

Outcome Evaluation

Getting More From Less

*A review of progress on energy efficiency
and renewable energy initiatives in New Zealand*



Office of the
PARLIAMENTARY COMMISSIONER FOR THE ENVIRONMENT
Te Kaitiaki Taiao a Te Whare Pāremata

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Outcome Evaluation: *Getting More From Less* (June 2002)

Background

Getting More From Less (GMFL) was released in February 2000. Its purpose was to examine and review progress with the implementation of energy efficiency and renewable energy initiatives as a contribution to sustainable development in New Zealand. It highlighted the significant potential to improve energy efficiency in the transport, residential, commercial, industrial and agricultural sectors. It also noted the importance of fostering new renewable energy initiatives.

The report made fourteen recommendations to the Ministers of Energy, Transport, Environment and Revenue. These focused on the need to:

- establish a Government energy efficiency and renewable energy agency
- develop a new energy efficiency and renewable energy strategy
- audit the effectiveness of departmental and inter-departmental processes for reporting on the environmental impacts of energy and transport sector policy proposals
- review the adequacy of electricity and gas markets to address energy demand management and the impacts of fixed line pricing on energy efficiency
- investigate and report on opportunities for addressing the environmental effects of transport patterns and the energy efficiency of the transport sector
- investigate and report on the use of consumption and pollution-based taxes.

The purpose of this evaluation is to ascertain the responses of public authorities to the recommendations made by the Parliamentary Commissioner for the Environment (PCE) and to determine what progress has been made towards the outcomes sought in *Getting More From Less*.

Overview Of Progress To Date

The Government has accepted the vast majority of recommendations made in *Getting More From Less*. Considerable progress has also been made to implement many of these since 1998. Nonetheless, further action is needed in many areas. Progress to meet the PCE's recommendations is summarised below.

Rec.	Status
1	Accepted and implemented
2	Accepted and implemented
3	Rejected
4a	Accepted and implemented
4b	Accepted
4c	Accepted and implemented
5	Accepted
6a	Accepted and implemented
6b	Accepted
7a	Accepted and implemented
7b	Accepted
7c	Accepted
7d	Accepted
7e	Accepted and implemented
8a	Accepted and implemented
8b	Accepted
9	Accepted
10	Accepted
11	Accepted
12	Accepted
13	Rejected
14	Superseded

TERMINOLOGY

Accepted and implemented	<i>The substance of the advice has been implemented according to the recommendation.</i>
Accepted	<i>There is an official intention to address the recommendation, or there has been an acceptance of the advice in principle, but further action is required.</i>
Rejected	<i>The Government does not agree that change in this area is necessary; or there has been no substantive action over the intervening time period.</i>
Superseded	<i>Events have overtaken the advice given.</i>

Government Responses And Progress To Date

Recommendation 1 (accepted and implemented): *Establish a Government-supported energy efficiency and renewable energy agency.*¹

- The Energy Efficiency and Conservation (EEC) Act 2000 came into effect on 1 July 2000. This established the Energy Efficiency and Conservation Authority (EECA) as a stand-alone Crown entity to encourage, promote, and support energy efficiency, energy conservation, and the use of renewable sources of energy. The functions and structure of EECA are consistent with the recommendations made by the PCE.

Recommendation 2 (accepted and implemented): *Prepare a new national energy efficiency and renewable energy strategy using a consultative process.*

- The EEC Act 2000 required the Minister of Energy to develop a National Energy Efficiency and Conservation Strategy. A draft Strategy was issued in March 2001 and a final Strategy was released after consultation on 27 September 2001. This will remain in force until 2006.
- The Strategy makes explicit linkages to the Climate Change Programme currently being developed by Government.

