

**Standing Committee of Officials of the
Ministerial Council on Energy**

Energy Bill Benchmarking

**Consultation
Regulatory Impact Statement**

October 2009

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Purpose of a Regulatory Impact Statement

It is mandatory for Australian Government departments, agencies, statutory authorities and boards to prepare a Regulatory Impact Statement (RIS) for all reviews of existing regulation, proposed new or amended regulation, quasi-regulation and proposed treaties involving regulation, which will directly or indirectly affect business, or restrict competition.

In April 1995, the Council of Australian Governments (COAG) endorsed a set of guidelines - which were amended in November 1997 and June 2004 - to promote good regulatory practice, including the use of RIS's by Ministerial Councils and national standard-setting bodies. These principles and guidelines apply to agreements or decisions to be given effect through principal and delegated legislation, administrative directions or other measures which, when implemented, would encourage or force businesses or individuals to pursue their interests in ways they would not otherwise have done. In 2004 COAG made several changes to the principles and guidelines to ensure greater clarification about the operation of RIS's involving Australian and New Zealand regulators.

The primary role of the RIS is to improve Government decision-making processes by ensuring that all relevant information is presented to the decision maker when a decision is being made. The RIS will be part of the documentation considered by the Ministerial Council on Energy (MCE) in making its decision. In that context, this RIS aims to provide a consistent, systematic and transparent process for assessing alternative policy approaches to problems being addressed. It includes an assessment of the impacts of the proposed regulation, and alternatives, on different groups and the community as a whole.

Further information on RIS's is available from the Office of Best Practice Regulation website www.obpr.gov.au.

1. Background

In August 2004 the MCE committed to implement a package of policy measures comprising the National Framework for Energy Efficiency (NLEE) Stage One Implementation Plans, noting the significant benefits that can flow from enhanced energy efficiency in Australia. Subsequently, seven implementation committees were formed (later reduced to six committees) to deliver on plans to achieve the goals of the NLEE. The Consumer Information Implementation Committee (CIIC) has the task of establishing a package which raises the awareness of consumers regarding the benefits of energy efficiency, to enable consumers to make better informed decisions about actions to reduce energy consumption and to motivate them to implement energy saving measures.

The *NLEE Stage One Implementation Plans*, as approved by MCE, December 2004 note that:

Energy retailers will be required to include average energy consumption data on energy bills and also to allow end users to compare their energy consumption against an appropriate benchmark. The objective of this measure is to motivate energy consumers with above average energy consumption to implement energy efficiency improvements.

In response to this directive the CIIC was tasked with the Energy Bill Benchmarking (EBB) Project to develop an effective and efficient benchmark to provide electricity and gas consumers with greater information to improve energy efficiency. This direction is subject to an objective analysis of the issue, and the implementation of an energy bill benchmark will only occur if the case for it is established through the RIS process.

Bill benchmarking alone is not the sole mechanism to improve energy efficiency in households and as is shown later in this RIS. There are many issues including household size, whether a benchmark is local or at a state level, and the cost impacts in developing a suitable benchmark. However, whilst these issues need to be addressed the MCE considers it to be an important facilitator of consumer awareness and education.

The CIIC has initiated extensive research and market testing, including:

- a report by McLennan Magasanik Associates (MMA) in 2005 developing ideas for presenting benchmarking data on energy bills based on a review of energy and water bills in Australia and overseas and interviews with a number of energy retailers;
- a report by Newton Wayman Chong (NWC) and Associates in 2006 on market testing of six alternative benchmarking formats based on the outcomes of the MMA study;
- a report by NWC in 2006 based on discussions with nine retailers exploring their view of benchmarking and the challenges and opportunities it could provide, and their reaction to the alternative benchmarking formats tested on consumers;
- a report by CRA International in 2009 containing a review of national and international benchmarking experiences; an assessment of implementation issues associated with various benchmarks models; and market testing of community attitudes to energy benchmarking.

These documents can be found at <http://www.ret.gov.au/Documents/mce/energy-eff/nfee/committees/consumer/focus.html>

As part of consultation with stakeholders, the CIIC met with retailers and distributors in April 2008 to discuss the EBB Project. There was agreement between the CIIC and attendees that some of the models previously suggested by the CIIC would be unnecessarily costly to implement. The CIIC agreed to undertake further work to inform the possible costs and benefits of EBB. The work of CRA International has been important in this process, in its assessment of implementation issues related to mandating a benchmark.

The CIIC is also liaising with Ergon Energy to review the outcomes of its EBB trial in the Mackay region in north Queensland. Preliminary findings from the trial are included in this RIS. More detailed research related to consumer behaviour from this trial is expected to be included in the Decision RIS for MCE consideration. Further information on this trial is contained in section 1.3.1 of this RIS.

1.1. Relationship to Other Energy Initiatives

Subject to the results of consultation on this RIS, the requirements to implement the EBB will be considered by MCE as part of the National Energy Consumer Framework (NECF) of which the First Exposure Draft was released on 30 April 2009¹.

Since MCE's commitment to the NFEE Stage One Implementation Plans in August 2004, there have been a range of national policy initiatives that will complement existing energy efficiency initiatives, impact on future energy prices and may influence the need to provide customers with energy efficiency options (such as EBB) to reduce their bills. These developments include:

1.1.1. Carbon Pollution Reduction Scheme

The Carbon Pollution Reduction Scheme (CPRS) White Paper, released in December 2008 stated on page 110 (Vol 2) that:

“Energy efficiency is the final piece of the emissions reduction strategy. Energy use is the key driver of emissions growth in Australia. The Renewable Energy Target and Carbon Capture and Storage will reduce the emissions produced and released in generating energy, but there is also considerable scope to increase the efficiency of energy use. Using energy more efficiently can significantly reduce the cost of greenhouse gas abatement and ease the transition to a low-carbon economy” and

“There are several impediments to the uptake of energy efficiency measures, including gaps in the information available to households and businesses to make informed decisions. By becoming more energy efficient, households can reduce the cost impacts of the Scheme. Prior to the commencement of the Scheme, the Government will deliver household energy efficiency initiatives building on existing programs to help households do their bit to tackle climate change and reduce energy bills”.

The introduction of a Carbon Pollution Reduction Scheme from July 2011 and the creation of a carbon market to reflect the environmental costs of goods and services, will encourage consumers to consider the environmental impact of their behaviour, including energy consumption which is one of the major producers of greenhouse gas emissions. The level of success will be influenced by the information consumers have available to them about their energy use.

1.1.2. National Strategy for Energy Efficiency

A National Strategy for Energy Efficiency has been developed through the Council of Australian Governments (COAG) to accelerate energy efficiency efforts across all governments and to help households and businesses prepare for the introduction of the CPRS. In July 2009, COAG signed the [National Partnership Agreement on Energy Efficiency](#), which will deliver a nationally-consistent and cooperative approach to energy efficiency. The agreement by Australian Governments is a comprehensive 10-year strategy to accelerate energy efficiency improvements for householders and businesses across all sectors of the economy. The strategy will complement the Carbon Pollution Reduction Scheme by addressing the barriers that are preventing the efficient uptake of energy efficient opportunities, such as split incentives and information failures.

¹ The First Exposure Draft of the NECF is available at <http://www.ret.gov.au/Documents/mce/emr/rpwg/necffed.html>

The strategy is divided up into four key themes. One of these is entitled 'Assisting households and businesses to transition to a low-carbon future' and includes a sub-section on advice and education. This sub-section states:

*'The efficient use of energy requires information that motivates, facilitates and reinforces rational and responsible behaviour by business and consumers. The Strategy is designed to ensure Australians have access to clear, consistent and credible information on energy efficient products and services. The jurisdictions will collaborate when developing communication campaigns designed to change community attitudes and behaviours in relation to energy efficiency, and consumers will be given energy use benchmarking information. Governments will support the uptake of new technologies by showcasing and promoting energy efficient technologies and energy conservation measures.'*²

The document goes on to outline that the strategy will:

'Continue to support the NFEES project on energy bill benchmarking, which will provide householders with information that will allow them to measure and compare their energy consumption.

A regulatory impact analysis for energy bill benchmarking will be prepared and released for consultation during 2009.

*Subject to regulatory impact analysis, regulatory requirements will be incorporated in the National Energy Customer Framework package to be enacted in 2010.'*³

1.1.3. Renewable Energy Target

On 20 August 2009 the Australian Government's Renewable Energy Target (RET) Bills were passed through both houses of Parliament. The expanded scheme will deliver the Government's commitment that the equivalent of at least 20 per cent of Australia's electricity comes from renewable sources by 2020. To achieve this, the RET scheme guarantees a market for additional renewable energy generation, using a mechanism of tradeable Renewable Energy Certificates known as RECs. Increased energy prices which may result from this initiative would be expected to encourage consumers to have more regard to their energy consumption.

1.1.4. Smart Meters

In February 2006 COAG committed to the progressive national roll-out of 'smart meters' for electricity, to permit the introduction of time-of-day pricing and to allow users to more appropriately manage their demand for peak power, in circumstances where benefits outweigh costs. This type of pricing will require consumers to have greater awareness of their energy use. After reviewing a national smart metering cost benefit analysis in 2008, MCE noted a wide range of potential net benefits, but that benefits and costs were not certain in all jurisdictions. Given the potential net benefits MCE supported the development of a national smart metering framework and smart meter deployments initially in Victoria and New South Wales. Ministers agreed to further progress the smart meter roll-out by undertaking coordinated pilots and business-specific business case studies in most jurisdictions (not including South

² Page 11 National Strategy on Energy Efficiency, Council of Australian Governments (COAG) July 2009

³ Ibid Page 12

Australia and Tasmania). These pilots and business cases seek to confirm the findings of the cost-benefit analysis, reduce the range of uncertainty to inform whether a roll-out should proceed, and also inform the development of roll-out implementation plans to maximise benefits.

1.1.5. State and Territory Government energy initiatives

There are various State and Territory Government energy initiatives to help reduce the impact of energy consumption on the environment and deliver economic benefits such as reducing consumer energy costs. Further information on specific schemes is contained in section 1.2 of this RIS.

As a result of these initiatives there is greater consumer awareness and responsiveness to energy efficiency, and climate change more broadly that is likely to influence the level of behavioural change by consumers in response to the proposed energy benchmark – i.e. the extent to which consumers will be motivated to implement energy saving actions.

For example, the market testing undertaken by Newton Wayman Chong (NWC) highlighted that the key motivation for most people in making efforts to use less energy, or to use it efficiently, would be savings and costs. Increased awareness of the greenhouse emissions associated with electricity generation and climate change generally may provide increased motivation to undertake energy efficiency measures.

1.2. Relevant Jurisdictional Policies

1.2.1. Victoria

In October 2008, the *Energy Legislation Amendment (Retail Competition and Other Matters) Act 2008* was made. Among other provisions, this Act amended the existing requirement (introduced in July 2002) for energy retailers to include in their electricity bills to customers, information on greenhouse gas emissions associated with the generation of electricity. The amendment introduced an alternative performance-based regulation that allows retailers to provide energy bill benchmarking information to a residential customer.

Bill Benchmarking information enables a residential customer to:

- (a) make a comparison between:
 - (i) the use of electricity at the residential customer's place of supply; and
 - (ii) the average use of electricity at similar places of supply; and
- (b) assess whether the use of electricity at the residential customer's place of supply is above, equal or below the average use of electricity at similar places of supply.

The Victorian Government is undertaking customer research to obtain data that will provide guidance to energy retailers on electricity bill benchmarking for Victorian customers. It should be noted that the legislation currently enables electricity retailers to provide bill benchmarking information to customers based on their own data. However it is understood that retailers are keen to utilise the Government provided data as a basis for this information at present.

In Victoria, the Energy Retail Code also requires retailers to include on a customer's bill, a graph showing the customer's consumption for that billing period and the customer's consumption for each billing period over the past 12 months. This allows the customer to compare their current consumption with the same period of the previous year.

1.2.2. South Australia

The South Australian *Electricity Act 1996* and *South Australian Gas Act 1997* outline the responsibilities of retailers with regard to provision of consumption and greenhouse information. These requirements apply to all small customers and state:

- the amount of greenhouse gas emissions for the period to which the account relates;
- the amount of greenhouse gas emissions for each period during the preceding 12 months in respect of which the customer was sent a bill;
- the information referred to in paragraphs must be presented in graphical form;
- the amounts of the greenhouse gas emissions must be calculated, in a manner approved by the Essential Services Commission, by reference to material about emissions coefficients published by the Australian Greenhouse Office of the Department of the Environment and Heritage of the Australian Government. The information must also be accompanied by explanatory material of a kind approved by the Commission.

1.2.3. Queensland

Queensland electricity retailers' billing obligations, including information that is required to be stated on a small customer's electricity bill, are set out in the Queensland Electricity Industry Code. The regulations state that a retailer must include data on average daily usage and a comparison to the same period in the previous year, however there is no requirement to include greenhouse gas information. Similar billing provisions are set out for gas customers under item 4.4 of the Gas Industry Code.

1.2.4. Western Australia

Western Australia has no legislated energy benchmarking or greenhouse gas reporting requirements. Energy retailers are encouraged to display current energy consumption compared to the previous period and the same period last year, as well as greenhouse gas emissions for the current period.

1.2.5. New South Wales

There is no statutory obligation in NSW for retailers to report on greenhouse abatement as part of their bills to customers. The former Premier Bob Carr wrote to standard retailers (Energy Australia, Integral Energy and Country Energy) requesting that they provide greenhouse abatement information on their bills. The NSW Independent Pricing and Regulatory Tribunal (IPART) was not involved in this process and as it is not a licence condition, had no power to enforce this request. Other energy retailers in NSW may provide greenhouse abatement information on their bills as this is a requirement in other jurisdictions. Therefore where a retailer uses a common bill format for all jurisdictions this information would also be provided in NSW.

The obligation to provide consumption details regarding previous billing periods is set out in *clause 31(1)(f) Electricity Supply (General) Regulation 2001*. In brief, this obligation requires standard retailers to provide the average daily consumption figure for the corresponding billing period during the previous year. This is subject to the retailer supplying the customer over the whole period. This obligation applies to small retail customers (less than 160MWh/annum) on standard supply contracts. The current regulatory arrangements are unlikely to change due to the proposed move to a national regime in the next couple of years.

