

Switch on Gas

Australia's strategy to improve the energy efficiency of gas appliances and equipment

2005–2015



This strategy is an initiative of the Ministerial Council of Energy and forms part of the National Framework for Energy Efficiency



Australian Government

Department of the Environment and Heritage Australian Greenhouse Office

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The Switch on Gas Strategy is available online at
www.energyrating.gov.au

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Acknowledgements

This Strategy was prepared for the National Appliance and Equipment Energy Efficiency Program (NAEEEP). It reflects the position of the Australian Ministerial Council on Energy, with New Zealand officials also examining the plan for possible adoption in that country.

The Australian Greenhouse Office, Department of Environment and Heritage, together with the two Victorian agencies, the Sustainable Energy Authority and the Office of Gas Safety have been involved in developing the strategy. These agencies would like to thank the gas industry for their time and professionalism and especially the members of the task force established by the Gas Appliance Manufacturers Association of Australia for their assistance in this project

Foreword



On behalf of the Ministerial Council on Energy, it is a pleasure to release Switch on Gas, Australia's long-term strategy to increase the energy efficiency of gas products.

Improving the efficiency with which we use energy is a priority of the Ministerial Council on Energy (MCE) and gas is a vital part of our energy infrastructure.

The main objective of the Switch on Gas ten year strategic plan is to implement a nationally consistent regulation scheme for energy efficiency of gas appliances and equipment. This strategy is an important part of the package of measures being implemented by the MCE under the National Framework for Energy Efficiency.

The Australian Government's statement Securing Australia's Energy Future (June 2004) also announced that the existing electrical appliance and equipment efficiency program would be expanded to include gas appliances and some commercial equipment.

By progressively increasing the energy efficiency of gas appliances and equipment beyond business as usual levels, Switch on Gas responds to the evolving needs of the community by providing world class energy efficient gas products. Switch on Gas will also make a contribution to national efforts to reduce greenhouse gas emissions.

Natural gas currently supplies about 30% of total household energy in Australia. Within 20 years it is projected that Switch on Gas has the potential to reduce the expenditure on natural gas of Australian consumers by up to \$115 million per annum and consumption by over 5% below business as usual.

The development of Switch on Gas has involved considerable consultation with industry and the community, as well as a review of the existing regulations in each of the states and territories, and in New Zealand.

Switch on Gas identifies the constituent parts of the Gas Appliance and Equipment Energy Efficiency Program. These will be detailed more specifically in three year work plans over the life of the strategic plan.

I am pleased to commend to you Switch on Gas, Australia's long term strategy to increase the energy efficiency of gas products.

A handwritten signature in black ink, appearing to read 'Ian Macfarlane'.

Hon Ian Macfarlane MP

Chair , Ministerial Council on Energy

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The Hon Ian Macfarlane MP
Minister for Industry, Tourism and Resources, and
Chair of the Ministerial Council for Energy
House of Representatives
Parliament House
Canberra ACT 2600.

Dear Minister Macfarlane:

For several years, GAMA has been working with the Australian Greenhouse Office in re-designing the Gas Appliance and Equipment Energy Efficiency Program. The industry-operated scheme has served Australia well but our members recognise the need and endorse the principle that the scheme should be contained in law. This outcome was agreed at the GAMA Conference on 4th August 2004 and again confirmed in our detailed response in November 2004 to government agency consultations on this subject.

The new scheme will bring massive change for both the government and the industry. These changes will over time improve the efficiency of products sold in Australia lowering the greenhouse emissions attributed to these appliances and equipment. It also will mean our members compete on a "level playing field" subject to the legal responsibilities created by the regulatory scheme.

Our members remain ready to work with government to improve appliance efficiencies but will need the necessary legislation, procedures and processes in place in all the states before a nationally consistent scheme can deliver the anticipated benefits. The transition to a regulatory scheme is assisted by this high-level ten-year strategy and will be further assisted by the first of the more detailed three year plans, scheduled to commence next financial year still being negotiated by government officials and GAMA members.