Recommendation 3 (rejected): *Commission an audit of the effectiveness of departmental and inter-departmental processes for assessing and reporting on the environmental impacts and sustainability implications of energy and transport sector proposals.*

- The Ministers of Energy, Environment and Transport do not believe that an official audit of departmental and inter-departmental processes is necessary.
- The Ministers of Energy and Environment suggested that the Transport Programme of the National Energy Efficiency and Conservation Strategy (NEECS) now clearly identifies the responsibilities of MfE, EECA, MoT and other relevant departments to address the sustainability of the transport sector. They are also confident that “environmental impacts and sustainability implications were effectively incorporated in the inter-departmental processes used to develop the NEECS.”
- However, the Associate Minister of Transport noted that a recent internal review of the Ministry of Transport’s environmental funding and policy “drew the Ministry’s attention to the need to improve departmental co-operation.” She also suggested that “in light of the success of the climate change cross-departmental group...the Minister sees value in adopting a similar approach with transport and energy.”

¹ These recommendations are a summary only. A full list of the original recommendations are included in the Appendix.

Recommendation 4 (accepted and partially implemented)²: *Review the adequacy of the electricity and gas markets to address energy demand management issues, the current structural framework for the electricity sector, and the use of fixed-line pricing by line companies.*

The Electricity Sector

- A Ministerial Inquiry into the Electricity Industry was conducted from February to June 2000. Its purpose was to assess the extent to which the regulatory regime could ensure that electricity is delivered in an efficient, reliable and environmentally sustainable manner to all classes of consumer.
- Following this inquiry, the Government released a Government Policy Statement on electricity in December 2000. This identified the government's overall objectives for the electricity industry "to ensure that electricity is delivered in an efficient, fair, reliable and environmentally sustainable manner to all classes of consumer. Industry arrangements should promote the satisfaction of consumers' electricity requirements in a manner which is least-cost to the economy as a whole and is consistent with sustainable development."
- The Electricity Amendment Act 2001 established a role for the PCE to assess the electricity industry's environmental performance. An audit framework is currently being developed to examine the extent to which an Electricity Governance Organisation (to be established in late 2002) meets the Government's environmental objectives for the electricity industry
- The Minister of Energy also noted that a 'fixed charge option' is now available to domestic consumers throughout New Zealand. All retailers supplying domestic consumers are required to offer at least one tariff with a fixed charge of no more than 10 per cent of the bill of the average domestic consumer.

The Gas Sector

- A review of the gas sector began in April 2001. Its purpose is to determine the degree to which the sector is ensuring that natural gas is delivered in an efficient, fair, reliable and sustainable manner to existing and potential users. The terms of reference for the review were to investigate the overall efficiency of the gas sector; the regulatory regime for gas companies; and the use of take or pay contracts. An initial report was released in October 2001 followed by a summary of submissions in April 2002. An officials report will be released to Government with recommendations at the end of June 2002. The Ministry for the Environment and EECA have participated in this process with the Ministry of Economic Development.

Recommendation 5 (accepted): *Establish an appropriate monitoring framework for the energy sector in order to assess the environmental, economic and social outcomes of energy reforms.*

- As noted above, the Electricity Amendment Act 2001 established a role for the PCE to provide some monitoring in this area.

² Some recommendations consisted of more than one part (see Overview). For some numbers, only parts of the recommendations have been 'implemented' while others have only been 'accepted'.

- The Minister of Energy also noted that tools will be developed to measure the “whole system efficiency” of the electricity sector in 2002/03. This work is being conducted as part of EECA’s Energy Supply Programme.
- Some work is also being conducted to look at the energy sector more broadly. The Minister of Energy highlighted the role of monitoring work to assess progress towards the government’s energy efficiency and renewable energy targets.
- The Minister of Energy also noted that “to avoid possible inconsistencies, the work on indicators for the environmental effects of energy (part of the Environmental Performance Indicators Programme co-ordinated by MfE) was put on hold while the NEECS was being developed.” He suggests that the “way is now clear to resume work to finalise these indicators” although no time-frame has been identified for their development.

Recommendation 6 (accepted and partially implemented): Take immediate action to implement the three proposed minimum energy performance standards (MEPS) for domestic electric hot water cylinders, fluorescent lamps and ballasts for office lighting. Renew the energy-wise companies campaign.