1.2.6. Tasmania

There are no energy benchmarking or greenhouse gas reporting requirements in Tasmania.

1.2.7. Australian Capital Territory

The ACT has two specific regulations requiring retailers to provide information on accounts which could assist consumers to benchmark their energy use. The first is Section 13.5 (1) (f) in the *Consumer Protection Code* (under the *Utilities Act 2000*) which requires retailers to provide 'current and comparative consumption data'. The second is Section 2.2 (2) in the *Guidelines for Greenhouse Gas disclosure On Customer Accounts* (Under the *Consumer Protection Code*) which requires retailers to provide a: 'graphical representation of greenhouse gas emissions associated with electricity consumption for all previous billing periods over the last twelve months, to the extent that this information is available'.

1.2.8. Northern Territory

There is no legislated energy benchmarking or greenhouse gas reporting requirement for the Northern Territory, although the Territory's sole supplier's billing format does display current consumption against the last period and the same period the previous year, the national / regional average for domestic consumption and associated greenhouse gas emissions on bills.

1.3. Existing Benchmarking in Australia

1.3.1. Ergon Energy

Ergon Energy in Queensland has recently completed a bill benchmarking trial with around 40,000 customers in the Mackay region to test consumer response to a benchmark. Ergon Energy has elected to base their household benchmarking initiative on a weather zone area comparison. It also has a web based comparison which allows customers to enter their average daily electricity kilowatt hours (kWh) consumption for each of three possible tariffs, and then select the area they live in (Maranoa, Central West, or Peninsula, for example), reflecting the various climatic zones within the State.

The benchmark compares the household's average daily electricity use for the last quarter with the average daily consumption in their area. It also includes a statement telling customers how much their consumption is above or below the area average in percentage terms.

The average consumption data for each of the eight benchmark areas is calculated and updated daily on a previous fortnight rolling average. Ergon Energy developed the benchmark using consumption data from its vertically integrated retail business. It should be noted that this approach is unlikely to be possible in a national benchmarking roll-out because the majority of retailers are disaggregated from distributors. This may have a bearing on some of the costs, benefits and impacts attributed to the Ergon Energy trial in this RIS.

Ergon Energy's web based comparison tool is available at <http://evolve.ergon.com.au/WhatcanIdo/Athome/Compareyourelectricityusage.aspx>

1.3.2. Home Energy Calculator

The Home Energy Saver Calculator is an online tool that shows consumers how much gas and electricity their household uses. It allows consumers to benchmark their energy consumption against other households and also provides useful tips to help reduce energy usage. The tool requires some basic inputs such as the number of people in the household and annual gas and electricity consumption. Results are presented in terms of CO₂ emissions, rather than energy units.

The calculator provides a comparison of the household's gas and electricity use against several benchmarks. For a given number of people in the household these include a comparison to the 2001 average Victorian home and the 1996 average Victorian home. The user can also compare their usage against the overall Victorian average for all homes and all occupants.

The benchmarks are presented in the form of a vertical bar chart. The charts are created in real time once the user inputs details about their household composition and annual energy usage. The benchmarks can be accessed at <http://www.saveenergy.vic.gov.au>.

1.3.3. National Australian Built Environment Rating System (NABERS)

NABERS is a voluntary rating system that measures an existing building's environmental performance during operation. NABERS is a Government initiative, managed nationally by the NSW Department of Environment and Climate Change on behalf of Federal and State Governments. The scheme currently covers office buildings and tenancies, hotels and homes. Ratings are being developed for hospitals, schools and retail centres.

NABERS for homes rates the energy and water use of Australian households against benchmarks, developed using available survey data. It awards a rating from 0 to 5 stars, with 2.5 stars reflecting median performance, and 5 stars representing a very efficient home.

Required information for a home energy rating includes:

- occupancy data (number of occupants and number of weeks in a year that the household was unoccupied);
- postcode (used to correct for climatic effects);
- annual or quarterly consumption for all fuels used in the home (electricity, natural gas, LPG, coal/coke, heating oil, wood diesel); and
- quantity of GreenPower used (kWh or per cent of total annual electricity purchased).

Householders can access the NABERS home rating tool for free online at <http://www.nabers.com.au/home.aspx>.

1.3.4. Brisbane Water

In 2005, Brisbane Water introduced a Separate Water Advice (SWA) notice for Brisbane residents which is distributed together with the Brisbane City Council's rates notice.

This SWA was developed to provide informative and tailored water consumption advice to help Brisbane residents better understand their own water consumption in comparison to a local area average and ultimately to promote water saving behaviour. The SWA contains customised messages and water saving ideas based on a number of factors, including water consumption, property size and property location. This notice is used to inform residential rate payers of their quarterly water consumption along with a comparison to previous quarters, the Brisbane average and their local area average water consumption.

1.3.5. City of Melbourne

The City of Melbourne's *Water Saving Calculator* was designed solely for education purposes for residents of the City of Melbourne. The calculator is in the form of a survey that is part of the Council's *WaterMark* strategy. The survey asks questions about a household's water consumption for different end uses (showering, laundry, garden watering, etc.), as well as its conservation practices, and calculates weekly water usage volumes on a per person per household basis.

The weekly per person water usage for a household calculated from the survey is compared to a three tier benchmark and contains a related message, as follows:

- 1200 litres per week: *Great Work. Your household is using water wisely. Share your knowledge with neighbours, friends and family! 750 litres a week would be exceptional!*
- 1200 - 1600 litres per week: *On the way. There are still plenty of ways for you to save water and at the same time save money in your home. Please read the City of Melbourne's WaterMark strategy for tips on water saving*
- 1600 litres per week: *You use a lot of water. Please read about water conservation in WaterMark and give Council a call if you need some extra assistance.*

The benchmark averages were derived from the City of Melbourne's water use data for the metropolitan area available at the time the benchmark was developed.

1.3.6. Yarra Valley Water 'Smart Account'

Currently in Victoria Yarra Valley Water residential customers receive a 'Smart Account' attached to their water usage account which provides customers with new "typical household" and "water efficient household" benchmarks. The figures and water conservation tips included on the flap of the bill help customers to understand how they can continue to meet achievable water savings. Figures show "typical" households now use 14 per cent less water inside the home and "water efficient" homes use 12 per cent less water inside the home compared to when the Smart Account was first developed in 2003.

Yarra Valley Water states that the key to water conservation is behavioural change and with the Smart Account, they not only want to engage and motivate people to use less water, but provide them with the information and knowledge to do so. The intention with this information is that the comparative data triggers a response in people to take action. The Smart Account also includes a tear-off section with simple water saving tips that can be kept as a handy reference.

The Smart Account was awarded the prestigious IWA Marketing and Communications Award for excellence in the category of customer bills at the International Water Association (IWA) conference in Beijing in 2006⁴

1.4. Existing Benchmarking Internationally

1.4.1. Danish Electricity Trust

The Danish Electricity Saving Trust's 'Guide to lower electricity consumption' is an initiative to encourage Danish consumers to reduce their energy consumption. The Guide provides consumers with encouragement and positive advice on how to reduce the amount of electricity they use in their homes, along with energy consumption benchmarks. It shows energy savings in the home can be made simply and safely – providing consumers with lower electricity bills and reduced environmental impacts.

⁴ <http://www.yvw.com.au/NR/ronlyres/6AC4534E-B48B-48C1-8E3A-E1615FD58D24/0/NewSmartAccountRelease.pdf>

Danes use an average of 1,500 kilowatt hours (kWh) per person per year. The Trust established a single national benchmark of 1,000 kWh per person per year. However, the benchmark for people who live alone increases to 1,500 kWh to acknowledge the fact that the energy used by some appliances is the same – irrespective of the number of persons in a household.

Information accompanying the benchmark also notes that if you have electric heating, you cannot count on achieving the target of 1,000 kWh per person per year. It suggests that homeowners wanting to make comparisons based on the 1,000 kWh target will need to discount their consumption for electric heating from their total usage.

The Guide was delivered to all 2.6 million households in Denmark between Christmas and New Year in 2008.

1.4.2. Lawrence Berkeley Laboratories – Home Energy Saver (HES), United States

The HES was designed to help consumers in the United States identify the best ways to save energy in their homes. The HES was the first internet-based tool for calculating energy use in residential buildings.

The project has been sponsored by the U.S. Department of Energy. The HES site is divided into two main sections, "Energy Adviser" and "Making it Happen." Energy Advisor computes a home's total energy use based on information entered online. Upon entering a postcode the Energy Adviser component displays the energy use, costs, and the energy consumption of major end uses (heating, cooling, water heating, major appliances, lighting, and small appliances) for a typical house in the local postcode area compared to that of an energy-efficient house in the area. The user can then answer a set of basic questions about their house, including its floor area, the number of occupants, types of heating and air conditioning equipment, and fuel prices, to get a tailored energy bill breakdown. The more information entered, the more the recommendations are customised to the house.

"Making It Happen" provides time-saving links to hundreds of internet sites with practical, detailed information about energy-efficient homes, products, service providers, utility programs, and online reading materials.

HES performs heating and cooling calculations using DOE-2, a building energy simulation program developed at the Lawrence Berkeley Lab. The other energy calculations in HES are also based on models and data from years of research at Berkeley Lab on how people use energy in their homes, for example, the types of appliances and equipment in homes, as well as usage patterns.

1.4.3. ENERGY STAR Home Energy Yardstick, United States

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DoE). The program aims to help consumers and businesses to save money and protect the environment through energy-efficient products and practices.

Through its partnerships with more than 15,000 private and public sector organisations, ENERGY STAR delivers the technical information and tools that organisations and consumers need to choose energy-efficient solutions and best management practices.

Energy Star has three web-tools for home owners. These tools can help homeowners understand possible improvements to make a home more energy-efficient, can be framed or hosted on a utility's web site, and can be used to promote any ENERGY STAR home improvement effort led by a utility.

The ENERGY STAR Home Energy Yardstick is a web-based home-energy calculator that provides a quick measure of a home's energy efficiency. It requires basic information: the homeowner's postcode, the size of the house, the year it was built, and utility bill information for 12 months. Once this information is entered, the energy calculator shows how a home performs energy-wise relative to comparable homes in the same location, and gives it a score between 0 and 10 (10 being the most energy-efficient, and 5 being average). Then, based on the home's performance, a set of recommendations is provided for improving the home's energy efficiency and lowering utility costs.

1.4.4. Positive Energy, United States

A number of US power utilities have commenced providing their customers with home energy reports. The reports provide benchmarks that allow customers to compare their electricity usage with other similar customers and encourage customers to reduce their electricity use. The report is sent out separately to the bill. The Sacramento Municipal Utility District in California has sent out reports to 35,000 randomly selected customers. Puget Sound Energy in Washington also commenced a similar pilot program in suburban Seattle with 40,000 customers. To date, the approach has been adopted by utilities in 10 major metropolitan areas.

The customer's monthly electricity usage is compared against that of neighbours in 100 homes of similar size that used the same fuel type for heating purposes. The customer's usage is also compared against the 20 most energy-efficient neighbours within the same group.

The benchmark presentation format is a simple horizontal 3 - bar chart that compares the customer's usage for the month in kWh against the average of all neighbours in the comparison group and against the 'efficient' neighbours sub-group. The graphic also includes a statement relating how much higher (or lower), in percentage terms, the customer's energy usage is in comparison to the neighbours. The benchmark information is incorporated in a stand-alone one page report, and is not part of the bill.

The reports are produced by a third-party, Positive Energy, on contract to the utilities. The utilities provide the energy billing data and Positive Energy generate, print and mail the reports. Energy usage data is sourced from each utility's customer billing database. It is not clear from the available material where the house size and fuel type for heating information is sourced from. Positive Energy, states on its website that they also incorporate external data sources in the compilation of the report.

2. Problem Statement

The EBB proposal seeks to fill a current information gap for energy consumers in the residential sector of Australia. It also seeks to implement a consistent approach across all jurisdictions so as to minimise cost and inefficiency.

Many consumers currently have no or minimal accessible information on how their energy consumption compares to other people and therefore may have no ability to identify if they are a high energy user. Providing an energy benchmark is one method of filling this information gap and potentially encouraging consumers to implement energy efficiency improvements.

For the purposes of this Regulatory Impact Statement, the following definitions will apply and are broadly consistent with the National Energy Customer Framework definitions:

- **consumer or customer** refers to a person to whom energy is or is to be sold by a retailer, or who proposes to purchase energy from a retailer, at the supply point for the person's premises;
- **energy** refers to electricity or reticulated gas;
- **residential consumer or customer** means a customer who purchases energy principally for personal, household or domestic use at premises;
- **retailer** means a person or body that is authorised to sell energy to customers;
- **distributor** means the organisation that operates the energy distribution system that transfers energy to the consumer's premises.

2.1. Problem Context

Climate change is a serious global challenge, requiring an effective global response (IPCC 2007). There are now strong community concerns regarding the threats posed by global warming, and governments are responding with a wide range of programs to reduce greenhouse emissions.

On 11 March 2008, Australia's ratification of the Kyoto Protocol was officially recognised by the United Nations Framework Convention on Climate Change (UNFCCC). Under Kyoto, Australia is obliged to limit its greenhouse gas emissions in 2008-2012 to 108 per cent of 1990 emission levels.