As the "devil is in the detail", our members and secretariat staff are ready to contribute to resolving the many technical issues and procedures as well as to reviewing progress on the introduction of legislation in all the states. With appropriate resourcing from government, our members look forward to completing the transition to a regulatory scheme as quickly as possible.

Sincerely yours,

Andrew Creek
President

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Abbreviations

MCE	Ministerial Council on Energy
NAEEEP	National Appliance and Equipment Energy Efficiency Program
GAEEEC	Gas Appliance and Equipment Energy Efficiency Committee
GAEEEP	Gas Appliance and Equipment Energy Efficiency Program
GAMAA	Gas Appliance Manufacturers Association of Australia
EEWG	Energy Efficiency Working Group
GTRC	Gas Technical Regulators Committee
MEPS	Minimum Energy Performance Standards
EECA	Energy Efficiency and Conservation Authority

1. Strategy Objective

The Switch on Gas strategy is a blueprint jointly endorsed by government and industry outlining the actions to enhance energy efficiency for gas appliances and equipment over the next 10 years. The launch of the strategy commits:

- Governments to incorporating gas end-use product efficiency into a similar regulatory environment that already exists for electrical products;
- Industry to providing world-class products within a legislative scheme, with formal responsibilities stipulated in state and territory laws.

The partnership that characterises the electrical product program will extend to include gas powered appliances and equipment.

Switch on Gas is supported by the Ministerial Council on Energy and therefore by all relevant jurisdictions in Australia. It represents the agreed parameters for the scheme that will improve the efficiency of and reduce greenhouse gas emissions from gas appliances and equipment over the next decade.

Switch on Gas sets the strategic direction for what will come to be known as the Gas Appliance and Equipment Energy Efficiency Program (GAEEEP). It will be an element within the National Appliance and Equipment Energy Efficiency Program (NAEEEP). This will be the first time that the efficiency of both electrical and gas products will be addressed by the one national scheme in Australia and potentially in New Zealand.

The program will strive to:

- Progressively increase the energy efficiency of gas appliances and equipment, beyond business-as-usual improvements;
- Assist the gas appliance industry to respond to the evolving environmental needs of the community by providing world-class energy efficient gas products; and,
- Reduce greenhouse gas emissions, through increasing the efficiency in gas products.

Switch on Gas announces the creation of that program and more specifically outlines:

- Key elements of the ten-year strategy and highlights the content of the first of three triennial work plans within the strategy;
- The product types initially covered and the processes used in the program.

Switch on Gas provides a solid framework that will allow the Australian gas industry and the broader community to unlock the economic and environmental benefits of improving the energy efficiency of gas products. It also provides an opportunity to align local efficiency requirements with those of our major trading partners, many of whom have similar policies.

2. Background

Maintaining broad consultations with stakeholders has enabled the process to reach the stage of allowing government and industry representatives to shape what will become a nationally consistent regulation scheme for gas appliance and equipment energy efficiency in an environment of consensus.

The 1998 announcement of the National Greenhouse Strategy saw all Australian Governments commit to 'working with industry to improve gas appliance minimum energy performance standards (MEPS) and labelling programs'. Over the next few years, key stakeholders within the Australian Gas Association (AGA) which operated an industry labelling and standards scheme, Standards Australia, and the peak industry body, the Gas Appliance Manufacturers Association of Australia (GAMAA), discussed with officials ways to achieve that goal.

The results were released in 2002, with the publication of a consultant study Energy labelling and minimum energy performance standards for domestic gas appliances [MEA 2002]. This was followed in July 2003 by a discussion paper, endorsed both by government agencies and industry groups, entitled Driving Energy Efficiency Improvements to Domestic Gas Appliances. By that time a joint government and industry working group had been established. Key stakeholders like the Gas Technical Regulators Committee, state and territory officials with gas safety responsibilities, as well as peak industry bodies supported the transition to the new national regulatory scheme.

