Under the EEO program, businesses with energy use of 0.5PJ in the specified year are required to undertake energy efficiency audits and assess opportunities for improved energy efficiency. This level of energy use is broadly equivalent to:

- 139,000 megawatt hours of electricity
- 9,000 tonnes of Liquefied Natural Gas (LNG) or 10,000 tonnes of Liquefied Petroleum Gas (LPG)
- 13 megalitres of diesel and
- spending of approximately $11–17 million on electricity, $1.5–2.5 million on gas or $16–18 million on diesel (depending on prices).⁴

Participating businesses are required to report publicly and to the government on their compliance with program requirements, which include reporting on energy consumption, assessments and details of energy savings. The Department of Industry notes that the number of businesses participating in the program is 315.⁵

Based on the 0.5PJ threshold, the Department of Industry notes that the EEO program covers around 65 per cent of Australia’s total energy use.⁶

The EEO program operates in five-year assessment cycles. The key compliance steps over the cycle involve assessment of energy use, registration in the scheme, undertaking energy efficiency assessments and reporting on outcomes. The time line for the first assessment cycle for businesses that entered the program based on their 2005–06 energy use covered the period 2005–06 to 2010–11 (Figure 1).

---

2. Ibid., section 3.
Figure 1  Timeline for the first assessment cycle 2006 to 2011, for businesses that participate in the EEO program based on the energy use in 2005–06

Step 1  Determine participation

Step 2  Register by 31 March 2007

Step 3  Submit assessment plan by 31 December 2007

Step 4  First assessments by 30 June 2008

Step 5  First reports to public and government by 31 December 2008

Remaining assessments and reports


Participants in the second cycle of the EEO program, covering the period 2011–12 to 2016–17 for participants who entered the program based on their energy use in 2011–12, is currently mid-cycle, with the completion of the first assessments due by 30 June 2014.\(^7\) Reporting under the program by these participants is first required by 31 December 2014.\(^8\)

Committee consideration

**Senate Economics Legislation Committee**

The Bill has been referred to the Senate Economics Legislation Committee for inquiry and report by 14 July 2014.\(^9\) Details of the inquiry are available on the Committee’s website.\(^10\)

As at the time of writing this Digest, the Committee had not delivered its report.

**Senate Standing Committee for the Scrutiny of Bills**

The Senate Standing Committee for the Scrutiny of Bills sought further detailed justification from the Minister for the possible retrospective commencement of the Bill.\(^11\)

**Policy position of non-government parties/independents**

At the time of writing this Digest, the Bill had passed the House of Representatives. The summary of non-government parties/independent policy positions below incorporates any contributions to the second reading debate on the Bill as well as positions expressed prior to the 2013 election on energy efficiency generally.

The Australian Labor Party has indicated that it will not oppose the Bill, although it believes that the repeal will ‘destroy’ a culture of innovation and energy conservation.\(^12\)

---

8. Ibid.
The Australian Greens 2013 election policies included proposals to increase funding for the Clean Energy Finance Corporation (earmarked for abolition by the Coalition) and designing a national energy efficiency scheme based on three existing state-based schemes.\(^{13}\)

**Position of major interest groups**

The Energy Efficiency Council, whose members include energy efficiency and cogeneration services providers, were disappointed when the 2014–15 *Mid-Year Economic and Fiscal Outlook* decision to de-fund the administration of the programme was announced.\(^ {14}\) With the announced repeal of the *EEO Act*, the Council considered that the Government was ‘breaking its promise to lower Australians’ energy bills’, noting that:

> The Abbott Government promised to help lower energy bills, but today they’ve broken it by cutting the Energy Efficiency Opportunities program. This world-class program helped companies find ways to save energy and lower their bills.\(^ {15}\)

In its submission to the Senate Committee examining the Bill, the Major Energy Users Inc., considered that the EEO program is no longer required as:

- the program has high compliance and administrative costs
- the increasing cost of energy is driving a need for reducing energy consumption and
- the proposed Emissions Reduction Fund (ERF) could overcome the barriers to discretionary investment in energy efficiency.\(^ {16}\)