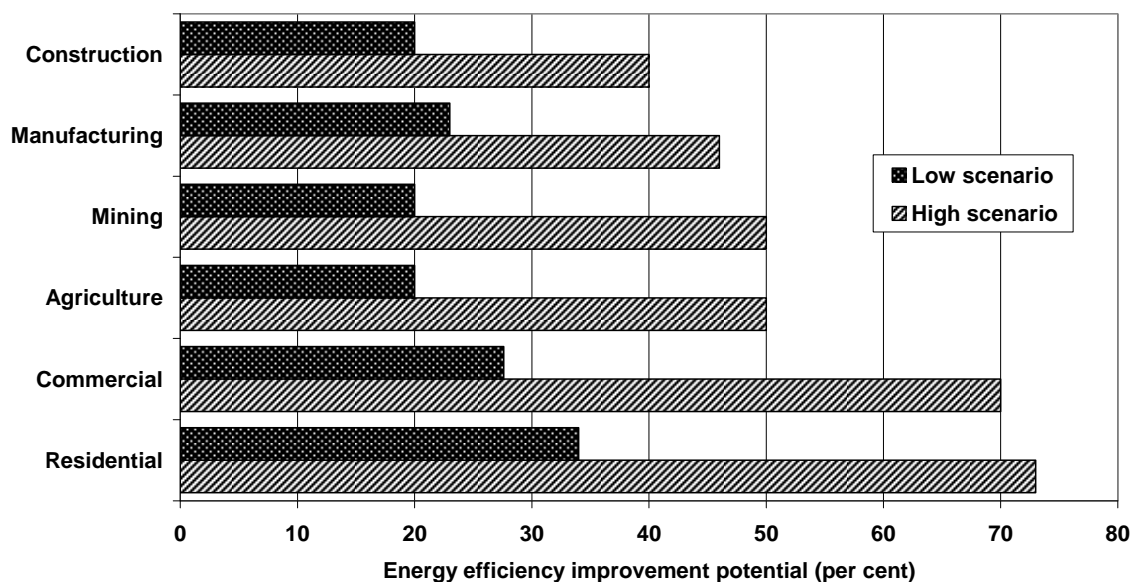
Australia like other OECD countries has in recent times seen an upward trend in residential energy consumption. Since 1973, primary energy demand in the residential sector in OECD countries has grown by more than all sectors other than transport; and in terms of electricity demand growth, it has outstripped all but the commercial buildings sector over this same period⁵.

⁵ International Energy Agency (IEA), *Cool Appliances - Policy Strategies for Energy Efficient Homes*, 2003, p.12

At the same time in Australia, there may be considerable potential to improve energy efficiency and to reduce the energy efficiency gap—the difference between actual energy efficiency and what is considered to be the most energy-efficient processes and technologies that are achievable.

The true extent of the energy efficiency gap is largely immeasurable. Numerous researchers have, however, used case studies of a subset of all possible energy efficiency improvements to demonstrate that Australian producers and consumers have failed to adopt energy efficiency improvements that are cost effective for them. In 2005 the Productivity Commission in its report entitled ‘The Private Cost Effectiveness of Improving Energy Efficiency’ reported on some of the case studies. A preliminary phase study by the Sustainable Energy Authority of Victoria (SEAV), with assistance from several consultants, produced estimates of Australia’s energy efficiency potential for the National Framework for Energy Efficiency (NFEE), which indicated there was significant scope for producers and consumers to adopt improvements in their energy efficiency that would be cost effective for them⁶ (see figure 1).

Figure 1 Preliminary (phase one) SEAV-NFEE estimates of potential energy efficiency improvements (a)



(a) Energy efficiency improvement potential is expressed as a percentage of current energy use. The low energy efficiency improvement scenario was based on current commercially available technologies with an average 4 year payback period. The high energy efficiency improvement scenario was based on existing or developing technologies potentially available during a 12 year projection period with an average 8 year payback period.

Data sources: EEWG (2003); SEAV, Armstrong and Saturn Corporate Resources (2003).

⁶ The Private Cost Effectiveness of Improving Energy Efficiency, Productivity Commission Inquiry Report August 2005, p. 71

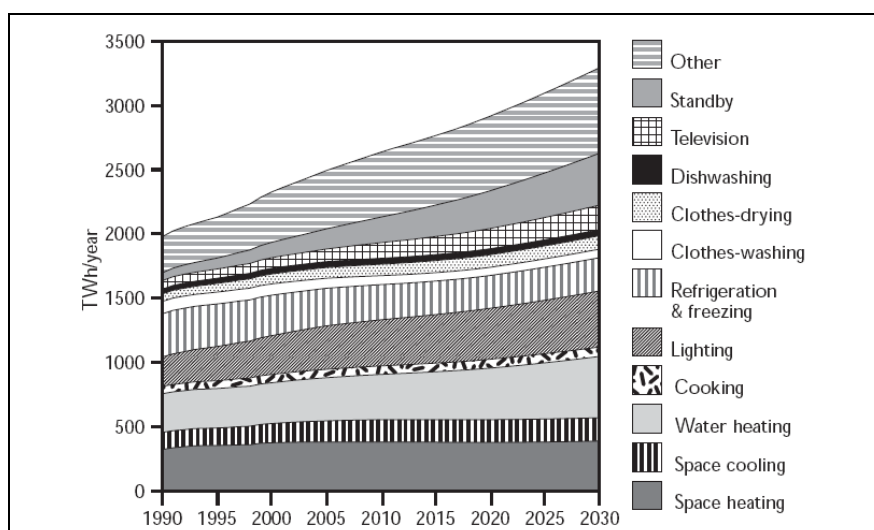
In a second phase assessment of the SEAV-NFEE, SEAV commissioned two more detailed studies for the residential sector:

- George Wilkenfeld and Associates (2004b) analysed potential improvements in the efficiency of water heating; and
- EMET Consultants (2004b) examined 15 potential energy efficiency improvements for lighting, cooking, refrigeration, dishwashers, clothes washers, building thermal performance and heating/cooling systems.

In summary, the residential sector estimates suggested that, by 2014, householders will have overlooked additional cost-effective actions that could have reduced their energy consumption by at least 13 per cent in that year. Whilst some time has passed since these studies were undertaken they would nevertheless suggest that there is substantial scope to improve energy efficiency in the residential sector. Initiatives that improve the consumer's information about their energy consumption and how it compares to other people will make a contribution to improving overall energy efficiency⁷.

In terms of electricity, residential equipment and appliances accounted for 30 per cent of all electricity generated in OECD countries in 2003, making the residential sector the second largest consumer of electricity and the third largest emitter of greenhouse gas emissions in the OECD⁸. This is projected to continue, assuming a business-as-usual scenario (Figure 2).

Figure 2: Projected International Energy Agency Residential Electricity Consumption by end-use under current policies⁹



⁷ Ibid

⁸ Ibid. p.12

⁹ Ibid. p.14

Overall energy consumption by Australian households has grown significantly over the past three decades. In the period from 1974–75 to 2006–07, energy usage in the residential sector almost doubled from 246 petajoules (PJ) to 442 PJ¹⁰. Indeed energy use on a per person basis has increased by around 18.1 per cent from 17.7 to 20.9 GJ/person in 20 years from the early-mid 1980s. Significantly, the Australian Bureau of Agriculture and Resource Economics (ABARE) has projected that over the period 2005-06 to 2011-12 the residential sector's energy use will continue to increase by 1.8 per cent per annum and then 1.5 per cent up until 2029-30¹¹. Slowing, and ultimately reversing, the growth in the residential sectors emissions is a high priority in Australia's greenhouse gas reduction strategy.

The continued growth in electricity consumption across all sectors of the economy requires ongoing investment in network infrastructure to meet rising demand and avoid network failure. This investment includes the provision of new infrastructure such as power stations and transmission lines, and also regular maintenance of existing infrastructure. The costs for this investment are substantial, with the 40 members of the Energy Supply Association of Australia stating that they have infrastructure investment plans worth more than \$30 billion over the next decade.¹² Although costs are borne initially by network operators (distributors), these costs are ultimately passed on to electricity consumers through higher electricity prices.

Australia is heavily dependent on fossil fuels for energy production, providing 96 per cent (5,380 PJ) of the energy consumed, with renewable sources providing approximately 4 per cent (260 PJ) of the energy consumed. The total energy sector accounts for approximately 70 per cent (401 Mt) of Australia's greenhouse gas emissions, comprising stationary energy (50 per cent), transport (13 per cent) and fugitive emissions in production and delivery (6 per cent). These emissions will naturally increase with increasing energy use, subject to reductions in the emissions intensity of energy production.

Following moves internationally to reduce carbon emissions as part of the response to climate change, it is anticipated that Australia too will place a price on carbon emissions. Due to the high emissions-intensity of the Australian electricity sector, this means that the sector will be exposed to further operating cost increases. These additional costs are unlikely to be borne by generators rather they will also be passed on to electricity consumers through higher electricity prices.

Whilst there are many variables such as climate zones, household size, dwelling type and appliance use that affect energy consumption, analysis undertaken by Energy Efficient Strategies (EES) on behalf of Department of the Environment, Water, Heritage and the Arts (DEWHA) indicates that household appliances are the major contributor to increased energy consumption. The analysis found that electrical appliances represent the largest single end use in terms of energy consumption, rising from approximately one-quarter of all energy use in 1990 to one-third of all energy use projected for 2020¹³.

¹⁰ Australian Bureau of Resource and Agricultural Economics (ABARE), *Energy in Australia 2009*, p.16

¹¹ ABARE, *Energy Projects to 2029-30* (research report 07.24), p.33

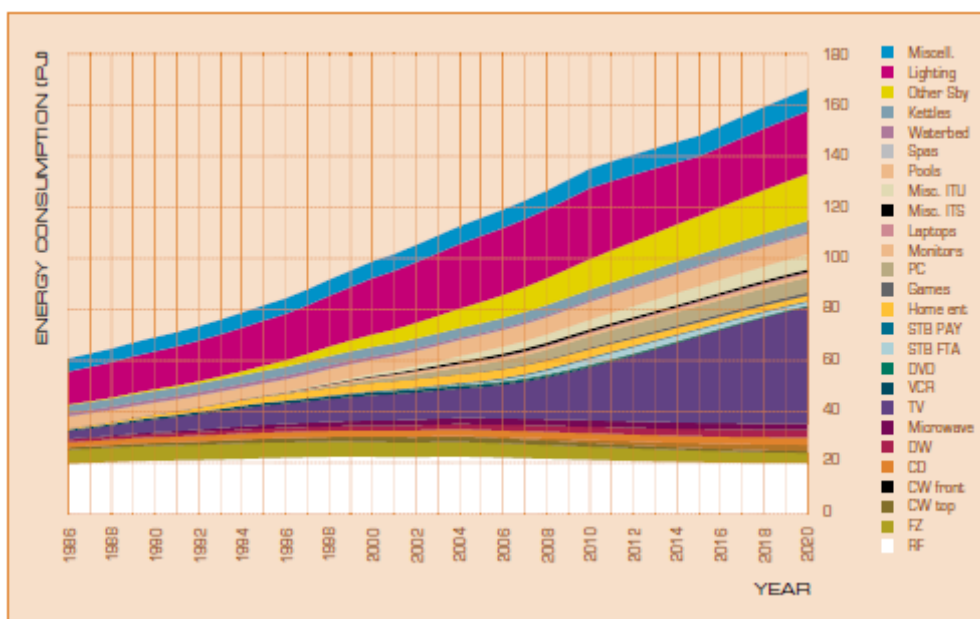
¹² Ibid. ESSA

¹³ The Department of Environment, Water, Heritage and the Arts, *Energy Use in the Residential Sector 1986 – 2020*, 2008, p. 48

EES found that the appliances with the largest contribution to increased residential consumption were (Figure 3):

- Computers – the ownership ratio (computers per household) in 1986 has grown from <math><0.01</math> in 1986 to 0.87 in 2005 with a projection of 1.25 in 2020¹⁴;
- Televisions – the ownership ratio in 1986 was 1.5 and is project to be 2.1 by 2020. More importantly is the increase in plasma, projection and Liquid Crystal Display (LCD) televisions which consume more energy than traditional Cathode Ray Tube (CRT) televisions. In 2005 CRT screens accounted for 75 per cent of all sales but by 2007 this is estimated to have fallen to less than 40 per cent . LCDs are projected to have a 70 per cent market share by 2010¹⁵; and
- Home entertainment – the total consumption from equipment such as DVD players, game consoles and set top boxes has increased from 0.5 PJ in 1986 to nearly in 3.5 PJ in 2006, however this is expected to drop to 2.0 PJ by 2020¹⁶; and
- Dishwashers – ownership in 1986 was 19.8 per cent of households and 41.5 per cent in 2005. 60 per cent of households are expected to have a dishwasher by 2020¹⁷.

Figure 3: Trends in Electrical Appliance Energy Types - Australia¹⁸



¹⁴ Ibid. p.55-56

¹⁵ Ibid. p. 61

¹⁶ Ibid. p. 57

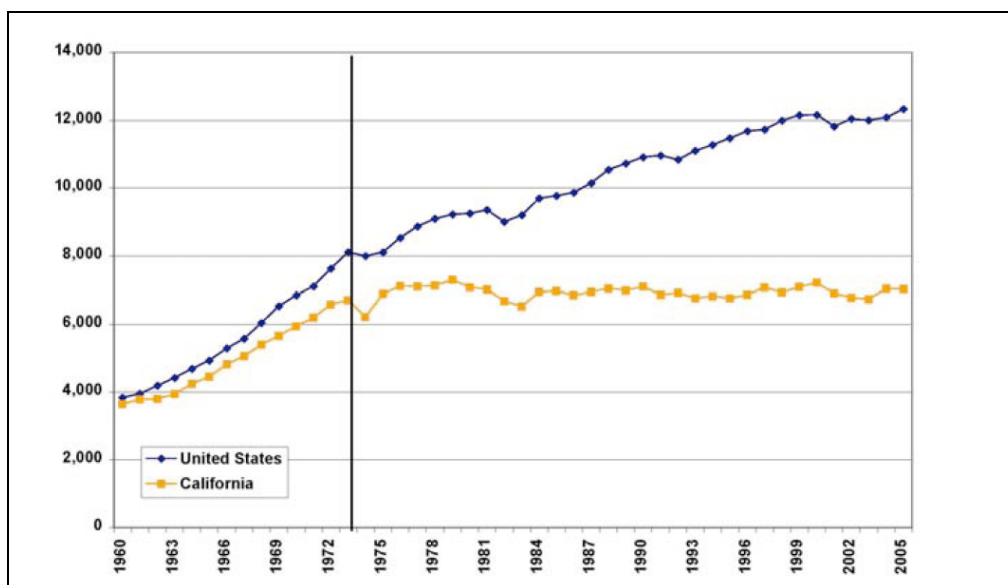
¹⁷ Ibid. p. 54

¹⁸ Ibid p. 41

In addition to the increased ownership of household appliances, the amount of time using ‘discretionary’ appliances such as computers, televisions and home entertainment equipment has increased substantially. As an example, time currently spent using computers has nearly doubled from 500 hours per annum in the 1990s to 900 hours per annum. This figure is expected to rise to 1200 hours per annum by 2020¹⁹. It should be acknowledged that the energy efficiency of some of the appliances listed above has improved over the period of analysis but not to same extent as the growth in ownership or usage.

