

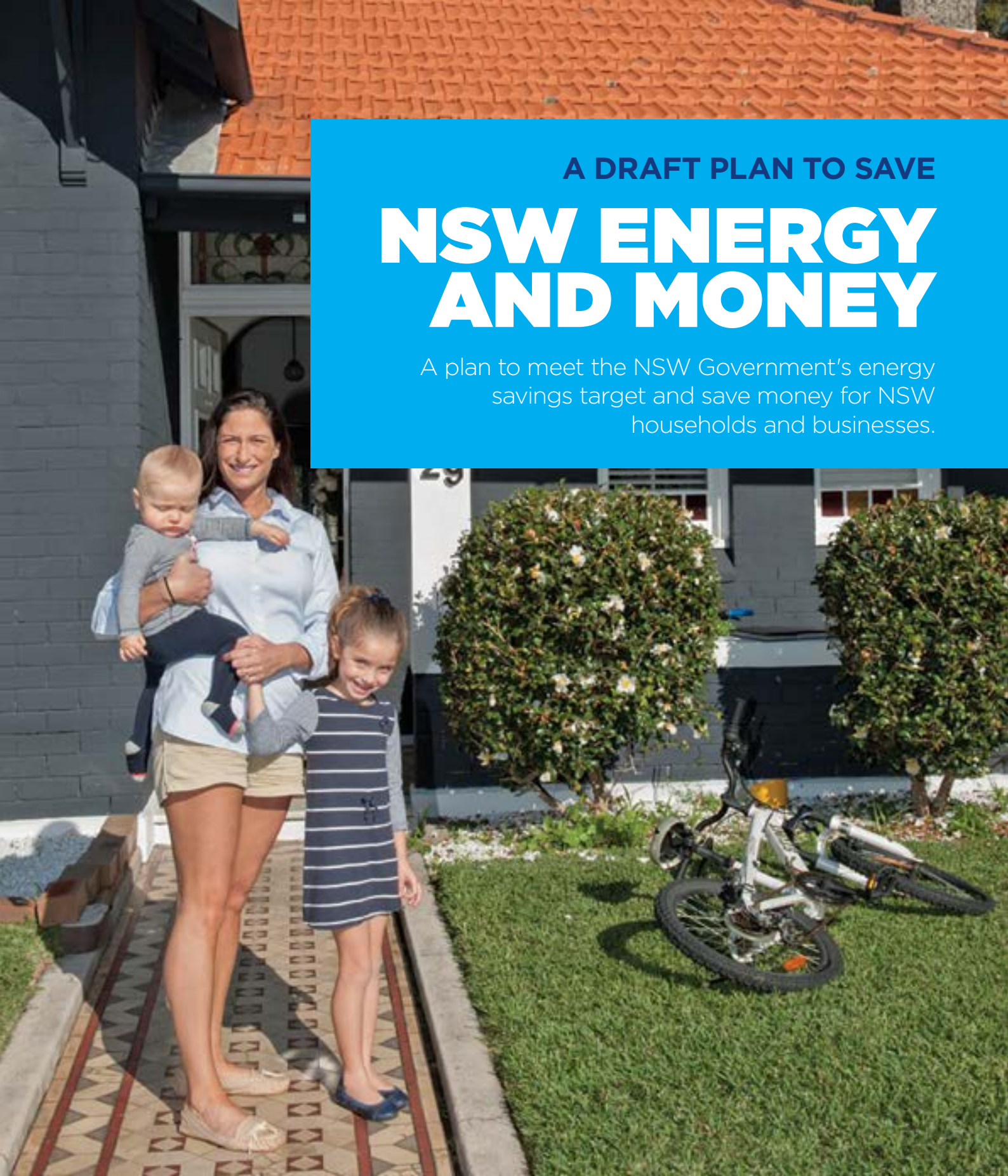


MAKING IT HAPPEN

A DRAFT PLAN TO SAVE

NSW ENERGY AND MONEY

A plan to meet the NSW Government's energy savings target and save money for NSW households and businesses.



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Office of Environment and Heritage

59 Goulburn Street, Sydney NSW 2000

PO Box A290, Sydney South NSW 1232

Phone: (02) 9995 5000 (switchboard)

Phone: 131 555 (environmental information and publications requests)

Phone: 1300 361 967 (national parks, general environmental inquiries and publications requests)

Fax: (02) 9995 5999

TTY users: phone 133 677, then ask for 131 555

Speak and listen users: phone 1300 555 727, then ask for 131 555

Email: info@environment.nsw.gov.au

Website: www.environment.nsw.gov.au

Report pollution and environmental incidents

Environment Line: 131 555 (NSW only) or info@environment.nsw.gov.au

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Have your say

We want your feedback on *A Draft Plan to Save NSW Energy and Money* and the preferred options we have suggested to achieve the NSW energy savings target.