The Property Council of Australia considered that the reporting requirements of the scheme duplicated reporting under the National Greenhouse and Energy Reporting Scheme (NGERS) and simply regulated existing business practice:

> For property companies we have got a demonstrated culture of identifying and implementing energy efficiency improvements and, in the context of higher energy prices and energy prices that are likely to continue to rise, I think that is only going to continue.\(^ {17}\)

**Financial implications**

The Explanatory Memorandum notes that the 2013–14 *Mid-Year Economic and Fiscal Outlook* (MYEFO) announced the termination of funding for the EEO program from 1 July 2014.\(^ {18}\) However, the 2013–14 MYEFO included the termination of funding for the EEO program with a range of other measures that were classified as being associated with the repeal of the carbon price mechanism. This makes it difficult to assess the cost savings for discontinuing with the EEO program in particular.\(^ {19}\)

It appears that the annual administration savings are in the order of several million dollars per year, with the Explanatory Memorandum for the 2006 EEO Bill including administration cost estimates of between $2.2 million and $3.9 million per year over the period 2004–05 to 2008–09.\(^ {20}\)

---

Statement of Compatibility with Human Rights

The Statement of Compatibility with Human Rights can be found at page two of the Explanatory Memorandum to the Bill. As required under Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011 (Cth), the Government has assessed the Bill’s compatibility with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of that Act. The Government considers that the Bill is compatible.

The Parliamentary Joint Committee on Human Rights considered that the Bill does not appear to give rise to human rights concerns.21

Key issues and provisions

Government support for energy efficiency programs for industry is usually based on the twin objectives of improved aggregate environmental benefits of avoided emissions and the financial benefit to businesses associated with costs savings in energy use.

Energy efficiency can have several different meanings which are often used interchangeably. Energy efficiency generally refers to gaining the same or a higher level of useful output, using less energy input. Technical energy efficiency is energy efficiency that comes from new and improved technologies and equipment (for example, energy-saving appliances, cogeneration in industrial applications) or operational practices (for example, energy-efficient design of industrial plant or just switching off lights and equipment when not in use). Energy intensity measures the energy used to produce a certain outcome, whether it be a widget or gross domestic product (GDP).

In Australia, the Commonwealth as well as state and territory governments have supported energy efficiency in a number of ways. The degree of compulsion and compliance impact of these programs varies significantly, from mandatory participation or technical standards for equipment, to voluntary participation through the provision of general information by government, grant programs for investment or co-investment in activities that improve energy efficiency or energy efficiency awareness.22

Repeal of the Energy Efficiency Opportunities Act 2006

Schedule 1 of the EEO Repeal Bill repeals the EEO Act in its entirety. The commencement provisions in section 2 of the Bill provide that the repeal would take effect on 29 June 2014.

The administration of the EEO program rests with the Department of Industry. The 2013–14 MYEFO effectively removed the funding provided to the department to administer the program.23

The Government’s key rationale for repealing the EEO Act and thereby discontinuing the EEO program is largely based on the benefits to business of removing $17.7 million per year in compliance costs.24 The Government considers that the EEO program is no longer required to deliver improvements in energy efficiency as higher electricity prices and a greater awareness of energy efficiency mean that ‘energy productivity is now core business for Australian industry’.25

The Government also notes that a key part of its greenhouse gas reduction policy—the Emissions Reduction Fund—will help businesses take action to improve their energy efficiency and that the energy white paper currently under development and work by the Council of Australian Governments are also considering options for improving energy productivity.26

---

25. Ibid.
26. Ibid.
The Coalition’s 2013 election policies did not directly include a policy on the future of the EEO program. However, the Coalition’s key commitment to meet Australia’s five per cent emissions reduction target—funding for emissions abatement though the Emissions Reduction Fund—foreshadowed that abatement from energy efficiency projects may be an activity supported by the fund. The Coalition’s deregulation agenda prior to the 2013 election was largely based on a 2012 discussion paper that examined ways of meeting the Coalition policy to reduce the regulatory and red tape burden for individuals, businesses and society as a whole by at least $1 billion per year.