Australia’s energy consumption trends contrast differently with energy consumption trends in the State of California in the United States. California is estimated to have the eighth largest economy in the World. Unlike other economies where energy consumption is growing with GDP, California has managed to stabilise energy consumption without constraining GDP growth (Figure 4). This can be attributed to the implementation of a broad range of some of the most stringent environmental performance and energy efficiency standards in the World, which are administered by the California Energy Commission. These focus on energy efficiency, renewable energy, research and development. More specifically, California has implemented a combination of pricing and policies to reduce electricity consumption - the latter involving aggressively expanding building and appliance energy efficiency standards programs as well as a suite of demand-side management programs.

Figure 4: Per Capita Electricity Sales (in Kilowatt Hours) in the United States and California²⁰



Australia’s sustained growth in energy consumption and in particular the increased consumption resulting from ‘discretionary appliances’ is the basis for a range of initiatives introduced as part of the National Framework for Energy Efficiency (NFE). Programs such as Minimum Energy Performance Standards (MEPS) and appliance labelling aim to assist consumers buy more energy-efficient products to reduce their energy consumption. The MCE recognises the value of providing consumers with a range of information, enabling them to make more informed energy-efficient buying decisions.

¹⁹ Ibid. p. 55

²⁰ California Energy Commission, *Integrated Energy Policy Report 2007 Summary*, 2007, p.3

Whilst consumers currently have information about their individual energy consumption, a market failure exists because they are not able to compare their energy consumption to other households. Their bill tells them the amount of energy they have used for a given period and in some cases previous usage information. However, the bill will not tell them if they are a high or low user in comparison to other households. If Australia is to reduce its energy consumption, consumers must be able to access adequate information to assist them when making energy efficiency and consumption decisions. The Productivity Commission, in its assessment of the private cost effectiveness of improving energy efficiency, concluded that one of the most important barriers to the adoption of privately cost-effective energy efficiency improvements was a failure in the provision of information²¹.

Moreover, the University of Oxford's Environmental Change Institute found that overall, literature from the USA, Canada, Scandinavia, the Netherlands and the UK on metering, billing and direct displays demonstrated that "clear feedback is a necessary element in learning how to control fuel use more effectively over a long period of time"²².

In order to determine the best course of action for Government to address a problem, a RIS analysis needs to identify:

- first, whether market failures exist, and
- second, whether there is a need for Government intervention to address the market failures.

Market failures are typically considered to fall within the following three categories:

- Public goods — public goods are those which are non-rivalrous and non-excludible which significantly limits the incentive for private providers to supply these goods, resulting in an undersupply or no supply at all without Government intervention.
- Externalities — externalities are those benefits (or costs) that are consumed by (or incurred by) third parties outside of the market. As such, these benefits or costs are not accounted for in the market demand-supply decision, and lead to a potential under-supply or over-supply in the market.
- Information asymmetry — information asymmetries occur when one party in the market, usually the buyer, does not have sufficient information about the goods they are considering purchasing, or the actions of the seller, to make a decision in their best interest.

Information asymmetries are the relevant type of market failure that this RIS seeks to address.

²¹ Pg XX The Private Cost Effectiveness of Improving Energy Efficiency, Productivity Commission Inquiry Report August 2005,

²² Darby, Sarah, University of Oxford Environmental Change Institute, *The Effectiveness of Feedback on Energy Consumption: A Review of the Literature on Metering, Billing and Direct Displays*, 2006, p.3.

This RIS thus explores options for filling this gap in consumers information about their energy consumption in comparison to other households by examining the option of retailers providing consumers with a relative energy benchmark on the bill (or by some other means). Information that allows consumers to measure and compare their energy consumption against a useful benchmark may empower them to take action to reduce their energy use and thereby save on their energy bills and reduce greenhouse gas emissions.

3. Objectives

The MCE's primary objective in their General Consumer Capacity Program under NFee Stage One was:

To raise the awareness of consumers regarding the benefits of energy efficiency, to enable consumers to make better informed decisions about actions to reduce energy consumption, and to motivate general consumers to implement energy saving actions.

The key element of the package was:

A requirement for energy retailers to provide benchmark data on household energy bills.

This RIS analyses the primary objective and explores options to determine if there is a satisfactory case for the implementation of an EBB.

As part of the analysis of the primary objective, four secondary objectives have been identified as relevant to the overall analysis of the EBB against the status quo.

The secondary objectives are as follows:

1. Minimise implementation costs – i.e. an option will be preferred if it minimises the initial and on-going costs of implementation given the benefits being delivered;
2. Provide meaningful benchmark data to the customer - i.e. an option will be preferred if it results in relevant and credible information being presented on customers' bills, for example by accounting for climatic or household characteristics;
3. An efficient outcome is achieved that provides a net benefit to the community; and
4. An approach is identified that is simple to implement and understand for both energy retailers and customers.

This RIS assesses the EBB options against these secondary objectives in equal terms and in relation to their adherence to the primary objective.

4. Statement of Options

Two options are presented in this RIS due to the MCE requirement, that the CIIC examine the requirement for energy retailers to allow end users to compare their energy consumption against an appropriate benchmark. The options examined are:

Option A. The status quo

Option B. Energy benchmarking

In the overall examination of the above options, consideration will be given to the following questions.

1. Is there value in requiring retailers to provide consumers with an energy benchmark to better manage their energy use?
2. Where a benchmark is considered beneficial, what type of benchmark is most useful to consumers to assist them better understand their energy use?
3. Where is a benchmark best provided to achieve maximum benefit?

In order to address these questions this RIS is divided into three key areas for stakeholder consideration:

- Responsibility for calculating and verifying a benchmark
- Benchmark comparator
- Benchmark provision

1. Stakeholders are asked to comment on the validity of an Energy Bill Benchmark and to indicate if there are any alternatives that fill the information gap for residential energy consumers in how their energy consumption compares to other people and their ability to identify if they are a high energy user.

Detailed evidence needs to be provided including costs to justify the claims of any suggested alternatives.

5. Impact Analysis

This section considers the benefits, costs and risks of the status quo versus those of an energy benchmark in response to the question “*Is there value requiring in retailers to provide consumers with an energy benchmark to better manage their energy use?*”

A range of scenarios will be examined for energy benchmarking to assess the range of variations in which the benchmark calculation can be done.

Each option is explored as a separate solution to the problem and is assumed to operate in isolation from other energy efficiency initiatives²³.

5.1. Option A – The status quo

The status quo in this case is no national benchmarking requirements at all, leaving only the benchmarking and/or greenhouse reporting requirements imposed by jurisdictional Governments where they consider them necessary. As outlined in section 1.2 of this RIS, there are currently energy benchmarking and/or greenhouse reporting requirements in some States and Territories. These programs would continue. There is a possibility other jurisdictional Governments may choose to impose requirements on retailers that operate in their State or Territory.

Benefits

- Retailers would continue current billing practices and provide information on energy efficiency as they deem appropriate (or as jurisdictional regulation requires) and therefore incur no additional costs.
- Existing flexible benchmarking requirements such as those legislated in Victoria, would continue to apply to all Victorian electricity retailers.

Costs

- Cross-jurisdictional retailers may continue to face higher billing and marketing costs to accommodate any difference in billing requirements between States or Territories.
- Consumers would continue to have access to little information to compare their energy consumption to other households. This is supported by research undertaken by Ergon Energy during its EBB trial which found that people generally have a low awareness of their energy use on average²⁴. Awareness is based on how much their bill costs them rather than kWh consumption.

²³ This is considered the best approach to assessing the value of energy benchmarking as an individual measure. It is acknowledged that if an energy benchmark was to be mandated it would work alongside other national and jurisdictional initiatives, except those that directly contradict it (e.g. Victorian benchmark requirement).

²⁴ Ergon Energy, Bill Benchmarking Trial Evaluation Research April 2009

- Overall energy consumption across the country is projected to continue to increase, creating the need for more energy generation and infrastructure, which is ultimately paid for by consumers through energy charges. Net capital expenditure in 2005-2006 for electricity generation, transmission and distribution was \$9 billion²⁵.
- Without measures to reduce energy consumption, greenhouse gas emissions would continue to rise. Between 1990 and 2006 CO₂ emissions from the stationary energy sector increased by 40 per cent²⁶.

Risks

- The impact of continued increases in Australia's greenhouse gas emissions (in the energy sector and others) is estimated to have extensive economic, environmental and social impacts. As an example, the *Garnaut Climate Change Review* calculated the negative impacts of climate change on infrastructure to be approximately 40 per cent of total Gross National Product²⁷. The infrastructure impacts are expected to affect a wide range of assets, including commercial and residential buildings, water supply and electricity infrastructure, and ports.
- There would be a possibility that jurisdictions may continue to diverge in their billing requirements and increase costs to cross-jurisdictional retailers.

Impact on stakeholders

Consumers

- Consumers would continue to have little or no comparative information on their energy consumption or environmental impacts on which to consider undertaking energy efficiency measures.
- Consumers who move from Victoria and the Northern Territory where they may receive a benchmark and or greenhouse emissions data to another jurisdiction would have less information on their energy bill than they previously did.
- Following the pending introduction of the CPRS, the price of electricity is expected to rise over time. This may provide consumers with some motivation to achieve energy savings, as potentially will the introduction of smart meters in some jurisdictions.

²⁵ <http://www.garnautreview.org.au/chp11.htm>

²⁶ Department of Climate Change, *Australia's Greenhouse Gas Emissions – Fact Sheet*, available at <http://www.climatechange.gov.au>

²⁷ Op cit <http://www.garnautreview.org.au/chp11.htm>

Retailers

- Retailers would continue to tailor their energy efficiency messages to consumers as they consider appropriate.
- Cross-jurisdictional retailers would continue to be responsible for implementing any jurisdiction-specific reporting requirements in addition to billing requirements in the NECF.

Distributors

- Distributors would continue to have no input into billing requirements aside from their responsibilities to provide retailers with metering data (or substitutions) on which to bill the customer.

5.2. Option B – Energy benchmarking

Retailers would be required to provide consumers with a benchmark to which they can compare their energy consumption. The costs and benefits of this requirement vary according to which party (or parties) is responsible for calculating the benchmark. Options include:

- retailers;
- distributors;
- government(s); or
- distributors and government(s).

Although the benchmark would be a national requirement, it is expected that the benchmark information would be different for each jurisdiction and possibly differ at a more local level (depending on the benchmark comparator). Other design elements of the benchmark such as the comparator, the metric to be used and information to support the benchmark are discussed later in this RIS.

Benefits

- Consumers would be made more aware of their energy consumption which may encourage them to undertake energy efficiency measures. This is supported by the following empirical evidence.
 - Positive Energy (US), which includes energy benchmarking in a Home Energy Report provided to consumers, has reported average reductions of 2.5 per cent of annual energy use across all households that received the report for a full year. This equates to 300 kWh per household in energy savings²⁸.

²⁸ Positive Energy in CRA International, *Energy Bill Benchmarking Desktop Analysis*, 2009, p.16

- A trial undertaken by Haakana et al of 105 households in Finland, in which consumers were given a range of feedback on their energy consumption, resulted in a total reduction in electricity consumption of 17-21 per cent of monthly consumption. Over half of this reduction was attributed to visual feedback provided to the consumer, which equated to a 83 – 125 kWh per month reduction²⁹.
 - 77 per cent of respondents in a consumer survey undertaken for this project indicated that they would be likely to take action to reduce household energy consumption if a benchmark showed that their household's use was higher than other households. It is widely acknowledged that what respondents say in a survey and what action they actually take can differ greatly, however if even a quarter of respondents respond as they indicated, this represents 10 per cent of all Australian households³⁰.
 - Benchmarking in the water industry provides useful insight into the impact of benchmarking. Analysis done by Brisbane Water of its water benchmarking program, in which consumers are provided with a local area and Brisbane-wide average benchmark and a range of water saving tips, has revealed that 68 per cent of respondents believe that the inclusion of this information in their rates bill has helped them to decrease their household's water usage³¹.
 - In 2008 the Queensland Government undertook a household survey which canvassed 900 people on a number of energy issues. When asked if they would be motivated to use less electricity if they had information such as a graph on their bill that showed they were above average for their area, an estimated 80.7 per cent of adults stated that they would be motivated to use less electricity³².
- Unlike other energy efficiency measures and historical billing information, energy benchmarking assists consumers to look beyond their own energy use and compares them to other households.

²⁹ Haakana, M., Sillanpaa, L. & Talsi, M., *The Effect of Feedback and Focused Advice on Household Energy Consumption*, 1997, p.10

³⁰ Calculated based on 77 per cent (survey result) x 25 per cent (discounting factor) x 50 per cent (assumed proportion of households that consume above the average) = 10 per cent. The discounting factor is based on the professional judgement of CRA International. This factor may be well above or well below this assumption and can only be determined with accuracy once the bill benchmarking measure is rolled out and there has been some experience in the field. Although there is likely to be some skew in the distribution of household electricity use in a given population, the assumption that 50 per cent of households consume more than the average is considered a reasonable estimate for the purposes of this study.

Further discussion in *Energy Bill Benchmarking Desktop Analysis*, p.34

³¹ Brisbane Water. Separate Water Advice Research report by Colmar Brunton August 2006 slide 40

³² Office of Economic and Statistical Research, Queensland Government, *Queensland Household Survey 2008* p 60

- Research undertaken by Roberts et al for the Office of the Gas and Electricity Markets in the United Kingdom (Ofgem) found that:

A household which was persistently wasteful would not see any change and therefore the justification for action would not appear in the feedback. This is a strong argument for providing feedback with normative comparisons or benchmarks³³.