We have also identified some good options for further investigation that could save a significant amount of energy, and other ideas to stimulate discussion.

You may have other ideas, and we're keen to hear them.

The NSW Government is interested in feedback on the following questions:

- » Do you have any comments on the actions we are proposing to drive energy efficiency?
- » Are there particular issues we need to consider to ensure these actions are effective?
- » Are there particular communities or industry sectors we should be targeting to improve energy efficiency?
- » Are there other opportunities for energy efficiency we should be encouraging?

You can participate in briefings and provide input via written submissions. Please complete submissions using the form provided. Further information on the process and how to get involved is available at <https://engage.environment.nsw.gov.au/Environmental-Future-Consultation>.

Please note this document is a summary of options and more detailed analyses will be available on our website.

Public feedback from this process will be considered in the development of a new energy efficiency action plan for New South Wales.

Submissions close at 5pm on 16 December 2016.

Please note, we have also released a *Draft Climate Change Fund Strategic Plan* for comment, and will provide more detailed analysis supporting the actions in this plan on the Office of Environment and Heritage website.



About this document

A Draft Plan to Save NSW Energy and Money links to the *Draft Climate Change Fund Strategic Plan's* chapter on national leadership in energy efficiency.

This document provides a short summary of the options that we estimate can achieve the NSW Government's energy savings target.

Please visit our [consultation website](#) for:

- » more detailed information on the actions presented in this paper
- » a submissions form with consultation questions.

FOREWORD

This plan strengthens New South Wales's position as the national leader in energy efficiency, and includes new measures to help households and businesses save energy and money. This is an important step towards our aspirational objective for New South Wales to achieve net-zero emissions by 2050.

The NSW Government is serious about helping households deal with cost-of-living pressures, including energy bills. Energy efficiency is one of the best tools available to do this. By saving money through energy efficiency, we can ease cost-of-living pressures on households, reduce the cost of doing business, place downward pressure on energy prices and deliver essential services more efficiently.

In 2013, the NSW Government released an *Energy Efficiency Action Plan* that included an ambitious target to help NSW households and businesses save 16,000 gigawatt hours of energy by 2020. This target is the equivalent of saving enough energy to power over 2.6 million NSW homes. Meeting this target was one of the NSW Government's election commitments in 2015.

A Draft Plan to Save NSW Energy and Money is our plan for achieving this target. It includes our preferred options for households, businesses, government and industry that will unlock energy and bill savings opportunities across the State's economy. In doing so, the plan will build on our leadership in energy efficiency, and deliver benefits to households and businesses.

Existing NSW Government programs are expected to reduce New South Wales electricity prices by an average of \$3.58 per megawatt hour between 2008 and 2020.

In 2015, we enhanced the NSW Energy Savings Scheme to save an extra 524 gigawatt hours of electricity a year by 2020, and save households and businesses an additional \$8 billion on their energy bills between 2015 and 2040.

The preferred options in this plan represent a further sustained effort to bring down power bill costs. Together, they are estimated to deliver over 1300 gigawatt hours of electricity savings a year in 2020, and around \$17 billion in bill savings by 2050.

It's particularly important that we help those most affected by rising energy costs save money on their bills. That's why this plan includes a proposal to expand the \$26.8 million Home Energy Action Program to help households living in public, community and Aboriginal housing access energy efficiency.

Saving energy also delivers real benefits to the economy. Money that we don't spend on energy bills can be spent on more productive uses, like growing a business. As well as bill savings, the options in the plan will be a shot in the arm for the NSW economy, estimated to encourage around \$1.9 billion in private investment by 2050.

To deliver these benefits, we propose to work with industry in New South Wales to improve energy productivity. Saving energy can directly benefit our industry by lowering running costs. In fact, the measures in this plan are estimated to help NSW businesses and industry save up to \$9.1 billion on bills by 2050. This will mean higher productivity for NSW industry and increased international competitiveness.

This plan can deliver big benefits to New South Wales, but we can't achieve these benefits alone. We will need to form strong partnerships between the State government, local governments, homeowners, landlords, tenants and businesses to ensure New South Wales achieves these benefits.