**Economics of energy efficiency identification and implementation**

There is a broad literature on the barriers firms can face in capturing existing commercially-viable energy efficiency opportunities. Three different types of barriers have been identified:

- **market failure** — where the market fails to provide or allocate goods and services to their most beneficial use
- **behavioural, cultural and organisational barriers** — which arise because of limits on the decision-making or monitoring abilities of individuals and organisations and
- **other barriers and impediments** — such as the additional costs of adopting energy-efficient investments or the impact of those investments on output.

Economic theory suggests a range of reasons why there may be market failure in the market for energy efficiency (Table 1). Transaction costs in acquiring information and split incentives between the person purchasing an energy consuming product and the person who benefits from it can inhibit the adoption of energy efficient technologies. These factors can affect both the incentives to search for and identify energy efficiency benefits — and their subsequent uptake.

Table 1  Barriers in the market for energy efficiency

<table>
<thead>
<tr>
<th>Category</th>
<th>Market failure</th>
<th>Particular instance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market failure</td>
<td>Imperfect information</td>
<td>Lack of information may lead to cost effective energy efficiency opportunities being missed.</td>
</tr>
<tr>
<td></td>
<td>Split incentives or principal-agent relationships</td>
<td>Energy efficiency opportunities are likely to be foregone if the party cannot appropriate the benefits of that investment. For example: individual departments in an organization may not be accountable for their energy use and therefore have no incentive to improve efficiency.</td>
</tr>
<tr>
<td></td>
<td>Adverse selection</td>
<td>Suppliers know more about the energy performance of a good than purchasers. The latter face difficulties in both obtaining information prior to purchase and verifying performance subsequent to purchase. As a result, purchasers will tend to select goods on the basis of visible aspects such as price and be reluctant to pay the price premium for high efficiency products.</td>
</tr>
<tr>
<td>Behavioural</td>
<td>Values</td>
<td>Energy efficiency has clear environmental benefits. Individuals motivated by environmental values may therefore give a higher priority to efficiency improvements than those that are not.</td>
</tr>
<tr>
<td></td>
<td>Form of information</td>
<td>Research demonstrates that the form of information is critical. To be effective, information must be specific, personalized, vivid, simple and available close to the time of the relevant decision.</td>
</tr>
<tr>
<td></td>
<td>Credibility and trust</td>
<td>The credibility and trust placed in the source will impact on the outcome.</td>
</tr>
<tr>
<td></td>
<td>Inertia</td>
<td>Inertia creates a bias against energy efficiency since it involves investing in hardware with uncertain outcomes and represents a departure from the status quo.</td>
</tr>
</tbody>
</table>


Government intervention to promote improvements in energy efficiency can target all or some of these barriers.

**Australia’s relative energy efficiency performance and energy efficiency opportunities**

The Australian economy has been more productive with its use of energy over the past 25 years, with the energy to GDP ratio declining in most years since 1989–90. Based on the alternate measure of energy intensity for the economy derived from individual sectors—the composite energy intensity—this improvement in the use of energy is less pronounced (Figure 2).

---

Based on data compiled by the International Energy Agency (IEA), Australia has improved its aggregate energy intensity significantly since 1990 compared to selected IEA countries. However, most of this improvement is attributed to structural changes in the economy rather than pure improvements in energy efficiency within particular industries (Figure 3).

Notes: efficiency effect represents the composite economy-wide adjusted energy intensity metric. IEA 15 member countries are those for which sufficient data is available to undertake analysis.

Recent assessments of the potential for further improvements by businesses in energy efficiency have highlighted the availability of further opportunities to improve energy efficiency. These assessments include:

- a 2012 consultancy report by Energetics on energy use and energy efficiency opportunity data for commercial sector and small/medium businesses\(^ {32} \) and

- a 2012 consultancy report by ClimateWorks Australia on inputs to the Energy Savings Initiative modelling from the Industrial Energy Efficiency Data Analysis Project.\(^ {33} \)

**EEO program background**

**2004 Energy white paper**

The EEO program was an outcome of the Howard Government’s 2004 energy white paper, *Securing Australia’s Energy Future*, in response to identified market failures and organisational barriers to improved energy efficiency by large energy users in the private sector.\(^ {34} \) The then Government noted in the white paper that:

> ... existing government measures focus largely on the commercial and residential sectors, and have relatively little impact on the industrial sector. Some states have measures that target industrial users, with some requiring low-level audits and the uptake of energy efficiency opportunities in some cases. The Greenhouse Challenge programme also requires low-level energy audits by members.