- This report also points towards consumer behaviours being strongly influenced by the ‘not sticking out from the crowd’ factor where people find they use more energy than those in their area.
- Visualisation of energy use is an effective tool to help consumers consider their energy consumption in comparison to other households. Customers in Ergon Energy’s benchmarking trial found the graph to have most impact.³⁴ Additionally, the Ergon Energy trial found that the graph comparing them to their local area average had a stronger impact on heavy energy users making them feel guilty about their energy use
- A benchmark can facilitate discussion within the household about energy consumption, especially in those above the average, which may encourage household members to undertake energy efficiency measures. Evaluation of Brisbane Water’s water benchmarking initiative revealed that 71 per cent of survey respondents discussed benchmarking material with other household members³⁵.
- A benchmark can facilitate discussion between friends and/or neighbours about energy consumption which creates an opportunity for people to share energy efficiency tips and experience. Brisbane Water’s evaluation found that 58 per cent of survey respondents discussed benchmarking material with family, friends or work colleagues³⁶.
- Consumers on “bill smoothing” arrangements who are likely to be disengaged with their energy usage (as they pay the same amount each billing period) may be more inclined to consider their energy consumption if compared to other households.

³³ Roberts, Simon & Baker, William (Centre for Sustainable Energy), *Towards Effective Energy Information – Improving Consumer Feedback on Energy Consumption*, 2003, p.28

³⁴ Op cit Ergon Energy

³⁵ Op cit Brisbane Water

³⁶ Ibid

- There is some expectation that a CPRS will be implemented going forward. This would result in national greenhouse gas emissions being capped. Given consumers' increased level of access to information about their energy consumption patterns, energy bill benchmarking could contribute further to the rate and cost of greenhouse gas abatement in Australia via schemes such as the proposed *Energy Efficiency Savings Pledge Fund*³⁷. The Australian Government is also exploring other avenues to take into account the voluntary actions of consumers when setting future CPRS cap levels.

Costs

- Positive Energy estimated the cost of production, printing, handling and mailing of its benchmark to be US\$10 per household per year. Assuming that retailers continue to bill their customers quarterly this equates to approximately AUS\$12.35 per annum³⁸. However, it should be noted that Positive Energy sends its benchmark to customers separately to their bill. If the benchmark was to be sent with the bill this cost would be reduced.
- Retailers would be required to redesign their bills to include any benchmark requirements (where it was mandated on the bill). Cost estimates previously provided by retailers varied widely with figures of \$12,000 to \$650,000 per retailer depending on billing systems. However, these estimates were provided based on a detailed benchmark proposal and considered to be a one-off system redesign. It is expected that retailers will have to redesign their billing systems to comply with other bill content requirements in the NECF so potentially some of these costs will be incurred regardless of any benchmark requirement. Retailers are therefore asked to provide revised estimates.
- There would be an ongoing cost associated with calculating the benchmark. The costs of this task are discussed in section 5.2.1. of this RIS.
- There would be initial set up and ongoing data management costs to retailers to match up benchmarking data with individual customer bills. These costs will vary depending on who is responsible for calculating the benchmark and the type of benchmark comparator (discussed in section 5.2.2).
- There may be an initial cost to retailers because of increased call centre activity from customers asking questions about the benchmark. However, Ergon Energy's experience with its trial has seen minimal contact through the contact centre or the website from customers about the benchmark.

³⁷ The proposed *Energy Efficiency Savings Pledge Fund* will be managed by the *Australian Carbon Trust* and will establish web-based tools for households and small businesses to simply calculate their energy usage and identify potential dollar savings resulting from reduced energy usage (e.g. by installing energy-efficient appliances). These can then be pledged to the *Energy Efficiency Savings Pledge Fund*, which will buy and cancel carbon pollution permits and/or carbon credits under the *National Carbon Offset Standard*. Pledges will be tax deductible.

³⁸ Calculated using an exchange rate of AUS\$1 = US\$0.81 as at 2/6/09.

- There would be an opportunity cost to retailers for the bill space required to publish the benchmark. However, the benchmark may also be an opportunity for retailers to promote products such as GreenPower to assist customers with high energy consumption reduce their impact on the environment. The benchmark also allows retailers to direct customers to their websites to view tips on energy saving and other products offered by the retailer.
- Any increased costs to consumers are expected to be minimal due to the minimal costs of producing a benchmark as indicated above.

2. Retailers are asked to provide estimated set up and ongoing costs associated with:

- redesigning billing systems;
- printing costs;
- call centre costs;
- data management; and
- opportunity costs associated with billing space.

Estimations should only consider costs that would be incurred beyond regular business activities or the result of other regulatory obligations (e.g. NECF bill content requirements).

Costs estimates should be provided on an annual basis.

Risks

- A potential risk is that the costs of implementing the benchmark outweigh the benefits of energy reduction. This will be hard to define as many of the benefits of reduced energy consumption are environmental and are not economically comparable (although a CPRS will help internalise these benefits). It is also unlikely that the environmental benefits of reduced energy consumption will be able to be directly attributable to benchmarking in amongst other energy efficiency and climate change initiatives. The MCE has recognised this in noting that bill benchmarking could be an important ‘facilitator’ of customer awareness and education and complementary to other initiatives currently being undertaken through the NFEF.
- Those consumers that are found to be below the average may increase their energy consumption. This is considered unlikely and can be counteracted with statements of encouragement for low energy use. Feedback from Ergon Energy customers suggests those customers below the average felt the benchmarking information was a ‘pat on the back’³⁹.

³⁹ Op cit Ergon Energy

- Consumers may not consider the benchmark as being relevant to them and therefore take no action to reduce their energy consumption.

Impact on stakeholders

Consumers

- Consumers would be empowered to reduce energy consumption. This is consistent with feedback from Ergon Energy research following its benchmarking trial which found that 85 per cent of participants considered it was important for them to be informed about their electricity use around the home⁴⁰. 63 per cent of respondents said they would like to see how their electricity usage compares to other households⁴¹.

The Ergon Energy findings are consistent with trial research undertaken by Wilhite et al in Norway which found that over 85 per cent of trial participants showed interest in continuing to receive a benchmark following the trial period. The research also found that over three quarters of trial participants said they would be motivated to reduce their energy consumption if they were found to be above the average⁴².

Depending on who is responsible for calculating the benchmark there may be a small increase in consumers' total bill charges. Where retailers are wholly responsible for the benchmark these costs are likely to be passed on to consumers. Where distributors play a role in the benchmark calculation they may be entitled to pass on any associated costs to consumers via regulated network charges.

- Following the introduction of the proposed CPRS, the price of electricity is expected to rise over time. This may provide consumers with some motivation to achieve energy savings. An energy bill benchmarking initiative would make customers aware of their energy consumption in relation to other households.

Retailers

- Retailers would be required to include an energy benchmark to all their residential customers. This will require retailers to undertake initial set up and ongoing data management tasks to ensure accurate benchmarks are provided to consumers.
- At the time of redesigning billing systems to accommodate bill content requirements in the NECF, retailers would have to include an energy benchmark that meets the design specifications agreed by MCE. It is expected that some elements of the benchmark design would be at the retailers' discretion.

⁴⁰ ibid

⁴¹ Ibid

⁴² Wilhite et al in CRA International, *Energy Bill Benchmarking Desktop Analysis*, 2009, p.13

Distributors

- Distributors could have a role in calculating and providing the benchmark. The impact of this is discussed in the following section.

5.2.1. Responsibility for calculating and verifying the benchmark

This section discusses the benefits and costs of four possible scenarios for calculating the energy benchmark. It is expected that the calculation process will include collection and manipulation of relevant information, collation with other data sources (where necessary) and provision of the benchmark to the retailers on a regular basis. The four scenarios for calculating the benchmark are:

- I. Solely the responsibility of retailers
- II. Retailers using information supplied by distributors
- III. Retailers using information supplied by government(s)
- IV. Retailers using information supplied by distributors and government(s).

Each scenario means a different set of responsibilities which impacts on the benefits and costs.

Scenario I – Solely retailers

Retailers would be solely responsible for calculating the benchmark to appear on bills. Retailers would be required to develop a benchmark for each jurisdiction or local area in which they have customers on a regular basis. This calculation could be done across all customers or across a statistically relevant sample. Retailers only have access to energy use information therefore the benchmark could not be broken down by household size or other relevant demographic indicator.

Benefits

- The entire data collection, manipulation and calculation process could be streamlined by a retailer and done according to the specific business requirements of each retailer.
- There may be economies of scale for large retailers in doing data collection and management for its customer base.
- Retailers have the consumption information for their customers and in some cases some demographic information and should be able to produce an accurate benchmark.
- The potential for mismatching benchmarks with customer bills is minimised because all the data is being handled by the retailer.

Costs

- Information previously provided by retailers indicated that data collection, cleansing and storage per retailer could cost between \$245,000 and \$4 million in set up costs and \$26,000 to \$1.5 million per annum depending on the data collection methodology used. It should be noted that these estimates varied widely and were not broken down by retailers and were provided based on a detailed benchmark proposal requiring in-depth demographic surveying. A less detailed benchmark is expected to reduce these costs significantly.
- If a local area benchmark is required retailers will have to calculate a benchmark for all areas in which they have customers. This may not be cost effective where retailers have few customers.
- The costs associated with calculating the benchmark may be especially burdensome on small retailers who may have a sparse distribution of customers. Retailers would likely have to maintain benchmarking data for all local areas (if this is mandated) to accommodate customers they may sign up in the future.

3. Retailers are asked to provide revised detailed cost estimations associated with them having sole responsibility for calculating the benchmark.

Risks

- Where there is not one national process for calculating the benchmark there may be discrepancies between customers of different retailers. This may be confusing for consumers who change retailers and minimise the potential for consumers to discuss the benchmark with other members of the community.
- Jurisdictional price regulation and/or existing contracts may prevent retailers from reflecting the cost of calculating the benchmark in their tariffs.
- The accuracy of the benchmark may be compromised if retailers only have a limited number of customers in a local area.

Scenario II – Distributor Calculation

Distributors would be required to calculate a benchmark average for their distribution area or smaller subsets of their distribution area depending on the benchmark comparator. The calculation could be done across the entire distribution area or across a statistically relevant sample. As distributors only have access to energy use data, the benchmark could not be broken down by household size or other relevant demographic indicator. Distributors would be required to provide benchmark information to retailers regularly either by publishing it on their website or via a business-to-business transaction (B2B).

Benefits

- Distributors currently collect meter data for all accumulation meters (which are the majority of installations) so therefore are well placed to develop a benchmark average of energy consumption. The proposed NECF will require distributors to record if a customer is a residential or business customer. This will ensure that an accurate residential benchmark can be calculated and will not be distorted by small business customers.
- Distributors are geographically based so are well placed to develop a benchmark based on a jurisdiction or local area average.

Costs

- There will be a data collection and management cost to distributors if they are responsible for calculating the benchmark. Initial feedback from some distributors at a stakeholder forum held in 2008 indicated that they had the data management capabilities to undertake this task at a minimal cost. Any costs associated with calculating the benchmark would be included in network charges where approved by the regulator. Further information on the costs of this approach is sought.
- Retailers are likely to incur some costs in data management to ensure their customers are receiving the correct benchmark. Further information is sought on these costs.
- If benchmarking information is provided via the B2B hub there will be cost associated with each transaction. This is expected to be minimal and similar to current meter data transactions. Further information is sought from market operators on this issue.

4. Market operators are asked to provide an estimated annual cost of information transactions associated with a benchmark updated annually and a benchmark update quarterly.
5. Distributors are asked to provide a detailed estimated annual cost of calculating a benchmark and providing this to retailers. Estimates are requested based on an annually revised benchmark and quarterly revised benchmark.
6. Retailers are asked to provide a detailed estimated annual cost of data handling associated with publishing a benchmark provided by distributors. Estimates are requested based on an annually revised benchmark and quarterly revised benchmark.

Risks

- As it is not possible to provide a more detailed benchmark that includes information such as household size or household type there is risk that the information will be deemed irrelevant by householders and they will be less likely to take action.
- Any delays by distributors providing benchmark information to retailers have the potential to impact on their billing practices.
- The potential for mismatching benchmarks and customer bills increases where any party other than the retailer is responsible for calculating the benchmark.

Scenario III – Government Calculation

A nationally coordinated survey would need to be conducted by Commonwealth, State and/or Territory Governments to calculate a benchmark to be provided to retailers on a regular basis. A Government calculated benchmark would be likely to incorporate consumption data and demographic information such as household size, house type and fuel type.

Benefits

- Government coordinated surveys enable a more diverse range of information to be collected to facilitate a more detailed benchmark for consumers to compare themselves with.
- There may be potential for Government to draw on pre-existing information in some jurisdictions and/or collaborate with other data collection surveys being developed to encourage energy efficiency.
- Data gathered could have a wide range of uses beyond the benchmark, and would be highly valuable for other household energy efficiency programs.

Costs

- A survey currently undertaken in a larger jurisdiction involving telephone interviews with consumers costs approximately \$280,000 annually with an initial set cost of approximately \$30,000. The survey includes a sample of around 5200 people from across the jurisdiction. This would be considered a robust sample size on which to base a benchmark calculation. Surveys would have to be undertaken in all jurisdictions to enable benchmarks to incorporate jurisdiction-specific issues such as climate and access to gas. These costs would increase if surveys were done more frequently to calculate a 'rolling' benchmark (e.g. fortnightly⁴³).
- Government would also need to obtain energy use data from retailers or distributors, which would likely have an additional cost.

⁴³ Ergon Energy calculated the benchmark for its benchmarking trial on a rolling fortnightly basis.

7. Retailers are asked to provide an estimated annual cost of data handling associated with publishing a benchmark provided by Government on customers' bills. Estimates are requested based on an annually revised benchmark and quarterly revised benchmark.

Risks

- One annual survey may fail to recognise any change in demographic information and/or reductions in energy consumption. These risks are increased if the survey is taken on a less frequent basis.
- Funding for ongoing surveys will require commitment from each jurisdictional Government. This funding cannot be guaranteed in perpetuity as Government priorities change and a reduced commitment from any jurisdictional Government threatens the validity of the benchmark in that jurisdiction.
- The potential for mismatching benchmarks and customer bills increases where any party other than the retailer is responsible for calculating the benchmark.