- EECA was empowered to prescribe MEPS in 2000. In February 2002 the Energy Efficiency (Energy Using Products) Regulations 2002 were also enacted. As a result, MEPS will become mandatory for fluorescent tubes, domestic refrigerators and freezers, three-phase cage induction motors and packaged air conditioning units from 1 July 2001. MEPS will also take effect for domestic electric storage water heaters and fluorescent lighting ballasts from 1 February 2003.
- EECA has reviewed the Energy Wise Companies campaign and is intending to re-launch a “new and improved” campaign towards the end of 2002. The Minister of Energy noted a proposal to introduce a tiered programme of services to target different groupings of businesses (such as small businesses or intensive users of energy).

Recommendation 7 (accepted and partially implemented): In the short to medium term, assess the potential for introducing further MEPS; a comprehensive labelling regime for domestic appliances, houses, vehicles and motors; provision of information on energy efficient building designs; the level of funding and agency support for research into national and sectoral energy efficiency trends; and the level of funding and support for the household energy end-use project.

- As noted above, MEPS have been introduced for an additional three product classes.
- EECA was empowered in 2000 to prescribe labelling requirements for all products including vehicles. On 1 April 2002, energy labelling became mandatory for refrigerators and freezers, dishwashers, clothes dryers, clothes washers and household-sized air conditioners.
- The Minister of Energy noted that the “government has given its approval in principle to progressing vehicle fuel efficiency labelling.” The Ministry for the Environment, EECA and the Ministry of Transport are expected to report back to Cabinet on proposals for this initiative in late 2002.
- A labelling regime for houses has not been developed. Nonetheless, EECA has been involved in the development of a home energy rating scheme in Canterbury.

The Minister of Energy suggested that this pilot scheme could be used to determine the viability of similar schemes elsewhere.

- EECA has not specifically assessed the potential to expand the provision of information on energy efficiency building designs. However, the Minister of Energy suggested that they are continuing “to work with industry partners to develop good practice information on a range of building technologies and design practices”. In addition, EECA and Standards NZ have been developing standards for insulation and working on a voluntary code of practice for houses.
- Further work is needed to promote research into national and sectoral agency energy efficiency trends. The Minister of Energy suggested that this recommendation is being addressed by the Energy Monitoring and Analysis measures in the National Energy Efficiency and Conservation Strategy. These measures are currently being reviewed by EECA and Statistics NZ with their “upgrade” scheduled for 2003.
- The Minister of Energy noted that the Household Energy End-use Project “will progress to completion over the next 3 years”. The project is now being funded by EECA, the Foundation for Science Research and Technology and the Building Levy.

Recommendation 8 (accepted and partially implemented): Take immediate action to implement the revised Clause H1 (building insulation) of the building code; and review the potential for increasing the requirements of this clause.

- The Building Amendment Regulations 2000, which came into effect on 29 December 2000, implemented the revised Clause H1.
- The Minister of Internal Affairs suggested in November 2000 that the Building Industry Authority was considering a review of this Clause in 2001. This review is now scheduled for 2003. More regular reviews are planned for every 5 years.

Recommendation 9 (accepted): Require all Government departments, ministries, agencies and state-owned enterprises to audit and report annually on the energy efficiency of their operations to meet an overall Government energy efficiency target.

- In his response to the PCE in September 2000, the Minister of State Services did not signify any intent to issue a directive to government agencies to improve their energy efficiency performance. He placed faith in the National Energy Efficiency and Conservation (NEEC) Strategy to “provide the platform for addressing issues of State Sector energy efficiency and how it will be monitored and reported on.”
- Under the Energy Wise Government programme, the Strategy sets a target for Central Government of a 15 percent improvement in energy efficiency by 2005.
- The programme is based on voluntary agreements between EECA and individual crown agencies. EECA is targeting all crown-funded agencies (including Government departments, Crown research institutes, area health boards and tertiary education providers) with energy bills over \$100000 p.a. The agreement requires completion of an energy management plan and energy audits.
- EECA currently has agreements in place with 45 agencies (representing approximately half of all agencies targeted).
- Local government is also being engaged with the same target and voluntary commitments in an Energy-Wise Councils Partnership.