The very largest energy users in Australia (those using more than 0.5 petajoules a year— around 250 firms) account for almost two-thirds of all energy used by business. These are mainly industrial firms but include a number in the commercial sector. Improving the uptake of commercial energy efficiency opportunities by these firms has the potential to significantly enhance economic welfare while reducing greenhouse emissions.\(^ {35} \)

**Productivity Commission inquiry into energy efficiency**

The 2004 energy white paper also announced the establishment of a Productivity Commission Inquiry into energy efficiency to provide further information on possible policy responses and the potential economic and environmental benefits from improving energy efficiency.\(^ {36} \)

The Productivity Commission’s inquiry report, *The Private Cost Effectiveness of Improving Energy Efficiency*, was released by the Government in October 2005.\(^ {37} \) While the Commission endorsed much of the economic literature on reasons why firms do not pay attention to energy efficiency or do not invest in cost-effective energy efficiency opportunities when they arise, the Commission did not necessarily endorse government intervention to remedy these shortcomings in all instances. The Commission noted that:

> The presence of market failure does not of itself warrant government intervention. Such intervention can be costly and introduces its own distortions, especially if the intervention is poorly targeted (chapter 2). Intervention is only warranted when it produces net benefits to the community (including economic, social or environmental benefits and the public and private costs). One way that this might be achieved would be to target the market failure as directly as possible. For example, some information asymmetries may be virtually insurmountable for most consumers at any reasonable cost. Government intervention that provided such information directly or that required that it be provided (through labelling, for example) could reduce the search costs of obtaining information.\(^ {38} \)

---

35. Ibid., p. 112.
36. Ibid., p. 111.
37. Ibid., p. 111.
38. Ibid., p. 54.
Sandwiched between the announcement of the EEO program in the 2004 energy white paper and the introduction of the legislation to establish the EEO (see below), the Commission’s comments on the proposed EEO program were lukewarm. The Commission’s reservations about the proposed program were based on:

- the use of a threshold of high levels of energy use for participation in the program which was ‘counter-intuitive’ and ‘counter-evidentiary’ as energy-intensive users are more likely to already be paying attention to identifying possible energy efficiency savings
- the likelihood that it would create significant administrative costs and procedural difficulties and
- organisational barriers alone cannot justify regulatory intervention and to address the perceived lack of managerial attention to energy efficiency matters may distort investment decisions and adversely affect the private cost effectiveness of firms’ operations.  

**Parliamentary consideration of the EEO Bill**

The legislation to implement the EEO program, the Energy Efficiency Opportunities Bill 2005 (EEO Bill), was introduced in the Parliament in September 2005 and passed the Parliament in March 2006.  

The EEO Bill had bipartisan support from the Coalition and ALP in the House and Senate and was generally supported by the Australian Greens and Australian Democrats. The Australian Greens proposed amendments to provide for a declining threshold for inclusion in the program, the establishment of a national energy efficiency target and for mandatory implementation of identified projects where there is a reasonable payback period for the costs of the investment to be recovered to that business. The Australian Democrats also supported mandatory implementation of identified projects. However, none of these amendments were supported by the Senate.

A regulation impact statement (RIS) to support the implementation of the EEO Bill was included as part of the Explanatory Memorandum to the Bill. The RIS included a re-statement of the rationale for government intervention through the EEO program as addressing some market and organisational failures and the environmental benefits associated with such action:

> The orthodox economic position is that Government intervention is only warranted to address the first category, market failures (especially in this case, information failures and environmental externalities). However, organisational failure and behavioural norms that are widespread in the market and produce outcomes that confound orthodox expectations of what the market should be delivering are also arguably market failure.