Scenario IV – Government and Distributor Calculation

A nationally coordinated survey could be conducted by Commonwealth, State and/or Territory Governments to collect demographic information such as household size, household type and fuel type. This information would then be supplemented with energy consumption information for the same survey respondents provided by distributors. A third party, funded by Governments, would provide the benchmarks to retailers on a regular basis.

Benefits

- The combination of Government collected data such as demographic information combined with energy consumption data provided by distributors is likely to produce a more accurate and detailed benchmark to consumers.
- Governments may be able to draw upon pre-existing information or ongoing surveys and/or collaborate with other data collection surveys being developed to encourage energy efficiency.
- In addition to the benchmarking benefits, demographic surveys combined with actual usage information may provide an insight into people's behaviours and enable a greater understanding of what drives consumer response.

Costs

- As outlined above, a consumer survey in each jurisdiction may cost up to approximately \$280,000 with an initial set cost of approximately \$30,000. Any costs to distributors in providing consumption information would be in addition to this cost. Distributors have been asked to estimate the cost of providing this information annually and quarterly.
- Indirectly costs will be borne by consumers through either taxes paid to Governments or network charges.

Risks

- Funding for ongoing surveys will require commitment from each jurisdictional Government. This funding cannot be guaranteed in perpetuity and a reduced commitment from any jurisdiction threatens the validity of the benchmark in that jurisdiction.
- The potential for mismatching benchmarks and customer bills increases where any party other than the retailer is responsible for calculating the benchmark. Where there are three parties involved this risk increases.
- Where there are multiple parties involved in developing the benchmark, there is a risk of delays in obtaining information. Any delay in providing benchmark information to retailers has the potential to impact on their billing practices.

8. Stakeholders are asked to outline any other benefits, costs, risks or impacts about any of the options discussed in this chapter.

5.2.2. Benchmark Comparator

This section considers the benefits, costs and risks of the various benchmarking options in response to the question *“Where a benchmark is considered beneficial, what type of benchmark is most useful to consumers to assist them better understand their energy use?”*

In order to answer the question, this RIS will explore three scenarios:

- I. A State/Territory benchmark
- II. A local area benchmark
- III. Household Size

Scenario I – State/Territory Benchmark

Retailers would be required to provide consumers with a benchmark that shows the average energy consumption for the State or Territory for the given billing period.

Benefits

- It would be easily identifiable to the consumer and gives them a broad benchmark on which to compare themselves.

Of the ten national and international examples of benchmarking found by CRA International two were found to use a broad average⁴⁴. The Danish Electricity Saving Trust uses a national benchmark of 1000 kWh per person per year for households and 1500 kWh for those who live alone although it must be noted that the size of Denmark and its single climate zone lends itself to a single benchmark.

Victoria's Home Energy Calculator enables households to compare themselves to the State average in 1996 and 2001. The user can compare their usage against the overall Victorian average for all homes and all occupants. Some localised information is also available.

- One single benchmark for each jurisdiction would be simple to administer as everyone gets the same benchmark.
- It could facilitate broad community discussion as everyone will be comparing themselves to the same benchmark.

Costs

- As discussed in section 5.2.1 there will be various costs associated with calculating and implementing a benchmark which vary depending on who is responsible for calculating the benchmark and how much detail it contains. One single benchmark for each jurisdiction is likely to be relatively simple and cost effective to implement.
- In jurisdictions with multiple distributors, a third party would be required to compile the benchmark average for each distribution area into one single figure (if distributors are involved in calculating the benchmark).

Risks

- Consumers may consider a State/Territory benchmark as being less relevant to them and therefore take no action to reduce their energy consumption.
- Benchmarks may not be representative of some parts of the State or Territory because of climatic conditions. For example the Nationwide House Energy Rating Scheme (NATHERS) has identified 69 climate zones throughout the country. This issue has been acknowledged by Ergon Energy in their benchmarking trials where they identified 14 climate zones for the State of Queensland

⁴⁴ Op cit CRA International, p.14-15

- Consumers with access to gas are likely to have lower electricity consumption than those without. This may have an impact on how households compare to the State/Territory average because households with gas are likely to be below the average as a result of appliances such as gas ovens and water heaters. A localised benchmark will better reflect gas reticulated areas.

Impact on stakeholders

Consumers

- Consumers would be able to compare their energy usage with a State or Territory average but will have no comparison beyond that.

Retailers

- Retailers would be required to inform customers of their energy usage in comparison to the State or Territory average. This requirement would be expected to be considered by retailers in any bill redesign work undertaken to accommodate billing provisions in the NECF.

Distributors

- If distributors are responsible for calculating the benchmark they would be required to do this across a representative sample of their distribution area and provide it to retailers or a third party (in jurisdictions with multiple distributors).

Scenario II – Local Area Benchmark

Retailers would be required to provide consumers with a benchmark that shows the average energy consumption for the local area for the given billing period. The local area could be defined as postcode, local government area or another geographically based cluster (e.g. climate zone).

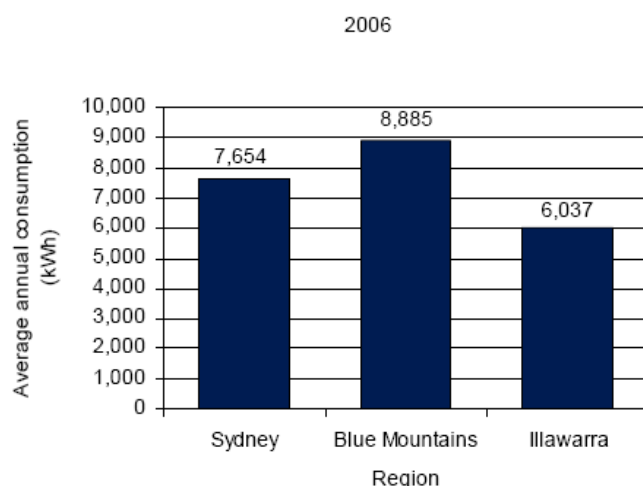
Benefits

- As identified in research, a local area benchmark provides consumers with a benchmark they can easily identify with which is expected to improve its overall effectiveness.
- Positive Energy, which uses a benchmark based on 100 approximately similar households in its Home Energy Report, stressed that it is critical that comparative information is perceived by consumers as being valid and credible otherwise the information is ignored. Consumer responses to their report have indicated a high satisfaction level. Of the 1-2 per cent of recipients dissatisfied with the report, most felt the benchmark was not relevant to them⁴⁵.

⁴⁵ ibid p.20

- Positive Energy’s feedback is consistent with Ergon Energy’s consumer testing of its benchmarking trial which found that the benchmark needed to be clear on what people were being benchmarked against. Most people perceived local area to be their street⁴⁶.
- A local benchmark has the ability to consider regional factors such as climate and access to natural gas. Weather, in particular, can be a large factor in how much energy a household uses, especially in heating and cooling. As displayed below, the energy consumption across different areas of New South Wales varies greatly.

Figure 2.1 Average electricity consumption by region, 2006



Source: Source: IPART: Results from the 2006 household survey

- A local area benchmark would be more likely to promote ‘friendly’ competition amongst neighbours within communities. Consumers often feel that their neighbours are people just like them and are more relevant to them than households in other areas. Consumer testing found that 65 per cent of respondents preferred a local area benchmark whilst 22 per cent preferred a State/Territory comparator⁴⁷. When asked why they preferred a local average the most common responses were: that the weather in the local region was an important factor in energy consumption; and the desire to be compared with people in their community. Those that preferred a State/Territory average did so because they saw it as important to give a ‘big picture’ perspective.

⁴⁶ Op cit Ergon Energy

⁴⁷ Op cit CRA International p.31

- Of the ten national and international examples of benchmarking found by CRA International, six were found to use a local average⁴⁸. The US Department of Energy's *ENERGY STAR Home Energy Yardstick* requires the user to input some basic information such as their zip code (post code), the size of the house and utility bill information for 12 months. Once this information is entered, the energy calculator shows how a home performs energy-wise relative to comparable homes in the same location. The Lawrence Berkley Laboratories *Home Energy Saver* operates on a similar basis.

Costs

- As discussed in earlier in this RIS there will be costs associated with calculating a benchmark. The costs of calculating local area averages are expected to be more than for a State/Territory average because multiple benchmarks would need to be calculated as opposed to one benchmark for the jurisdiction.
- If benchmark information is to be delivered via the B2B hub there would be multiple transactions for multiple local area benchmarks.
- There would likely be costs to retailers associated with matching customers' bills to their local area average.

9. Distributors are asked to provide an estimate of the difference in cost of calculating a benchmark by local area (e.g. postcode) and distribution area average. Estimates are requested based on an annually revised benchmark and quarterly revised benchmark.

10. Retailers are asked to provide a detailed estimate of the cost associated with matching customer bills with their local area benchmark. Estimates are requested based on an annually revised benchmark and quarterly revised benchmark.

Risks

- The additional costs associated with calculating a local area average outweigh the energy reduction benefits from the benchmark.
- Consumers could disregard the benchmark for reasons other than locality and do not take action to reduce their energy consumption.
- Socio-economic factors could impact on a local area benchmark detrimentally. For instance if the benchmark area is too narrow and wealthy, high consuming suburbs are only compared to other high consuming suburbs, it could validate the high energy use of those households.

⁴⁸ *ibid* p.14-15

Impact on stakeholders

Consumers

- Consumers would be able to compare themselves with households in the local area which takes account of local factors such as climate and access to reticulated gas.

Retailers

- Retailers would be required to inform customers of their energy usage in comparison to a local area average. This requirement would be expected to be considered by retailers in any bill redesign done to accommodate billing provisions in the NECF.
- Retailers would be required to match customers' bills against the relevant local area benchmark.

Distributors

- If distributors were responsible for calculating the benchmark they would be required to do this for several local areas within their distribution network. As distributors record the location of the meter for reading and maintenance purposes, a benchmark by postcode could be possible. The accuracy of the benchmark would be further enhanced by proposed NECF provisions that require retailers to advise distributors a customer is classified as a residential or business customer.

Scenario III – Household Size Benchmark

Retailers would be required to provide consumers with a benchmark that shows the average energy consumption according to household size. This could be either a state or local area benchmark. Studies conducted in Victoria and New South Wales show a correlation between number of occupants and energy usage. In 2006 the NSW Independent Pricing and Regulatory Tribunal (IPART) commissioned household surveys in the Sydney region and found that households who were high electricity users or high gas users on average had more occupants, whereas households who were low electricity users and low gas users had on average fewer occupants⁴⁹. The Victorian Utility Consumption Survey 2007⁵⁰ conducted by the Department of Human Services shows a strong positive correlation between total electricity consumption per household and the number of occupants in the house. Benchmarks could be provided for a range of household sizes, say from one person to six person households, based on either a State/Territory average or local average.

⁴⁹ Residential energy use in Sydney, the Blue Mountains and Illawarra. Independent Pricing and Regulatory Tribunal P5

⁵⁰ <http://www.dhs.vic.gov.au/concessions/research/publications/victorian-utility-consumption-household-survey-2007>

Benefits

- The benchmark could potentially have more relevance to consumers as they would be able to compare themselves with households of similar size. Feedback from Ergon Energy's evaluation of its benchmarking trial revealed that some people rejected the comparison as they felt that they should not be compared to other people who have different lifestyles and family sizes.
- Research undertaken by Newton Wayman Chong on behalf of the CIIC found that approximately 80 per cent of participants favoured a benchmark figure which compared them to other households of a similar number of people⁵¹.
- Lyre et al undertook work to feed into the US Energy Star Billing programme, studying the range of comparison groups which could be used to ensure the comparison was meaningful for the consumer. They found robust comparison groups resulted from street name, 'meter book' (the group of properties a meter-reader could read in one day) or housing type and multiple household characteristics (heating fuel and housing type). The study also found that criteria for benchmark comparison groups such as by entire cycle, by entire meter book, or by single house characteristics such as floor area, resulted in poor quality comparison groups⁵². It is unclear if the study involved household size but it would appear to be similar to the positively received examples given above.
- The National Australian Built Environment Rating System (NABERS) program, which is a voluntary performance-based rating system in NSW that measures a building's overall environmental performance during operation, uses household size (ie: number of people) and climate zone to calculate the household's rating – these were found to be the two factors that most greatly affected energy use, and were essentially outside the control of the household. Floor area was originally included in the calculation, but ultimately removed because it was concluded that it did not provide a meaningful comparison.

Costs

- The number of people in a household is not information currently held by retailers or distributors so this information most likely would have to be collected and provided by Government. There are various options for calculating the benchmarks. Some jurisdictions currently do social surveys in which household size and energy use information is obtained, and this information could be combined with data from distributors to extrapolate it out to other jurisdictions.

⁵¹ Newton Wayman Chong, *Energy Bill Benchmarking – Market Testing*, 2006, p.21

⁵² Op cit CRA International, p.12

- Alternatively, national surveys could be conducted at a cost up to \$1.2 million a time. If household size was the only information being sought, this cost would decrease significantly—but to make the survey worthwhile it is likely other information such as housing type, appliance mix and heating/cooling use would be beneficial for benchmark development and/or to inform other energy efficiency initiatives.
- A further alternative could be to seek to have questions included in existing national surveys such as those undertaken by the Australian Bureau of Statistics.
- A benchmark including a household size comparator is likely to take up more space on the bill which has opportunity costs for retailers.

Risks

- A more complex benchmark on bills could lead to increased calls to retailer call centres, thereby increasing costs associated with this measure.
- Surveys may not be undertaken regularly to reflect changing energy use.

Impact on stakeholders

Consumers

- Consumers would be able to compare their energy consumption to that of similar sized households. It is possible they would perceive the benchmark to be more relevant to their personal situation, and therefore be more motivated to act on the information.

Retailers

- Retailers would be required to provide customers with an energy benchmark that includes household size. This requirement would be expected to be undertaken by retailers in any bill redesign to accommodate billing provisions in the NECF.

Distributors

- No impact.