Recommendation 10 (accepted): *Require the Government's energy efficiency and renewable energy agency to examine and report on opportunities to improve the actual application and use of research into new renewable energy sources.*

- The Minister of Energy noted that EECA is currently developing a research strategy "that will establish key roles for EECA in identifying and prioritising research in renewable energy as well as energy efficiency and transport", although he did not identify a time-line for this development.

Recommendation 11 (accepted): *Develop and provide guidance to all local authorities on the relative weight to be afforded to the protection of outstanding natural features and landscapes under the Resource Management Act 1991 vis à vis the development of renewable sources of energy such as wind power.*

- The National Energy Efficiency and Conservation Strategy includes an action item to provide decision-makers with "guidance for use in RMA processes eg. on solar orientation, management of environmental effects of renewable energy projects."
- The Minister for the Environment noted that MfE and EECA are currently developing a project plan for this work. "Advisory support" is scheduled to begin in 2003.

Recommendation 12 (accepted): *In consultation with local authorities, investigate and report on opportunities for addressing the environmental effects of transport patterns and the energy efficiency of the transport sector.*

- There has been some progress in this area since 2000.
- The Minister of Energy and the Associate Minister of Transport highlighted the potential role of the New Zealand Transport Strategy (under development since 2000) to address the environmental effects and energy efficiency of the transport sector. One of the aims of this Strategy is to ensure that the transport sector is environmentally sustainable. A final Strategy is scheduled to be complete by August 2002 (although this may be influenced by the election in July).
- The Ministry of Transport, EECA, MfE and Local Government New Zealand have also begun work on a project to examine the role of urban form in influencing energy efficiency and environmental effects related to transport. The first sub-project for this work is expected to be complete in September 2002.
- The Associate Minister of Transport also noted that the Land Transport Funding Package, announced in February 2002:
 - included additional funding for more energy efficient modes of transport
 - changed the principal purposes of Transfund NZ and Transit NZ to require them to allocate resources to achieve the objectives of the (proposed) Transport Strategy
 - approved the use of Electronic Road User Charges in principle.
- She also acknowledged that the additional \$94 million committed to roading in this package will "in the long term generate additional traffic. If no other changes occur, the long-term energy impact of this expenditure could eventually be counter to climate change goals."

Recommendation 13 (rejected): *Investigate the potential to expand the role of the Government's energy efficiency and renewable energy agency in terms of it providing policy advice, implementation measures, and practical information on a wider range of resource efficiency issues.*

- The Minister of Energy noted that EECA informally considered the implications of having a broader resource efficiency mandate. He noted that the “synergies between energy management and other resource management issues were recognised. However, consistent with current government policy, priority is to be given to the substantial task of implementing the National Energy Efficiency and Conservation Strategy (NEECS).”
- The Minister of Energy also suggested that the Ministry for the Environment will consider the integration of wider resource efficiency initiatives as it pursues its roles under the NEECS, the New Zealand Waste Strategy and sustainable development issues.

Recommendation 14 (superseded): *Investigate and report on the potential role of consumption and pollution-based taxes and incentives to address the environmental and economic impacts of energy use, as part of the forthcoming structural review of the taxation system.*

- The Government did consider the role of some consumption and pollution-based taxes in the 2001 Tax Review.
- Nonetheless, with the possible exception of carbon charges, this review did not favour any proposals to implement new “eco-taxes”.
- The Minister of Revenue noted that Treasury is not doing any further work in this area, beyond providing some advice to other government agencies. In addition, Treasury is not undertaking any work on carbon charges at this stage.
- However, the Minister for the Environment noted that the introduction of a carbon charge (or possibly emissions trading) from 2007 would be an integral part of the government's preferred policy package for climate change. She also noted that the excise on petrol had been increased in February 2002 to help pay for a *Moving Forward* programme to address congestion, regional development and alternatives to roading.