In June 2004, the New Zealand government signaled an intention to introduce standards and labelling for gas space and water heaters in concert with Australian developments in its publication Appliance and Equipment Energy Efficiency Forward Programme 2004 - 05.

Within this broad consensus for a regulatory scheme, stakeholders identified key issues which will be addressed in the specific work plans to improve the efficiency of gas products by:

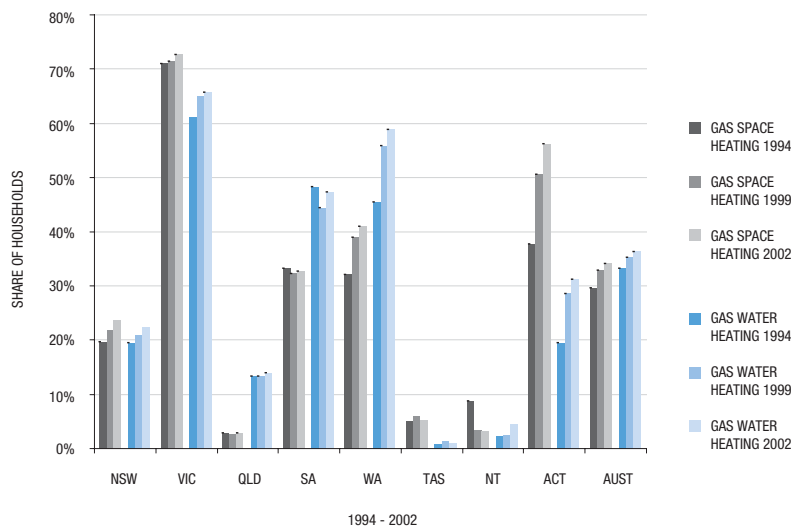
- A policy of using international test methods and performance standards to facilitate trade and reduce business cost;
- Energy labelling of domestic gas water heaters, ducted and room heaters needs to incorporate mandatory point-of-sale display and needs to be enforced;
- Stringency standards need to maintain the momentum already generated for electrical appliances and at least match developments overseas;
- Improved verification of performance and labeling of targeted products;
- More comprehensive monitoring and reporting to track the effectiveness of the scheme; and
- Improved consumer access to comparative information on product efficiency, which to date has been problematic.

The MCE has agreed that Switch on Gas will address these matters.

3. Energy Savings and Greenhouse Emissions Potential

FIGURE 1: Share of Households with Gas Space and Water Heating by State, Australia

Reproduced from GWA (2004), Data source: ABS 3602.0



Natural gas supplies about 30% of total household energy in Australia particularly concentrated around space heating/cooling (40%) water heating (45%) cooking (almost 30%). The natural gas share of space heating and cooking is increasing steadily, as shown in Figure 1 above.

At present, Victoria accounts for over two thirds of the Australian household gas market. The next largest household gas market is NSW (including ACT), followed by WA and SA. The pattern of state gas use is gradually changing. Natural gas has only recently been introduced into Tasmania, and although gas has been used for electricity generation in the NT for some time it is only now being reticulated for household use.

There is considerable scope for rapid growth in the consumption of natural gas at the expense of other energy forms, especially wood and electricity. Most of the growth potential is in NSW and Queensland, where there are many homes on the lines of gas mains that are not yet connected.

Preliminary estimates of the impacts, costs and benefits of implementing a national gas appliance and equipment energy efficiency program addressing the current issues facing gas products [GWA 2004] indicates that the development of a national program has the potential to generate significant benefits in twenty years:

- Australian residential gas consumption around 5.3% lower than BAU;
- Expenditure on natural gas by residential consumers reduced by up to \$115 million per annum below BAU; and
- Annual greenhouse gas emissions reductions could be as much as 600kt CO2-e per annum below BAU.

Domestic gas water heaters, room and ducted heaters sold in Australia are currently labelled with their gas consumption and energy efficiency, under a program run by the gas industry since the 1980s. These, and some additional appliance types, are also subject to minimum efficiency levels set out in the relevant gas appliance standards.