5.2.3. Benchmark Provision

This section considers the benefits, costs and risks of two approaches to providing an energy benchmark to consumers in response to the question “*Where is a benchmark best placed to achieve maximum benefit?*”

In order to answer the question, this RIS will explore two options:

Scenario I. A bill benchmark included within the energy bill

Scenario II. An online benchmark

Scenario I – A Bill Benchmark within the energy bill

Retailers would be required to provide their customers with an energy benchmark on each quarterly bill showing their energy usage compared to a like group (e.g. State/Territory, local area, household). The requirements of the benchmark would be minimum requirements only with retailers able to provide further information where they considered it appropriate. Retailers would also be able to brand the benchmark as necessary to be consistent with their preferred bill format.

Benefits

- The bill is the major form of communication between retailers and their customers. The universality of bills means that 100 per cent of households would receive the benchmark, which is expected to encourage greater comparisons within households and within the wider community.
- Consumer testing revealed that 77 per cent of respondents indicated they would be likely to take action if they received a benchmark that showed they were an above average energy user. More importantly, this group included several people who had stated earlier in the survey that they would not be interested in comparing their energy use with other households⁵³. This suggests that although not all people may not be initially interested in comparing their energy use with others, once they actually see the information they feel some obligation to take action to reduce their energy consumption should it be shown to be higher than the average. This is consistent with MCE’s policy objective.
- Consumers would be confronted with the information when it appears on their bill. Regardless of whether they take action or not consumers are made aware of how their energy usage compares to other households. Providing high energy users with information on how to reduce their consumption is the second stage of the education process (discussed further in section 5.3).

⁵³ Op cit CRA International, p.29

- Consumers would not have to go looking for the information because it will appear on their bill each quarter. This would take out a step in the process where people often lose interest in taking action if it takes extra time and effort and assists people who wouldn't know where to look if they wanted to compare their energy usage with others.
- On customer bills there will be limited space to communicate the benchmark. Therefore the benchmark will need to be straight forward and clear. Ergon Energy addressed this in its benchmarking trial by presenting customers with a simple bar chart comparing their average consumption to the average consumption of their local area. Feedback from customers has shown that the graph is easily understood and effective in making customers think about their energy usage⁵⁴.
- The benchmark could be tied in with other messages on the bill to enable a retailer to market certain products (e.g. GreenPower).

Costs

- There would be costs to retailers to redesign bills to include the benchmark. However, it is expected that retailers will have to redesign their billing systems to comply with other bill content requirements in the NECF, therefore some of these costs will be incurred regardless of any benchmark requirement.
- Depending how retailers incorporate the benchmark into their bill design there could be additional printing costs.
- There would be an opportunity cost to retailers for the bill space that otherwise could be used for other purposes.

Risks

- An uncomplicated benchmark, necessitated by the limited space on bills, may not be relevant to customers and therefore reduce its effectiveness.
- Energy bills are already “busy” pieces of communication and a benchmark could get lost amongst the other information. Feedback from Ergon Energy’s benchmarking trial provided mixed responses from customers as to their attitudes towards the bill. Some open it and read it thoroughly; others open it check the balance and the due date and put it away; others put it away and read it later.
- If there is a delay in receiving the benchmarking information from the party responsible for calculating the benchmarking (where it is not the retailer) some bills could have to be delayed or an outdated benchmark used.

⁵⁴ Op cit Ergon Energy

- If there is a significant shift to consumers receiving online billing, the impact of a message on the existing bill may be reduced. At present online bills replicate existing bills meaning that such a benchmark would retain its effectiveness.

Impact on Stakeholders

Consumers

- All consumers would be provided with a basic benchmark on their quarterly bill with which they can compare their energy use against other households. Where supplemented with information on ways to reduce energy consumption, consumers would have a basis on which to undertake energy efficiency improvements in their household.

Retailers

- Retailers would be required to provide their customers with an energy benchmark on all quarterly bills. This would have initial and ongoing development and management costs for retailers.

Distributors

- No impact.

Scenario II – Online Benchmark

Retailers would be required to make an energy benchmark available to their customers on their website. Retailers would be required to inform their customers of the online benchmark on the bill. There would be minimum requirements of what the online benchmark must include but retailers would be able to provide further information where they considered it appropriate. Retailers would also be able to brand the benchmark as necessary to be consistent with other web material.

Benefits

- Retailers could offer more than one benchmark and/or offer more interactive tools online so consumers could get as much or as little information as they want. This could also link consumers to other information on how to better manage their energy consumption.
- As an example, the Home Energy Saver (HES), a tool used in the US, was designed to help consumers identify the best ways to save energy in their homes. The HES site enables consumers to input their household consumption information and appliance mix to get an indicative benchmark. This is supplemented by educational material on how to reduce energy consumption and links to service providers, utility programs, and online reading materials.

Other examples of online tools are contained in sections 1.3 and 1.4.

- There is a growing trend towards online transactions with banking, telecommunications and shopping providing some examples of consumers' willingness to conduct their affairs via the internet. With this trend, consumers are becoming more technologically savvy and enjoy the convenience the internet offers. The energy sector is following this trend with several retailers currently offering their customers' billing and other services online. Online benchmarking would be consistent with the shift towards online customer management in the energy sector and other sectors.
- The introduction of smart meters and related technology means the idea of an automated home controlled through the internet (or some other form of wireless technology) is foreseeable in the future. It is likely that at some point consumers will be able to control appliances in their home while at work using the internet. Having benchmarking information available online would complement online energy management programs in the future.
- Online benchmarking avoids the issue described above in relation to bills being busy documents. A link to an online benchmark on the bill could be equally successful in assisting people compare their energy consumption.
- Online benchmarking would allow consumers to see the average energy consumption in other areas or according to other demographic indicators, if these benchmarks were available. This was found to be of interest to 15 per cent of respondents during consumer testing⁵⁵.

Costs

- There would be a cost to retailers in the initial set up and ongoing management of an online benchmark. Further information is sought from retailers on this matter.
- There would be a minor cost to consumers in internet charges to access the benchmark. This assumes that only people who currently have internet access would access the benchmark.

11. Retailers are asked to provide an estimate of the cost associated with the set up and maintenance of a benchmark on their existing website?

⁵⁵ Op cit CRA International p.29

Risks

- People without access to the internet would not be able to view the benchmark. According to the 2006-07 Australian Bureau of Statistics Census, 63 per cent of dwellings had access to the internet⁵⁶. This varies considerably according to geographical location and demographics. At the national level 66 per cent of dwellings in major cities have access to the internet, compared to 42 per cent for remote Australia.
- People with low internet access or usage may not feel comfortable accessing the benchmark online or understand the benchmark in an online format.

Australian Bureau of Statistics (ABS) data shows that people aged 55 years and over use the internet at home less than those in younger age groups.

- Positive Energy also reported that only 3 per cent of utility customers in the United States visit their utility's website, suggesting that web-based tools and calculator have limited penetration. Low income users and the elderly are particularly disadvantaged⁵⁷.

INTERNET ACCESS AND USE AT HOME BY AGE - 2006-07

Age group (years)	Internet access (%)	Internet use (%)
15-24	79.7	76.5
25-34	75.8	71.8
35-44	80.2	72.6
45-54	78.5	66.5
55-64	64.7	51.7
65-74	42.2	28.1
75 and over	21.8	10.5
Total	69.5	60.9

Source: ABS 2006-07 Household Use of Information Technology Survey.

⁵⁶ <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/8146.0.55.001Main+Features12006?OpenDocument>

⁵⁷ Op cit CRA International p.25

- Consumers could be unwilling to make the effort to go online to look at the benchmark therefore reducing its reach and effectiveness.
- Feedback from Ergon Energy's evaluation of its benchmarking trial was that an online tool would be useful for some but others believe, while interesting, they are unlikely to visit the website. Respondents clearly preferred information on the bill⁵⁸.

Impact on stakeholders

Consumers

- Consumers with access to the internet and knowledge of how to use it would be able to get a benchmark to compare their energy use to other households from their retailers' website. This benchmark may be a simple comparison that meets the minimum requirements agreed by MCE or could be more detailed.
- Consumers without internet access or limited technical experience may not be able to access or understand the benchmark.

Retailers

- Retailers would be required to maintain regular benchmarking information on their website that meets the minimum requirements agreed by MCE.
- Retailers would be required to include a link to the benchmark on their customers' bills.

Distributors

- No impact.

5.3. Comparison of Options

In comparing the merits of the options for either the status quo or an energy bill benchmark, it is essential that they be compared to against the three key issues (outlined below).

5.3.1. Responsibility for calculating and verifying the benchmark

The status quo (Option A) is business as usual for the information that is given to consumers on their energy usage. Retailers in some jurisdictions would continue to provide comparative energy use or greenhouse information to consumers. This inconsistency increases costs and inefficiencies for cross-jurisdictional retailers. If the status quo remains consumers in some jurisdictions would continue to receive little information on their energy usage in comparison to other households and be given little impetus to take energy efficiency measures.

⁵⁸ Op cit Ergon Energy

Requiring retailers to provide their customers with an energy benchmark (Option B) fills the existing information gap. Research from Australia and overseas indicates consumers' desire for more information on their energy use and willingness to take action. The benchmark has the ability to act as a trigger for high energy users to consider energy efficiency measures to reduce their energy consumption. The benchmark also has the ability to act as a key facilitator of discussion within households and in the broader community about energy efficiency.

If a benchmark is mandated, it could be calculated in several ways. Retailers handling the entire process are expected to minimise possible delays and data mismatching however the ability to develop nationally consistent benchmarks is potentially reduced. The costs are likely to be highest in this scenario, with retailers bearing most of them depending on the extent these can be passed on to consumers.

Distributors calculating the benchmark are likely to be the lowest cost option as distributors currently have energy consumption data and are able to provide this data in perpetuity, however this option limits the level of detail the benchmark can contain. Government calculation of the benchmark has the potential to incorporate demographic information such as household size and type, however the ongoing provision of this data cannot be guaranteed. Consumer surveying to collect this type of information is expected to cost approximately \$1.2 million annually to conduct. A combination of Government collected information and distributor consumption data is likely to produce the most accurate and detailed benchmark but necessitates greater collaboration and potentially increases costs and the risk of delays and cannot be committed to or guaranteed beyond the current governments' terms.

5.3.2. Benchmark Comparator

A State/Territory benchmark is a simple and cost effective way to provide consumers with a broad reference point with which to compare their energy usage. However, consumer testing in Australia and internationally has revealed a preference for a more localised benchmark to incorporate factors such as climate and access to gas. In the Australian context, climate plays a large role in consumers' perception of a valid benchmark. The costs of calculating a local area benchmark are greater, however it could be argued that the consumers' ability to relate to the benchmark and therefore take positive actions to reduce their energy use justify the additional cost.

Taking the benchmark a step further to include household size also results in additional costs. However this style of benchmark could potentially be perceived as a more relevant benchmark and therefore more likely to inspire behaviour change and energy savings.

12. Stakeholders are asked to outline any other benefits, costs, risks or impacts about any of the options discussed in this section.

5.3.3. Benchmark provision

An energy benchmark on customer bills provides certainty and simplicity to any benchmarking exercise because of current billing practices which see the majority of consumers receive a paper bill at least once a quarter. An online benchmark presents more opportunities for retailers to be innovative with the benchmark and potentially increase its value to consumers. This option also removes the opportunity cost to retailers of having to allocate space to the benchmark on a bill that already contains a lot of information.

Despite the increasing growth in online customer transactions, the paper bill remains the dominant communication between retailers and consumers in the energy sector. Also, a significant portion of the population remains without access to the internet with those in remote areas more likely to be affected. ABS data also shows that people aged over 55 are the age group least likely to use the internet for access or technical reasons. This may be a barrier to maximising the benefits of a benchmark.

The experience of Ergon Energy customers would suggest that a paper bill benchmark is preferred over an online version because having the benchmark provided on a bill is less onerous for the consumer and has a greater likelihood of being seen than consumers having to look for the information on the internet.

13. Stakeholders are asked to outline any other benefits, costs, risks or impacts regarding any of the options discussed in this section.

6. Other Requirements

This section outlines a range of issues to be addressed in the implementation of an energy benchmark if it were to be included as a bill content requirement in the NECF. Some of these implementation issues may be addressed as minimum requirement for the benchmark whilst others may be left up to retailers to consider the most appropriate approach. Stakeholder feedback is sought on all implementation issues.

6.1. Updating of the Benchmark

Historical evidence presents a range of possibilities on how often a benchmark should be updated. Benchmarks such as the Victorian Home Energy Saver Calculator and the NABERS program are based on surveys conducted every few years, whilst Ergon Energy updates its benchmark daily on a previous fortnight rolling average to account for seasonal changes in the weather⁵⁹. More regular updating improves the accuracy of the benchmark by accommodating constantly changing elements such as the weather; however the data management costs could increase as regular updating occurs.

⁵⁹ It should be noted that Ergon Energy's benchmark is a basic design and all the calculation is done in-house.

Annual surveys, which often incorporate much more information than just energy consumption, can be costly to undertake and therefore are done on a less frequent basis. The risk of this type of information is that it may fail to account for changing demographics and/or seasonal variation. In some cases these issues can be rectified by statistical manipulation.

14. Stakeholders are asked to suggest the most appropriate timeframe for updating the benchmark.

6.2. Benchmark Metric

A mandated benchmark would be likely to define what metric the benchmark information should be provided in. The majority of energy bills are currently shown in kilowatt hours (kWh) for electricity or megajoules (MJ) for gas which is how the energy is measured by the relevant utility. Other suggestions are options to present the information in dollars (\$) or in greenhouse gas emission units (kg of CO₂).

Ergon Energy found that people generally have a low understanding of energy consumption metrics or tariffs⁶⁰ and prefer information in dollar terms. Unlike water where a consumer can physically envisage a litre, a kWh (or a MJ) is often not tangible to the consumer.

Dollars are easily recognisable to consumers and were found to be the most favoured metric by 71 per cent of respondents in the NWC survey undertaken on behalf of the CIIC⁶¹. However, the presentation of benchmarking information in dollar terms is not necessarily the most accurate representation of a customers' usage and/or the impact of any reductions (or increases).