Comments On Progress To Date

The Government has made considerable progress to implement many of the recommendations made in *Getting More From Less*. EECA has been established with a strong mandate and the first comprehensive National Energy Efficiency and Conservation Strategy has been released. Reviews have been conducted of the electricity and gas markets and Mandatory Energy Performance Standards have been introduced with a labelling regime for domestic appliances.

New Zealand is now in a much stronger position than before the PCE's report was published to work towards a sustainable energy future. Nonetheless, considerable progress is still needed in several areas. In particular, emphasis needs to be placed on improving the energy efficiency and sustainability of the transport sector. One of the key conclusions in *Getting More From Less* was that strong Government leadership is needed to fully address energy efficiency, renewable energy and demand management issues in the energy and transport sectors. Although strong leadership has been evident in many parts of the energy sector, this leadership is still lacking in the transport area.

Additional progress is also needed in the areas of energy sector monitoring, labelling for vehicles and houses, research and consumption and pollution-based taxes. Each of these are discussed in more detail below.

Future areas for monitoring

Recommendations 3 & 12: Transport

- *Getting More From Less* (PCE, 1998:98) emphasised that "there is a clear need to review and fully address transport energy efficiency issues. It is a substantial issue that remains outstanding and requires more attention by appropriate agencies." Specifically, it noted an urgent need to provide balanced transport solutions; address the environmental effects of transport patterns on energy use; and provide information on fuel efficiency and vehicle labelling.
- There has been limited substantive action to address these issues since 2000. The Government also rejected the Commissioner's recommendation to commission an audit of departmental and inter-departmental processes to address the sustainability implications of the transport sector. Despite this, the Ministry of Transport (MoT) recently conducted their own internal review that highlighted the need to improve departmental co-operation in this area. MoT, MfE and EECA are also attempting to work more closely together by discussing overlaps of interest.
- It is positive to note that the proposed New Zealand Transport Strategy will be based on a notion of sustainability. Given the importance of the transport sector (and the impact it has on the environment) it is essential to check that this strategy is implemented after the July 2002 election (as there is no statutory requirement to ensure this). It is also imperative to assess the scope of this strategy when it is released.

- *Getting More From Less* (PCE, 1998:99) also suggested that “the linkages between transport management, environmental effects, climate change and energy efficiency do not appear to have been adequately recognised or addressed in current policy proposals.” It is positive that considerable progress has been made to make these conceptual linkages since 2000. The National Energy Efficiency and Conservation Strategy, the Climate Change Programme and proposals for the New Zealand Transport Strategy have all identified the links between transport policy, energy efficiency and climate change.

Recommendation 5: Energy sector monitoring

- A considerable amount of work has been undertaken to develop a monitoring framework for the sustainability of the electricity sector. Although this should be commended, further work is needed to develop a framework (or a series of frameworks) to monitor the environmental, social and economic sustainability of the energy sector *in its entirety*. In part, this could be addressed by the energy indicators being developed by MfE. Nonetheless, it remains to be seen when this work will be completed.

Recommendation 7: Labelling and information requirements

- EECA has successfully begun implementation of an energy efficiency labelling regime for domestic appliances. Future monitoring is needed to ensure that a similar scheme is developed for houses and vehicles (the Government has at least approved the latter in principal).
- Although EECA is working with Standards NZ on an “upgrade” of energy monitoring and analysis, further work is needed to provide robust time series data on New Zealand’s energy use, particularly for the transport and industrial manufacturing sectors.
- The PCE should monitor the completion of the Household Energy End-Use Project (scheduled for 2005).

Recommendation 8: Building insulation

- A review of clause H1 of the building code was originally scheduled for 2001. It is important to ensure that a full review is undertaken in 2003 (as currently planned).

Recommendation 9: Government leadership

- It is positive to note that central and local government agencies are being targeted by EECA to achieve a 15 percent increase in the energy efficiency of their operations by 2005. Nonetheless, it may be necessary to broaden the scope of the Energy Wise Government programme to include more agencies (currently only half the *targeted* agencies are participating in this project). Depending on the success of this project up to 2005, it may be necessary to *require* government agencies to audit and improve on their energy efficiency rather than relying on voluntary measures alone.