That's why we are seeking your feedback on these options, as well as your ideas on how New South Wales can best achieve further energy and bill savings. We'll use this feedback to develop a new *Energy Efficiency Action Plan* that can ensure New South Wales remains the national leader in energy efficiency.



Mike Baird MP
NSW Premier



Mark Speakman MP
Minister for the Environment

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1

A DRAFT PLAN TO SAVE NSW ENERGY AND MONEY

1.1 National leadership in energy efficiency

New South Wales has had great success in using energy more efficiently, and we are the nation's clear leader in this area. It makes sense to use less energy where we can to improve our lifestyles and productivity. Energy efficiency means lower costs, lower emissions, greater community wellbeing and a healthier economy. In the longer term, if we are using energy efficiently, it will be easier to achieve net-zero emissions by 2050.

In 2011, the NSW Government committed to a target of helping NSW households and businesses achieve 16,000 gigawatt hours of annual energy savings by 2020. Significant progress has been made, but more action is needed to meet this target.

This public consultation paper, *A Draft Plan to Save NSW Energy and Money*, summarises preferred options for achieving the State's energy savings target. We have also included other options that could help us meet the target but need further investigation. These options fall under sections on:

- » energy efficient homes
- » energy efficient business
- » energy efficient government and infrastructure
- » energy efficiency markets and appliances.

More detailed analysis of all of these options and questions to guide your feedback are available on our [consultation website](#).

The combined options in this plan are estimated to deliver total bill savings of around \$17 billion from 2017 to 2050, make households and businesses cheaper to run, free up cash for more productive uses, place downward pressure on energy prices, reduce impacts on the environment and health, improve living standards, build market capacity to deliver more efficient technologies and grow our economy.

This plan is part of consultation on the broader *Draft Climate Change Fund Strategic Plan*, which includes other actions that extend beyond or don't directly contribute to the 2020 energy savings target. Following this consultation, the NSW Government will develop an updated action plan for national leadership in energy efficiency that can:

- » deliver our energy savings target
- » boost energy productivity and put downward pressure on energy bills
- » capture co-benefits and manage unintended impacts of external policies
- » make the most of opportunities to grow new industries in New South Wales.

1.2 Guiding principles

Six key principles have guided the development of the options included in this plan.

NSW energy efficiency principles

1. Save NSW households and businesses money.
2. Help consumers take whole-of-life costs into account when making important purchasing decisions, including for homes and appliances.
3. Help vulnerable households access energy efficiency to reduce bill stress and place downward pressure on the cost of living.
4. Target market barriers which prevent NSW households and businesses from using energy more efficiently.
5. Accelerate existing regulatory frameworks, to lower complexity for government and provide greater certainty for businesses.
6. Carefully consider stakeholder impacts with thorough analysis of costs and benefits and options to offset or avoid any impacts.

By following these principles, we can ensure the right options are taken up and the best outcomes are achieved.

1.3 New South Wales in the national policy context

The proposed actions in this plan are consistent with achieving national targets, including the National Energy Productivity Target of a 40% improvement in energy productivity by 2030 on 2015 levels and the Commonwealth Government's interim and long-term emission savings targets.

The proposed actions in this plan will complement, rather than duplicate, national programs. Benefits of taking state-based action through this plan include significant economic benefits to New South Wales, including downward pressure on NSW electricity prices, making homes and businesses cheaper to run and building market capacity to deliver more efficient technologies.

For each option in the plan, we have thought carefully about the most appropriate level of government to act. For some options, national action is preferable (such as standards for new commercial buildings and appliances). For other options, the identified market barrier or program gap can be best addressed by NSW action.

1.4 Meeting the NSW energy savings target

Past and current NSW and national programs are expected to deliver 14,637 gigawatt hours of electricity savings towards the 16,000 gigawatt hour energy savings target in 2020. Figure 1 outlines the contribution of programs towards our energy savings target.

Our analysis indicates that we will not meet our energy savings target with voluntary measures alone.

The policy options we're consulting on in this plan aim to deliver the remaining 1363 gigawatt hours towards the NSW energy savings target.

1.5 Options to meet the target

The NSW Government has identified preferred options to bridge the remaining gap and meet our 2020 target. These options and the relative scale and benefits of each option are outlined in Figure 2.