Anecdotal evidence from previous Australian programs supports the Government’s view that large energy users do in fact appear to lack information about energy efficiency opportunities within their own organizations, and are thus failing to take advantage of potentially privately cost effective investments.

The other, and equally important problem to which this program is directed is the ability of such a measure to help address environmental externalities associated with emissions. The Government explicitly stated in the White Paper that it is committed to a strong, secure and sustainable energy sector. However there is no single solution that will address the Government’s desire to encourage substantial investment in the infrastructure needed to support growing energy demands, while at the same time moving the sector towards a low-emissions future.

The RIS assessed the proposal included in the Bill against a voluntary scheme. Some of the outcomes of the cost benefit analysis were:

---

45. Ibid., p. 8.
participating firms in a mandatory scheme would face upfront compliance costs of around $22 million and ongoing compliance costs of almost $29 million per year

based on the available evidence, a best estimate is that the net financial benefit of firms taking up energy efficiency opportunities identified through the EEOA measure could rise to around $205 million in year ten (2014–15), or a total benefit in net present value terms of $760 million and

a ratio of benefits to costs of between 2.9 (at a discount rate of three per cent) to 2.3 (at a discount rate of 12 per cent).

**EEO program extensions**

*Remove exemption for electricity generators*

Prior to the 2010 election, the then Government proposed to extend the coverage of the EEO program to remove the exemption from the program of electricity generators. The proposed extension was part of a broader environmental policy framework for electricity generators that included establishing best practice emissions standards.

Regulations to remove the exemption for electricity generators took effect from 1 July 2011. A regulation impact statement (RIS) prepared for the Department of Resources, Energy and Tourism by consultants Access Economics assessed the costs and benefits of removing the exemption. The Department’s summary of the RIS was that:

> The net present value of the energy cost savings to the fossil fuel generators is $640.1 million, resulting in a benefit cost ratio (BCR) of 2.95 in the absence of a carbon price. Generators would need only to save 0.18% of their generation energy use and 2% of ancillary energy use to obtain a positive BCR. A carbon price significantly increases the positive BCR.

The calculated accompanying compliance costs for generators in meeting the EEO program requirements were estimated to be $107.1 million in net present value (NPV) terms. These estimates were based on observed compliance costs under the program, with a cost of $200,000 per annum assumed for the largest generator, which was then moderated to account for different firm level structure.

Stakeholders who opposed the removal of the exemption for electricity generators were primarily those involved in generating electricity or supplying fuels. The RIS noted that:

> These stakeholders mostly viewed the policy as ‘unnecessary’ as they considered that the electricity generation industry was already strictly regulated by various Federal and State programs and that energy efficiency is already a priority for the energy intensive generators. There is a high opportunity cost associated with electricity consumption in terms of the ability to sell that electricity to the market and this serves as an inherent driver for generator efficiency in the market. The market for electricity generation is competitive and transparent forcing generators to optimise their cost structures to maximise profit. As primary energy costs are generally one of the largest costs, economic optimisation of energy efficiency is a business priority. Plants are also long lived assets engineered precisely to maximise efficiency such that identifying equipment or processes that can be upgraded with a maximum four year payback period may be difficult.

---

46. Ibid., pp. 24–25, 30.
51. Ibid., p. viii. No single year total compliance estimates were presented.
52. Ibid., p. 10.
These stakeholders also stated that assessment and reporting requirements mandated by the EEO program would only add to administrative and compliance time and costs without achieving additional benefits.\(^{53}\)

**Extension to energy transmission and distribution networks and major Greenfield and expansion projects**

On 10 July 2011, the Prime Minister announced—as part of the announcement of the implementation of the carbon price mechanism—that the Energy Efficiency Opportunities Program would be extended to energy transmission and distribution networks and major Greenfield and expansion projects.\(^{54}\) Part of this extension was further funding to support the program to 30 June 2017, ‘enhanced’ assessment and verification requirements and the establishment of a voluntary scheme for medium-sized energy users.\(^{55}\)