Recommendation 10: Research

- EECA is currently developing a strategy to prioritise research into renewable energy sources. Monitoring needs to ensure that this strategy is completed and identifies ways to *apply* this research.

Recommendation 11: RMA guidance

- MfE and EECA have begun a project to provide guidance on the management of environmental effects of renewable energy projects in RMA processes. It is important to determine the scope of these guidelines and to ensure they are implemented in 2003.

Recommendation 13: Resource efficiency issues

- The Government is not intending to extend the role of EECA to cover a broader range of resource efficiency issues. Despite the PCE's initial recommendation, this seems like an appropriate approach to pursue. EECA is currently focused on implementing the National Energy Efficiency and Conservation Strategy and it could prove counter-productive to broaden its mandate at this stage. However, this does raise concerns about the lack of advocacy in central government for broader resource efficiency initiatives. The Ministry for the Environment has some responsibilities in this area, following the implementation of the New Zealand Waste Strategy in 2002. In contrast (as noted in the PCE's (2000) investigation into urban water systems) there is still a vital need to address the inefficient use of water resources. This suggests that some sort of agency may be needed to co-ordinate and promote resource efficiency initiatives. This could become a function of a 'sustainable development advisory body' (as recommended by the PCE (2002) in *Creating Our Future*).

Recommendation 14: Taxation

- The 2001 Tax Review did not favour the use of consumption and pollution-based taxes. However, contrary to the belief in this review that most New Zealand environmental effects are localised, there is a need to revisit the application of environmental taxes for issues that are of national significance (such as energy, waste and water consumption). While debate on the effectiveness of environmental taxes in New Zealand continues, evidence from the European Union suggests that the use of such taxes is widespread and effective (PCE, 2002:55)

References

Parliamentary Commissioner for the Environment (1998), *Getting More From Less: A review of progress on energy efficiency and renewable energy initiatives in New Zealand*. Wellington, PCE.

Parliamentary Commissioner for the Environment (2000), *Ageing Pipes and Murky Waters: Urban water system issues for the 21st century*. Wellington, PCE.

Parliamentary Commissioner for the Environment (2002), *Creating Our Future: sustainable development for New Zealand*. Wellington, PCE.

APPENDIX A: Full recommendations in Getting More From Less

Recommendation to the Minister of Energy

1. Establish a Government-supported energy efficiency and renewable energy agency with the functions and structure identified below.

Functions

The functions of the Government-supported energy efficiency and renewable energy agency will be to:

- a) advise the responsible Minister directly on all aspects of energy efficiency and the use of renewable energy;
- b) undertake relevant policy and programme development and engage in policy development with other Government agencies on matters that impact on or are affected by energy efficiency and renewable energy;
- c) encourage, promote and support energy efficiency and the use of renewable energy through the use of market transformation and partnership approaches;
- d) undertake and encourage the dissemination of information and provision of educational programmes on matters relating to energy efficiency and the use of renewable energy;
- e) administer and fund grants programmes to further energy efficiency and the use of renewable energy;
- f) monitor and review the state of energy efficiency and the use of renewable energy; and
- g) monitor and report on the costs and benefits of the agency's activities.

Structure

In order to perform the above functions effectively, the Government-supported energy efficiency and renewable energy agency will require an agency structure with:

- a) an appropriate legislative mandate;
- b) a sufficient and secure medium-term funding base;
- c) combined policy advice and implementation functions in recognition of the specialist services that the agency will provide;
- d) guidance and oversight from an advisory panel representing the range of sector interests;
- e) sufficient capacity to allow it to participate and take full part in all inter-departmental committees and working groups that affect energy efficiency and renewable energy issues (egg the Officials Committee on Energy Policy, the Officials Group on Climate Change and any transport policy committees); and
- f) sufficient capacity to allow it to undertake a market transformation approach to energy efficiency and renewable energy through the establishment of partnerships with industry, business, central and local government, tangata whenua, interest groups and community sectors.