We estimate that implementing these options can:

- » deliver up to 1379 gigawatt hours of electricity savings in 2020
- » reduce energy bills by around \$17 billion between 2017 and 2050
- » deliver up to \$1.8 billion of net economic benefit to New South Wales in present value terms
- » save around 1.2 million tonnes of carbon emissions in 2020 and 3.5 million tonnes in 2025
- » save around 52 million tonnes of carbon emissions over the lifetime of the measures at a net benefit of \$71 per tonne, a much lower cost than the current cost in Europe.

These options are also estimated to:

- » deliver up to 1.4 petajoules of gas savings in 2020
- » encourage around \$1.9 billion in private sector investment resulting in around 870 jobs in New South Wales and grow the economy
- » place downward pressure on energy prices and bills by deferring investment in network infrastructure of around \$336 million in present value terms
- » improve air quality and reduce health costs by around \$349 million in present value terms
- » increase business productivity, reduce the costs of doing business and make New South Wales more competitive
- » reduce the amount households spend on running their homes and directly support vulnerable households
- » grow the energy efficiency market in New South Wales to support households and businesses through greater consumer choice
- » help build a strong new economy that puts New South Wales in position to achieve net-zero emissions by 2050.

We've also included other options that could help us meet the target but need further investigation.

1.6 Interaction with the Energy Savings Scheme

In 2015 we reviewed our largest energy savings program, the Energy Savings Scheme (ESS). As part of this review, the NSW Government increased scheme targets, extended the scheme duration to 2025 and expanded fuel coverage to include gas.

The ESS review found that beyond an ESS target of 9%, the efficiency of the ESS becomes comparable with other energy saving policies to help meet the NSW energy savings target.

This plan includes a wide range of policy options to help New South Wales save energy and money which will complement the ESS.

Some of these options, such as incentives to build market capacity, are estimated to help drive additional energy savings towards the NSW target in the short term, while helping more cost-effective activities to access the ESS in the medium term. These options can reduce the cost of meeting current and future ESS targets.

1.7 The NSW Climate Change Fund

New South Wales is the only state in Australia to have a fund dedicated to supporting climate change activities.

Figure 1: Progress towards meeting the 16,000 gigawatt hour energy savings target

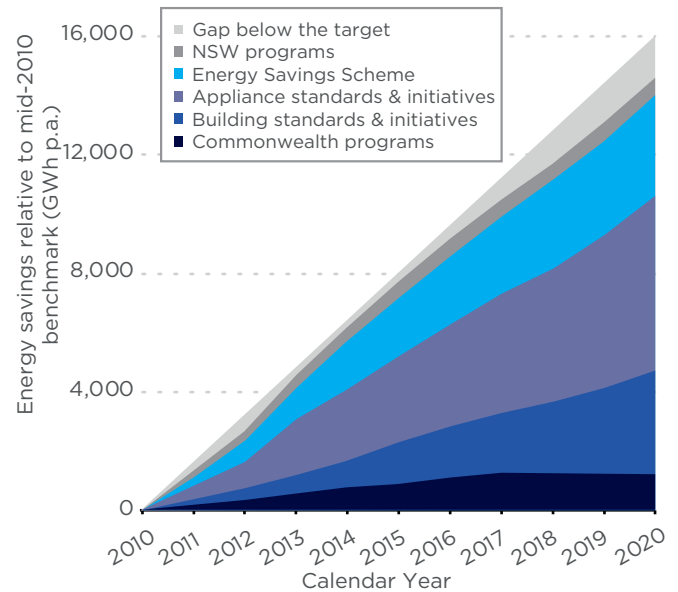
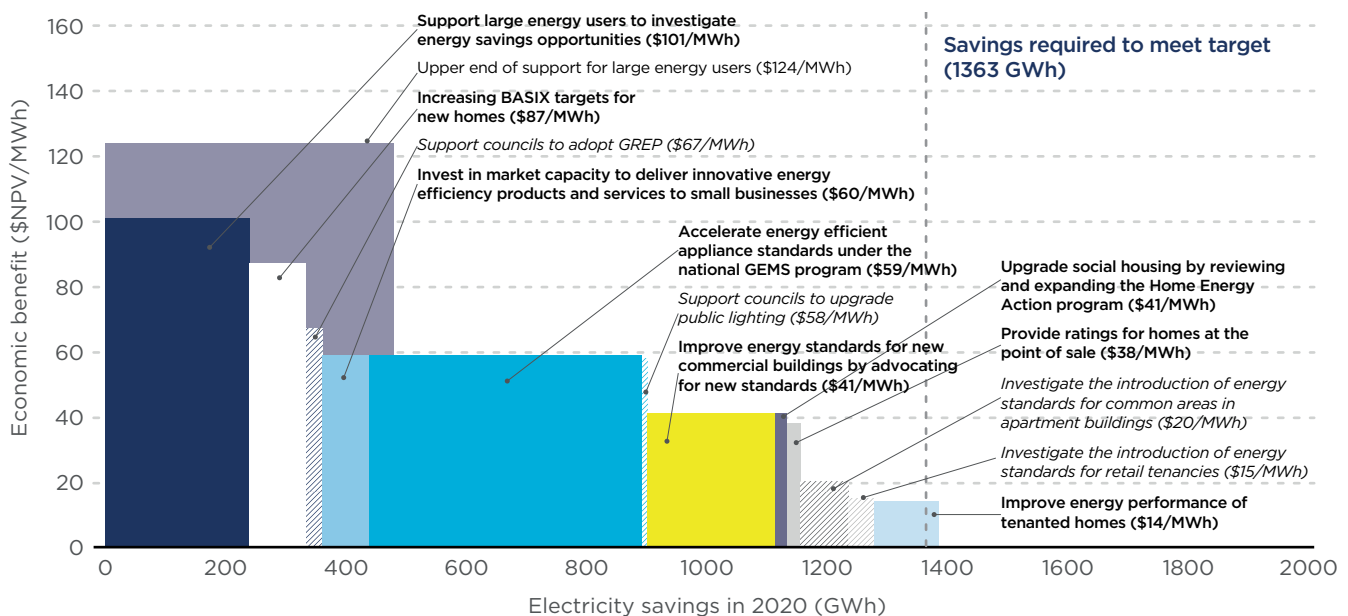