A RIS was not prepared for this decision, with the Office of Best Practice Regulation noting that a post-implementation Review would therefore be required within one to two years from the implementation of the extension of the EEO program.\(^{56}\)

The decision to extend the EEO program to energy transmission and distribution networks was reversed in 2013, with the Government accepting the results of a RIS on the extension that the costs would exceed the benefits.\(^{57}\) The RIS upon which the Government based its decision, compiled by consultants Sapere Research Group assumed compliance costs of $19.1 million for the likely 28 additional participants in the EEO program.\(^{58}\) The overall result of the cost benefit analysis was for a net benefit of negative $12.6 million, with a benefit to cost ratio (BCR) of 0.74.\(^{59}\)

The regulations governing the EEO program were amended to reflect the decision to exclude energy transmission and distribution networks in June 2013.\(^{60}\)

A separate RIS prepared by consultants Sapere Research Group for the extension of the EEO program was based on modelling for the benefits attributable to the EEO program for a ‘typical’ mining project.\(^{61}\) Informed by case studies, the modelling results were for a BCR of between 1.47 and 1.64 depending on the discount rate used. Business compliance costs in 2013–14 dollars (including $2.5 million delay costs) were assumed to be $3.4 million over six years.\(^{62}\)

Amending regulations to support the extension of the EEO program to the design stage of new developments and expansion projects from 1 July 2013 were implemented in July 2013.\(^{63}\)

**EEO program reviews and reports**

There have been a number of scheduled reviews undertaken on the EEO program. There has also been report on outcomes of the first cycle by the Department.

These reviews have included information about the costs and benefits of the EEO program as a whole and for individual participants. The reviews have also provided a basis for making adjustments to the EEO program, including changed administration and compliance arrangements.

---

53. Ibid., p. 19.
54. J Gillard (Prime Minister of Australia) and G Combet (Minister for Climate Change and Energy Efficiency), *Energy efficiency: creating a clean energy future*, joint media release, 10 July 2011, accessed 3 June 2014.
59. Ibid., p. 34, accessed 3 June 2014.
60. *Energy Efficiency Opportunities Amendment (Continuation of Networks Exemption) Regulation 2013*, accessed 3 June 2014.
62. Ibid., p. 36.
**Mid term review outcomes**

A mid-cycle review of the EEO program was conducted jointly by consultant Environmental Resources Management Australia Pty Ltd and the CSIRO. The final report was provided to the then Department of Energy and Resources in December 2010. The stated aim of the Mid-Cycle Review was to assess the impact the EEO Program had had upon the systems, people, and processes participating corporations had in place to assess, manage and report on their energy use and energy efficiency opportunities. No information about compliance costs under the EEO program was presented in this report.

Key outcomes of the mid-term review included:

- in 2009, energy savings reported as implemented, implementation commenced or to be implemented were at 56 PJ, which is nearly 1.5 per cent of Australia’s 2007/08 total energy end use of 3,907.1 PJ and
- there was a significant increase in perception by corporations over the three-year period to 2010 that the EEO program is a compliance exercise with limited value to their business.

In addition to these tangible outcomes for business, the mid-term review report noted that survey responses indicated that most of the barriers to improving energy efficiency within organisations had been substantially reduced (Figure 4).

**Figure 4** Barriers to identification of energy efficiency opportunities before and after the EEO program

![Figure 4](image-url)  

---

65. Ibid., p. 2.
66. Ibid., pp. 53, 66.
Full cycle review outcomes

An evaluation of the first full cycle of the EEO program was conducted by consultants ACIL Tasman in 2013.67 A key finding and recommendation of this review was that the EEO program to date had delivered benefits to participants well in excess of their costs, that information type market failures continue to remain an important barrier to energy efficiency investment and that the EEO program should complete its second cycle.68

Some of the other key findings of the full cycle review included:

- the ‘conservative’ estimate of the ratio of industry’s cumulative BCR attributable to the EEO program was 3.67, net of implementation and compliance costs
- assessment and implementation costs over the first cycle of the program were reported as being just over $914.51 million. The administrative costs of the program over the same period were about $18.95 million and
- the ‘additional’ improvement in energy efficiency attributable to the EEO program was approximately 40 per cent of the energy efficiency improvements in the Australian industrial sector, with energy savings (88.8 PJ) and net financial benefits ($808 million per year) reported from opportunities to be implemented.69

Even though the full cycle review recommended that the EEO program should continue, it confirmed that businesses had significantly improved the attention they paid to energy efficiency, with energy efficiency nominated as ‘standard practice’ across two-thirds of EEO participant firms in 2012 compared to only one-third in 2005.70 Improvements in energy management and awareness in other areas was also reported (Figure 5).