The important contribution that the industry-run gas labelling and MEPS scheme has made to promote the sale of energy efficient gas appliances is acknowledged by Australian Governments. However, it is important that gas appliances continue to match the energy efficiency gains being achieved for electrical appliances, to ensure that this important non-renewable resource is used economically and in a sustainable manner.

4. Criteria and Principles of the Strategy

The following criteria will be used to determine which specific technologies are eligible for inclusion in the program, matching the approach used for electrical products:

- > Potential for national energy savings
- > Potential saving of greenhouse gas emissions
- > Environmental impact of the fuel type
- > Opportunity to influence purchase decision
- > Market barriers
- > Access to accepted energy testing or measurement procedures
- > Administrative complexity of the project

The following principles will be used to shape the program:

Coverage

GAEEEP will steadily incorporate those products already subject to energy labelling and standards under the existing industry scheme. It will expand to include any product that consumes mains pressure natural gas or LPG gas within the domestic, commercial and industrial sectors, subject to economic analysis and community consultation.

Governance

Representatives from the Australian, State, Territory and New Zealand government energy agencies and gas technical regulatory agencies will oversee the program and report to MCE through the Energy Efficiency Working Group (E2WG). Regular joint meetings with key industry representatives will manage all major issues surrounding the program. An initial full triennial work plan is already under development for implementation over the period 2005/06-2007/08 and will be released publicly early in 2005.

Consultation and Transparency

This and future workplans will be developed and implemented after consultation with stakeholders within industry, government and the wider community. The analysis and reasoning behind product decisions will be made available through annual or product specific reports.

International competitiveness

Switch on Gas will support and facilitate the gas industry keeping pace with energy efficiency developments in comparable countries throughout the world. Resources will be pooled to ensure that gas products industry efficiency efforts are coordinated and effective.

Stringency and reporting

The regulatory proposals will match, or where viable and economically feasible, lead the world in regulatory standards. The progress of efficiency improvements will be reported in annual reports commencing in 2005.

5. Strategy Infrastructure

A nationally consistent legislative framework, including penalties for non-compliance, will be put in place in all jurisdictions, based on efficiency legislation and model regulations developed by Victoria. All Australian jurisdictions have agreed to fund the program on an agreed basis.

The program for gas products will continue to be based on structures and processes either familiar to the gas industry or used by the electrical product program:

- Test methods, MEPS levels and labelling algorithms defined in Australian or joint Australian/New Zealand standards, and based on international standards where possible;
- Mandatory regulations implemented through State, Territory and New Zealand legislation which call up the relevant standards for each product type;
- Products approved to the standards and registered for MEPS or energy labelling by state-based regulators (or EECA in New Zealand);

- Public information provided through national web sites;
- A targeted check-testing program, and checks of retailers to enforce compliance, backed up by a nationally consistent penalty process; and
- The process for developing and implementing regulatory actions will include the preparation of specific product profiles, regulatory proposals based on cost-effective options for the Australian community, the CoAG regulation impact statement process, involvement of all stakeholders in key standards development and consultation processes.

Switch on Gas is a strategy that addresses the very real problem for gas products - market failure. To make informed decisions, purchasers need access to up-to-date, reliable, and comprehensive information about the products they purchase. It is the responsibility of industry to provide consumers with this information, and of government to ensure that industry meet national efficiency targets and world's best regulatory practice. It is therefore essential that the gas industry and governments work together to ensure that purchasers have access to the most energy efficient gas appliances possible.

The Australian gas appliance industry is committed to providing world-class products, and recognises the need to continuously improve to meet the needs of the Australian community and environment. Government and industry representatives together believe this Strategy, Switch on Gas, represents a blueprint for our future.

6. Timeline and Priorities

Table 1 outlines the projects for which development will commence in the period 2005/7 - 2012/15. These projects rely on current technologies and the measures available to the GAEEEC, and have been prioritised according to their potential for, and certainty of, energy reduction outcomes.