Recommendation to the Minister of Energy

2. Prepare a new national energy efficiency and renewable energy strategy using a consultative process. The Government's energy efficiency and renewable energy agency should be given the task of co-ordinating the development of the strategy. The relationship of the new energy efficiency and renewable energy strategy with any national climate change strategy should be clearly identified.

Recommendation to the Minister of Energy, (in association with the Minister for the Environment and the Minister of Transport)

3. Commission an audit of the effectiveness of departmental and inter-departmental processes for assessing and reporting on the environmental impacts and sustainability implications of energy and transport sector policy proposals (i.e. any energy efficiency and renewable energy issues). This is to ensure that these issues are given full and timely examination as part of the development of relevant Government policy.

Recommendation to the Minister of Energy

4. Review the adequacy of:
 - a) the electricity and gas markets to address energy demand management issues in terms of the provision of information, pricing, equity, monopoly share and the internalisation of major externalities in order to bring improvements in demand management;
 - b) the current structural framework for the electricity sector to assess if this inhibits the adoption of new technologies and embedded generation; and
 - c) the use of fixed line pricing by line companies to assess if activity- or beneficiary-based charges could promote increased energy efficiency by the electricity sector.

Recommendation to the Minister of Energy

5. Establish an appropriate monitoring framework for the energy sector in order to assess the outcomes of the series of energy reforms in terms of environmental, economic and social costs and benefits and report annually to Parliament on the results of this monitoring.

Recommendation to the Minister of Energy

6. Take immediate action to:
 - a) Implement the three proposed minimum energy performance standards;
 - b) Renew the energy-wise companies campaign to encourage and, where necessary, support small and medium companies to respond to energy efficiency and renewable energy initiatives.

Recommendation to the Minister of Energy

7. In the short to medium term, assess:
 - a) the potential for introducing further minimum energy performance standards;
 - b) the potential for introducing a comprehensive labelling regime for domestic appliances, houses, vehicles and motors;
 - c) in association with the building sector the potential to expand the provision of information on energy efficient building designs;
 - d) the level of funding and agency support for research into national and sectoral energy efficiency trends in order to provide robust time series data on New Zealand's energy use, particularly for the transport and industrial manufacturing sectors; and
 - e) the level of funding and support for the household energy end-use project being co-ordinated by the Building Research Association of New Zealand.

Recommendation to the Minister of Internal Affairs

8. a) Take immediate action to implement the revised Clause H1 (building insulation) of the building code; and
- b) Review the potential for increasing the requirements of Clause H1 (building insulation) of the building code taking into account new information and techniques to improve the thermal performance of buildings.

Recommendation to the Minister of State Services

9. Require all Government departments, ministries, agencies and state-owned enterprises to audit and report annually on the energy efficiency of their operations in order to meet an overall Government energy efficiency target; eg a 20 % improvement by 2005.

Recommendation to the Minister of Energy

10. Require the Government's energy efficiency and renewable energy agency to examine and report on opportunities to improve the actual application and use of research into new renewable energy sources.

Recommendation to the Minister for the Environment

11. Develop and provide guidance to all local authorities on the relative weight to be afforded to the protection of outstanding natural features and landscapes under the Resource Management Act 1991 vis à vis the development of renewable sources of energy such as wind power.

Recommendation to the Minister of Energy (in association with the Minister of Transport and the Minister for the Environment)

12. In consultation with local authorities, investigate and report on opportunities for addressing the environmental effects of transport patterns and the energy efficiency of the transport sector.

Recommendation to the Minister of Energy

13. Investigate the potential to expand the role of the Government's energy efficiency and renewable energy agency in terms of it providing policy advice, implementation measures, and practical information on a wider range of resource efficiency issues.

Recommendation to the Minister of Revenue and the Minister for the Environment

14. Investigate and report on the potential role of consumption and pollution-based taxes and incentives to address the environmental and economic impacts of energy use, as part of the forthcoming structural review of the taxation system.