---

68. Ibid., p. iii.
69. Ibid., pp. ii–iii and 70.
70. Ibid., p. 14.
Figure 5  Organisational practices for energy management – 2012 and 2005


Five year results reports

In December 2013, the Department of Industry prepared and published a series of reports that covered the first cycle of the EEO program, including an overview report and reports for various industry sectors.  

The overview report includes a range of information including aggregated information on EEO participants, energy use, energy savings identified, business responses to identified energy savings opportunities and an estimate of the annual net financial benefits of energy savings. Some of the key findings of the overview report are:

---

71. Department of Industry, *‘Energy Efficiency Opportunities: five year results reports’*, Department of Industry website, accessed 3 June 2014.
• as at 30 June 2011, EEO Program participants reported that they had identified opportunities that could result in annual energy savings of 164.2 PJ. Of these, 88.8 PJ were adopted

• the adopted savings were reported to have an annual net financial benefit of $808 million and represent an annual emissions abatement of approximately 8.21 million metric tonnes of carbon dioxide equivalent emissions (MtCO₂-e) or 1.5 per cent of Australia’s total emissions in 2010–11, and

• EEO Program participants adopted 54 per cent of the energy efficiency opportunities identified, leaving 46 per cent of opportunities under investigation or not to be implemented.⁷²

As part of business reporting on the EEO program, businesses were encouraged to voluntarily report data on compliance costs, the reporting framework providing for different types of compliance costs (for consultants and in-house costs) covering registration, preparation of energy savings assessments, reporting and verification. Only one in five businesses provided information on compliance costs during the cycle, with an average cost of $94,854.⁷³

**Energy efficiency and energy price trends**

The EEO program was implemented at a time when Australia was perceived to have a competitive advantage from relatively low energy prices compared to some major trading partners and had generally exhibited poorer improvements in energy efficiency compared to overseas countries.⁷⁴

In recent years, the price of energy (electricity and gas) for manufacturing firms has increased significantly (Figure 6). There are a number of factors that have contributed to this increase, including the unwinding of cross subsidies between users, the cost of environmental programs (including the carbon price from July 2012) and higher levels of investment in network infrastructure.⁷⁵

![Figure 6 Electricity and gas prices for manufacturers, 1990 to 2014 (index 1990=100)](source)

While the increase in electricity and gas prices has been significant, particularly from around 2007, expectations of future electricity price changes are for more moderate price increases. For example, electricity price increases in the next few years will moderate mainly due to a reduction in network charges across most jurisdictions and competition in the wholesale market, with analysis by the Australian Energy Market Commission forecasting

---


⁷³ Ibid., p. 34.


annual growth in prices at 1.2 per cent over the period to 2015–16. However, for gas users in eastern Australia, price increases are expected to accelerate as LNG is exported from Queensland from 2015, with some projections of a tripling of gas prices in the medium term.

With significant energy price increases for industrial and commercial users in the past decade, any comparative competitive advantage in energy prices appears to have dissipated. However, with energy prices expected to continue to increase, especially those for natural gas, businesses will need to focus on energy efficiency in order to remain competitive. This supports the Government’s view that higher energy prices should of their own accord make energy efficiency activities attractive for business.

**Red tape reduction and benefits of repealing the EEO Act**

The Government’s main argument for the repeal of the *EEO Act* is based on the benefits to business of removing $17.7 million per year in compliance costs. The preparation and publication of cost benefit analysis has accompanied legislation and changes to regulation over the period of the EEO program. While the results of these analyses can depend on the key assumptions made, they nevertheless provide for a more informed debate about the policy responses to improve energy efficiency.