Table 1: GAEEEP - 10 Year Timeline of Priorities

HIGH PRIORITY - 2005 TO 2007

FORMALLY ESTABLISH GAEEEP:

- Finalize first GAEEEP 3-year work plan, in consultation with stakeholders (refer Annexure A for draft)
- Prepare forward estimates of energy and greenhouse savings for 1st 3-year work plan
- Form the Gas Appliance and Equipment Energy Efficiency Committee
- Establish nationally consistent administrative and legislative infrastructure
- Undertake a national campaign to communicate the formation of the new scheme to industry stakeholders
- Develop methodology to track efficiency and consumer trends in the sale of gas products

PRODUCTS:

- Review and agree test methods and MEPS and labelling requirements for domestic gas water heaters, room and ducted heaters, and agree on introduction date
- Prepare product profiles for commercial gas heaters and water heaters, industrial gas boilers, and domestic gas ovens and cooktops
- Develop a product strategy for commercial catering equipment, including gas products
- Incorporate gas products into national energy rating and Energy Allstars web sites
- Include gas products into a national promotional campaign targeting appliance retail stores and consumers

MEDIUM PRIORITY - 2008 TO 2011

PRODUCTS:

- Undertake a national campaign to communicate the new scheme to consumers
- Commence targeted check-testing program for regulated products
- Complete implementation of new MEPS and/or labelling requirements for domestic gas water heaters, room and ducted heaters
- Develop MEPS and/or labelling proposals for commercial gas heaters and water heaters, industrial gas boilers and domestic gas ovens and cooktops, and agree on implementation dates
- Develop product profiles for gas clothes dryers and priority gas catering equipment. Develop MEPS and/or labelling proposals for these products and agree on implementation dates.

LOW PRIORITY - 2012 TO 2015

PRODUCTS:

- Complete implementation of agreed new MEPS and/or labelling requirements for commercial gas heaters and water heaters, industrial gas boilers, and domestic gas ovens and cooktops
- Commence implementation of agreed new MEPS and/or labelling requirements for gas clothes dryers and priority commercial catering equipment;
- Develop MEPS and/or labelling proposals for gas clothes dryers and priority gas catering, and agree on implementation date;
- Develop product profiles for lower priority commercial gas catering equipment;
- Review MEPS and/or labelling for domestic gas water heaters and domestic room and ducted heaters

References

MEA 2002: Energy and labelling and minimum energy performance standards for domestic gas appliances Mark Ellis and Associates
 2003 Discussion Paper: Driving Energy Efficiency Improvements to Domestic Gas Appliances
 EECA 2004: Appliance and Equipment Energy Efficiency Forward Programme 2004-05
 GWA 2004:- Outline Strategic Plan George Wilkenfeld and Associates Pty Ltd

Annexure A

Work Plan Proposal 2005/06 - 2007/08

Switch on Gas is the strategy that will create the infrastructure to carry forward the governments' wider energy conservation and greenhouse abatement objectives. The following table lists probable activities covered in the first triennial work plan. The final work plan will be resolved through dialogue with key industry officials early in 2005

2005		
TASK	MILESTONES	TARGET
Establish the Gas Appliance and Equipment Energy Efficiency Program	GAEEEP work plan finalized	Feb 05
	Inform industry stakeholders	Apr 05
	Establish administrative and legislative framework	Jul 05
	<ul style="list-style-type: none"> • Committee operating • National legislative framework agreed • Model legislation finalized, Victoria • Registration process agreed 	Sept 05 Nov 05 Dec 05
MEPS and labelling - residential / commercial	New domestic water heater test method developed	July 05
	New domestic water heater MEPS and labelling proposal developed	Sept 05
	Product profile for commercial heaters and water heaters completed	Dec 05
Identify and pursue opportunities for increasing industrial sector coverage	Discussion Paper and workshop on additional opportunities in the industrial sectors completed	July 05
	Decision on additional industrial products to be targeted	Dec 05
Information and awareness	Gas products on national high efficiency database	Jan 05
	Communication strategy developed	Apr 05
	Information on national web site	Apr 05
	National promotional campaign targeting retail stores developed	Dec 05
Monitoring and evaluation	Projections prepared	Dec 04
	Develop methodology for tracking sales weighted efficiency and consumer attitudes	Dec 05