Generally, the cost to provide energy is increasing, therefore the cost to consumers is likely to increase. In addition, a customer's decision to purchase GreenPower can increase costs without a corresponding increase in energy consumption. Reflecting energy consumption in dollar values in an environment where prices are increasing distorts any impacts consumers may be having by reducing their energy use. This has the potential to lead to the 'what more can I do' factor whereby consumers don't see any savings for their energy efficiency efforts and give up. The policy intent of this initiative is to show consumers how they compare to other households and what impact they can have through reducing their energy use.

In addition, the introduction of time-related pricing to better reflect underlying cost drivers following the roll-out of smart meters has a bearing on the appropriate metric for benchmark information. In particular, while a benchmark expressed in dollars will continue to reflect a consumer's relative contribution to the costs of energy supply, it will not be directly correlated with a consumer's relative energy consumption because energy consumption is only one of several factors driving costs. A benchmark metric of dollars will not correlate directly with energy consumption because a bill may vary depending on when energy is used, rather than only the total amount of energy consumed.

⁶⁰ Op cit Ergon Energy

⁶¹ Newton Wayman Chong, *Energy Bill Benchmarking – Market Testing*, 2006, p.20

Conversely, a benchmark metric of total energy use will not correlate directly with the cost drivers for the industry because it would not reflect the peak demand that drives supply-side capital investment. This is also the case in jurisdictions that currently have peak/off-peak electricity tariffs.

With an increased focus on climate change, greenhouse gas emissions are discussed more and more frequently in our everyday interactions as well as in the media. The Home Energy Saver Calculator, developed by Sustainability Victoria, enables consumers to measure their energy consumption in kg of greenhouse gas emissions. This assists consumers to consider the environmental impacts of their energy consumption. This is inconsistent with Ergon Energy's findings that environmental issues were a low motivating factor amongst trial participants. Many participants had trouble understanding the real meaning of greenhouse gas emissions and indeed its link to electricity consumption and therefore did not relate to this information⁶². This issue may be overcome with more widely accessible educational messages.

15. Stakeholders are asked to outline their views on the most appropriate metric for a benchmark.

6.3. Aspirational Target

An energy benchmark would reveal how a consumer compares with a household in their State/Territory or local area. How a consumer compares is most likely to determine what action they take to reduce their energy consumption (if any). It is arguable that those on or below the average will take that as confirmation that their energy use is acceptable and that no further action is required. The inclusion of an aspirational target on the benchmark may appeal to these people and encourage them to take further action to reduce their consumption.

Aspirational targets have been used in a number of jurisdictions in relation to water usage. The Victorian Government has introduced "*Target 155*", encouraging households to make sure their water use does not exceed 155 litres per person per day. Retailers such as Yarra Valley Water present their bills in a way that makes it easy for the household to determine whether or not it is achieving the target⁶³.

Similarly in Queensland, the Queensland Water Commission introduced "*Target 140*", a highly successful water saving campaign which ran from March 2007 until July 2008 with the goal of reducing the region's average residential consumption to 140 litres per day. As a result of this campaign and its associated educational messages in the media and various water restrictions, South East Queenslanders have reduced their average daily consumption to 129 litres per person over the last 12 months, compared with 300 litres per person per day before the drought⁶⁴.

⁶² Op cit Ergon Energy

⁶³ http://www.yvw.com.au/yvw/YourHome/YourAccount/UnderstandYourSmartAccount/watersmart_account.htm

⁶⁴ <http://www.target140.com.au/>

The inclusion of an aspirational target for energy use could potentially increase the cost of calculating the benchmark depending on how it is implemented.

16. Stakeholders are asked to outline any potential benefits and costs of an aspirational benchmark.

6.4. Bill Insert and Separate Report

Section 5.2 assumed that if a benchmark was to be provided to each individual consumer, it would be provided to them on the bill. Two alternatives to this approach are sending the benchmark as a bill insert or as a separate report.

Bill Insert: The benchmark would be sent with the bill but on a separate page that may or may not look different to the bill. This is the approach Brisbane Water took to deliver its Separate Water Advice (SWA). It provided consumers with comparative information on their water usage as a separate page within Brisbane City Council rates notice. Evaluation by Brisbane Water found that customers had a very high awareness of the SWA (89 per cent) with 68 per cent stating that it assisted them to reduce their water consumption⁶⁵.

A bill insert would free up bill space for the retailer to include its own material and remove the cost of redesigning the bill. However, it is likely to be more expensive due to higher printing costs and the extra bill handling required to ensure customers are getting the bill insert which corresponds to their bill.

Separate Report: The benchmark would be delivered to customers in a report separately to their energy bill. This is the approach undertaken by Positive Energy who provide consumers with a Home Energy Report that compares their energy use to similar homes in the same area. The Report has been developed as a hosted software application that takes in utilities' customer and energy use data and generates quarterly or monthly reports for consumers. Research undertaken by the Sacramento Municipal Utility District found customers that received the personalised report reduced energy consumption by 2 per cent more than those who got standard bills (with no benchmark)⁶⁶.

Like the bill insert, a separate report would free up bill space for the retailer to include its own material and remove the cost of redesigning the bill. However, printing and mailing costs could be increased as two pieces of correspondence would be sent to the customer instead of one. There are also likely to be costs associated with creating a separate report that can stand on its own without the support of the bill. These tasks could be undertaken by a party other than the retailer if necessary.

17. Stakeholders are asked to outline any potential benefits and costs of a bill insert and/or separate report.

⁶⁵ Op cit Brisbane Water

⁶⁶ Op cit CRA International, p.41

6.5. Complementary Measures

The first step in encouraging energy efficiency is to make consumers aware of their energy consumption and how it compares to other households. An energy benchmark does this. The second step is providing guidance to consumers on how to reduce their energy consumption. This can be done through focused advice such as energy audits, advertising campaigns, energy saving tips or web links to more detailed information and energy calculators. All of the examples discussed in this RIS include some form of focused advice to consumers on how they could reduce their energy consumption. As an example, Victoria's Save Energy Website⁶⁷ provides a list of actions you can do to reduce energy consumption and the associated CO₂ emission saving of each action.

Ergon Energy included a range of focused advice to customers in its benchmarking trial and got mixed results. The idea of having a section on hints to save energy was well received and they welcomed more ideas on ways to save energy. A majority (85 per cent) of respondents stated that they liked to look for tips on how to reduce their electricity consumption⁶⁸. There was also some cynicism towards the value of the tips presented in the trial because their electricity bills seemed to go up anyway⁶⁹. A proportion of Ergon Energy customers also found that the tips were fairly obvious and nothing they hadn't heard before. They suggested regular changing of the energy saving advice to keep people interested. In terms of assisting behaviour change, 67 per cent of the Ergon respondents stated that they would read the information and actively try to reduce their energy use.

Many retailers currently offer a range of focused advice, either on their bills or on their websites. This advice could be integrated with a benchmark to better enable consumers to reduce energy consumption.

18. Stakeholders are asked to outline the value of focused advice and how it can be best delivered.

6.6. Review

If a bill benchmark is introduced the intention is that its effectiveness be reviewed in accordance with any review periods set down in the National Energy Customer Framework (NECF) legislation. If there are no such review periods indicated it would be proposed there be a review of Bill Benchmarking within five years of its commencement or at a time determined by the Ministerial Council on Energy.

19. Stakeholders are asked to outline the appropriate time to review the impact of a bill benchmark.

⁶⁷ www.saveenergy.vic.gov.au

⁶⁸ Op cit Ergon Energy

⁶⁹ Ibid p 25

7. Consultation

7.1. Consultation with Stakeholders

Various forms of consultation on this policy initiative have been facilitated by the CIIC. Consultation with stakeholders was a primary focus of the initial phase of the examination of energy bill benchmarking options. In late 2005 the CIIC commissioned McLennan Magasanik Associates (MMA) Pty Ltd to review the content requirements of electricity and natural gas bills in order to “develop ideas for showing benchmark information on energy bills”. This work included:⁷⁰

- a review of national and international billing information to help identify best practice approaches to energy bill benchmarking;
- the release of a Discussion Guide to retailers across the jurisdictions, for the purposes of informing them and seeking general feedback from them; and
- a series of one-on-one interviews with retailers for the purposes of obtaining their specific views on benchmarking information and to gather information on the nature of their specific billing systems and the constraints that may exist to implementation.

The information gathered from this process was presented to the CIIC in a December 2005 report by MMA entitled “*Showing comparative energy consumption information on customer’s bills*”.

On the basis of the energy bills that were reviewed and the constraints that were identified by retailers about the practicalities of implementing energy bill benchmarking, MMA:

- proposed a limited number of bill designs for testing – i.e. designs showing information about a customer’s historical energy use and a benchmark;
- recommended a number of design elements for the CIIC’s testing phase for the identified designs; and
- considered various regulatory scenarios to encourage retailers to show benchmarking information.

Following CIIC endorsement of the recommendations of the MMA Report, a process of qualitative consumer market testing was undertaken during 2006 to evaluate the effectiveness of the energy bill benchmarking options and to optimise the presentation of billing information for maximum consumer understanding, motivation and likelihood of positive action.

⁷⁰ McLennan Magasanik Associates Pty Ltd, *Showing Comparative Energy Consumption Information on Customer’s Bills*, December 2005, p.3. Can be found at <http://www.ret.gov.au/Documents/mce/energy-eff/nfee/committees/consumer/focus.html#focus1>

The next stage involved the development of the market testing parameters which was supported by a report by Evans and Peck Pty Ltd⁷¹ who recommended:

- suitable design options for showing benchmarking information on household energy bills, given current and predicted constraints of energy retailers;
- appropriate sample sizes in order to be statistically significant;
- the most appropriate market testing methodology or methodologies to engage participants to promote the integrity, robustness and rigour of results; and
- appropriate target markets and market segments in order for a nationally consistent approach to be recommended.

The recommendations in Evans and Peck's report were used to inform a market testing exercise of bills. Qualitative market testing was then undertaken by NWC Research during 2006 to recommend models for provision of energy bill benchmarking for Australian electricity and gas consumers. This work included the design of six residential bill 'mock-ups' to market test the appeal of benchmark data, methods of communication and the potential impacts of its presentation. The program of qualitative testing included:⁷²

- 10 pilot in-depth interviews prior to finalising the draft material; and
- A combination of focus groups (involving 210 respondents) and in-depth interviews (involving 44 respondents), structured to cover five states (Queensland, New South Wales, Victoria, South Australia and Western Australia); metropolitan, regional and rural areas; customers of English-speaking and non-English speaking origin; and a mix of smaller and larger households.

The information gathered from this process was published in a report by NWC Research entitled "Energy Bill Benchmarking - Consumer Market Testing Final Report". The report was publicly released in September 2006. This report made a number of specific recommendations regarding the design of benchmark models and associated presentation of the data based on the consumer testing.⁷³

In August 2007, a Retailer Survey sought information from a cross-section of energy retailers about the nature and quantum of their costs in order to quantify the costs of implementing a range of identified bill benchmarking options. The survey was sent to a selection of retailers who were considered to be representative of all States and Territories and the electricity and gas industries.

The Survey also sought to identify issues associated with implementing the various options, including those issues that would impact on the timeframe for the commencement of any potential bill benchmarking proposal.

⁷¹ Evans and Peck Pty Ltd, *Energy Bill Benchmarking – Market Testing*, March 2006. Found at <http://www.ret.gov.au/Documents/mce/energy-eff/nfee/committees/consumer/focus.html#focus1>

⁵⁹ NWC Research, *Energy Bill Benchmarking – Consumer Market Testing Final Report*, September 2006, page 3. found at <http://www.ret.gov.au/Documents/mce/energy-eff/nfee/committees/consumer/focus.html#focus1>

⁷³ Ibid, page 47.

In response to the concerns and issues raised by the retailers through this survey, the CIIC held a workshop with retailers and distributors in April 2008 to discuss the development of the EBB Project and had subsequent discussions with representatives from the Energy Retailers Association of Australia. The CIIC noted the concerns of retailers at that meeting with regard to the complexity of the previous benchmark designs that were tested and the potential costs associated with implementing such detailed benchmarking models. These concerns regarding the degree of complexity of the benchmark have been reflected in this document with the proposal now being that the regulation would be far less prescriptive than what was originally proposed.

7.2. Opportunity for Stakeholders to comment

Comment is now sought on this RIS from affected stakeholders and interested parties. Stakeholders are requested to focus on the individual questions contained in the text but other general comments will be considered in the development of the Decision RIS.

7.2.1. Written Comments

Written comments on this consultation regulation document may be forwarded:

- via email (preferred): bill.benchmarking@cleanenergy.qld.gov.au
- via mail to: Anne Armstrong
Chair NFEE Consumer Information
Implementation Committee
Office of Clean Energy,
Department of Employment, Economic
Development and Innovation
PO Box 15216
City East QLD 4002

Submissions should be received no later than **9 December 2009**.

7.2.2. Stakeholder workshop

It is also proposed that a workshop will be held in Melbourne in November 2009. This workshop will be widely advertised in advance and will provide an additional opportunity for stakeholder engagement and feedback.

8. Conclusion

MCE has stated that it considers energy benchmarking, subject to objective analysis, an enabler to encourage consumers to undertake more energy efficiency measures. This is in response to Australia's ever-growing energy consumption and the environmental impacts this has. Australian and international evidence suggests there is value in the concept. That same evidence provides a variety of options as to what information consumers prefer and what is the most effective way of presenting this information in changing consumer behaviour. Some experience points to a simple benchmark being the most effective whilst other evidence points to more detailed benchmarking encouraging greater energy reductions.

Consideration of the potential benefits must be weighed up against the implementation costs that are associated with each option and the status quo. The trade-off between potential benefits and implementation costs is an issue the MCE Standing Committee of Officials is committed to exploring, and therefore seeks stakeholder guidance on an appropriate policy response. All stakeholder submissions will be considered in the development of this policy.

Given the evidence of the existing information (much of which is outlined in sections 1.3 and 1.4 of this RIS) it would appear that providing benchmarking information on utility bills does affect positive behaviour changes. Details as to a possible benchmark comparator (i.e. state average, local average or household size); a possible benchmark metric (i.e. kWh or greenhouse gas); responsibility for calculating the benchmark; and how the benchmark might be provided (i.e. via energy bills or online), need to be determined after consultation with stakeholders, principally through this Consultation RIS process.