Cost benefit analyses on the design of the EEO program and decisions about subsequent changes in program scope have generally included:

- a statement about the rationale for government intervention
- estimates of the compliance costs of the program, including energy measurement costs to confirm participation requirements, costs to meet registration requirements, assessment costs and reporting costs. These costs are typically based on assumptions about the requirements for different types of businesses and sectors that are likely to be covered. Compliance cost estimates prepared for proposed changes to the EEO program also incorporated some knowledge of actual or reported compliance costs. Administration costs to government were also included and
- the aggregate financial benefits of associated reductions in energy costs associated with implementation of identified energy efficiency opportunities. These are typically based on some analysis and assumptions about the quantum of unrealised opportunities and the degree of additionality (those opportunities that would not have been taken up by businesses had it not been for the EEO program).

Unfortunately, the various cost benefit analyses prepared to accompany the introduction of the EEO program and subsequent proposed changes do not generally present information on a comparable basis. For example, estimates are sometimes discounted to a present value basis or presented for a single year or cycle only.

The Explanatory Memorandum includes the cost benefit analysis for the repeal of the *EEO Act*, with three options assessed: status quo (EEO program continues), a streamlined program based on the EEO, and the termination of the EEO program. Unlike previous analyses, the RIS should also reverse the assessment of the costs and benefits of the proposals so that the costs are the financial gains from energy savings foregone and the benefits are the avoided costs of compliance.

**Avoided compliance costs (benefit)**

The key benefit associated with the repeal of the EEO is avoided compliance costs, which are calculated to equate to $17 million annually. These costs are calculated based on ‘participant feedback through evaluation

---


surveys and data reported to the government as part of the EEO Program compliance requirements.\textsuperscript{81} The $17 million annual compliance cost equates to around $38,239 per participating business.\textsuperscript{82} This compares to previous published estimates of annual compliance costs per business for the first five-year cycle of the EEO program of $94,854.\textsuperscript{83}

**Foregone energy savings (cost)**

The RIS does not include any published calculation of the foregone energy savings that would accrue were the EEO program to continue. Instead, the RIS notes that benefits of energy savings are ‘likely’ to decrease over time, with the proportion of ‘additionality’ of energy savings attributed to the EEO program in the ACIL Tasman full cycle evaluation to be ‘only 25 per cent’ of the total improvement in energy efficiency.\textsuperscript{84}

The absence of such a published calculation makes it difficult to assess the aggregated energy efficiency savings foregone through the discontinuation of the EEO program.

**Uptake of energy efficiency opportunities through the Emissions Reduction Fund**

The Government notes that its key policy mechanism to meet Australia’s greenhouse gas emissions reduction target—the proposed Emissions Reduction Fund—will ‘help business and industry to take direct action to reduce emissions and improve their energy efficiency’.\textsuperscript{85}

Energy efficiency measures are generally among the lower cost and abatement of policy options (Figure 7), with many providing abatement reductions at negative cost. This means that making those changes can lead to considerable abatement for little long-term cost, or even for financial gain.

**Figure 7** Australian emissions reduction cost curve

![Australian emissions reduction cost curve](image)


While the ERF is yet to be legislated, energy efficiency improvements that would not otherwise have occurred except for the support provided by the ERF, are likely to qualify for assistance through facility-level assessments for activity-based methods under an expanded Carbon Farming Initiative for industrial energy efficiency and building energy efficiency.\textsuperscript{86} An alternative facility-based assessment may also provide for aggregation.

\textsuperscript{81} Ibid., p. 23.

\textsuperscript{82} Parliamentary Library estimate calculated as the total calculated annual compliance cost of $17,742,982.22 divided by the 464 businesses participating in the EEO program as at March 2014.

\textsuperscript{83} Department of Industry, *Energy efficiency opportunities program, The first five years: 2006–2011, Overview*, op. cit., p. 34.


opportunities for a business that makes energy efficiency improvements that may be measured on a broader basis.\textsuperscript{87}

\textsuperscript{87} Ibid., p. 25.