2006		
TASK	MILESTONES	TARGET
MEPS and labelling	RIS process for domestic water heater MEPS and labelling proposal completed, implementation date agreed	Mar 06
	Review of ducted heater test method and standard completed	Jul 06
	Product profile for industrial gas boilers completed	Jul 06
	Review of commercial heater and water heater test method and standard completed	Dec 06
MEPS and labelling	Strategy for commercial catering equipment completed	Dec 06
EPS and labelling	Gas products on national energy rating web site	Jun 06
	Consumer promotional campaign - media and retail stores	Jun - Sept 06
Monitoring and evaluation	Targeted check-testing program commenced	Sept 06
	Retail compliance survey undertaken	06
	Track sales weighted efficiency and consumer attitudes	On-going

2007		
TASK	MILESTONES	TARGET
MEPS and labelling	New MEPS and labelling proposal for gas ducted heaters developed	Jan 07
	Review of room heater test method and standard completed	Jul 07
	RIS process for ducted heater MEPS and labelling proposal completed, implementation date agreed	Jul 07
	Product profile for domestic cookers developed	Jul 07
	New MEPS and/or labelling proposal for gas room heaters developed	Dec 07
	MEPS and/or labelling proposal for commercial heaters and water heaters developed	Dec 07
Information and awareness	Gas product listings on national energy rating web site maintained	Ongoing
	Gas products included in national promotional campaign targeting retail stores	
EPS and labelling	Gas products on national energy rating web site	Ongoing
	Consumer promotional campaign - media and retail stores	Ongoing
Monitoring and evaluation	Targeted check-testing program	Ongoing
	Retail compliance survey undertaken	Ongoing
	Track sales weighted efficiency and consumer attitudes	On-going

Ministerial Council on Energy (MCE)

The Ministerial Council on Energy consists of the following members:

The Hon Ian Macfarlane MP

Minister for Industry, Tourism and Resources
COMMONWEALTH
Chairman, Ministerial Council on Energy

The Hon John Mickel MP

Minister for Energy
QUEENSLAND

The Hon Frank Sartor MP

Minister for Energy and Utilities
NEW SOUTH WALES

The Hon Theo Theophanous MP

Minister for Energy Industries
VICTORIA

The Hon Eric Ripper MLA

Deputy Premier; Treasurer
Minister for Energy
WESTERN AUSTRALIA

The Hon Patrick Conlon MP

Minister for Energy
SOUTH AUSTRALIA

The Hon Kon Vatskalis MLA

Minister for Mines and Energy
NORTHERN TERRITORY

Mr Jon Stanhope MLA

Chief Minister
ACT Government
AUSTRALIAN CAPITAL TERRITORY

The Hon Bryan Green MHA

Minister for Infrastructure,
Energy and Resources
TASMANIA

National Appliance and Equipment Energy Efficiency Committee

The National Appliance and Equipment Energy Efficiency Committee of the Ministerial Council on Energy consists of the following member organisations:

- Australian Greenhouse Office, Department of the Environment and Heritage
- NSW Department of Energy, Utilities and Sustainability
- Office of the Chief Electrical Inspector Victoria
- Sustainable Energy Authority Victoria
- Electrical Safety Office, Queensland Department of Industrial Relations
- Queensland Department of Energy
- Western Australian Department of Consumer and Employment Protection
- Western Australian Sustainable Energy Development Office
- South Australian Office of the Technical Regulator
- Tasmanian Office of Energy
- ACT Department of Treasury
- Northern Territory Department of Business, Industry and Resource Development
- New Zealand Energy Efficiency and Conservation Authority

With the incorporation of gas appliances and equipment into the wider national program, other agencies with gas regulatory powers may join to manage GAEEEP from 2005.