Figure 2: Options pathway to meet the 16,000 gigawatt hour energy savings target (striped options require further investigation)



BASIX NSW Building Sustainability Index
 GEMS Greenhouse and Energy Minimum Standards
 GREP NSW Government Resource Efficiency Policy

NPV net present value
 MWh megawatt hour
 GWh gigawatt hour

Over the next five years, the Climate Change Fund will support \$1.4 billion of activity in New South Wales. This activity will be guided by the *Draft Climate Change Fund Strategic Plan*, which organises potential policy actions into three priority investment areas:

- » accelerating advanced energy
- » national leadership in energy efficiency
- » preparing for a changing climate.

A *Draft Plan to Save NSW Energy and Money* addresses the second priority area (energy efficiency). Up to \$200 million from the Climate Change Fund will be used to support the achievement of the 2020 energy savings target and the national leadership in energy efficiency priority investment area.

More detail can be found in the *Draft Climate Change Fund Strategic Plan*.

1.8 The NSW Climate Change Policy Framework

The NSW Government has released a *NSW Climate Change Policy Framework* to demonstrate our commitment to action on climate change and guide future policy and programs. The framework sets aspirational objectives for New South Wales in relation to climate change.

NSW aspirational objectives

- » Achieve net-zero emissions by 2050
- » NSW is more resilient to a changing climate

This plan is an important step towards NSW achieving net-zero emissions by 2050.

The framework sets out our policy directions to guide government action.

NSW Government policy directions

1. Create a certain investment environment by working with the Commonwealth to manage transition
2. Boost energy productivity, put downward pressure on household and business energy bills
3. Capture co-benefits and manage unintended impacts of external policies
4. Take advantage of opportunities to grow new industries in New South Wales
5. Reduce risks and damage to public and private assets in New South Wales arising from climate change
6. Reduce climate change impacts on health and wellbeing
7. Manage impacts on natural resources, ecosystems and communities.

This plan implements these directions by boosting energy productivity, placing downward pressure on household and business energy bills and capturing co-benefits.

The framework also sets out roles of the NSW Government in emissions savings and climate change adaptation across policy, operations and advocacy.

NSW Government roles in emissions savings

Government policy

Implement emissions savings policies that are consistent with achieving the Commonwealth Government's interim and long-term emissions savings objectives and are fair, efficient and in the public interest

Government operations

Lead by example to save emissions in government operations

Government advocacy

Advocate for Commonwealth, COAG and international action consistent with the Paris Agreement

Table 3 An options pathway to meet the energy savings target

	Policy	Operations	Advocacy
Accelerate energy efficient appliance standards under the national Greenhouse and Energy Minimum Standards program	Yes	No	Yes
Improve energy standards for new commercial buildings by advocating for new standards	Yes	No	Yes
Provide ratings for homes at the point of sale	Yes	No	Yes
Improve energy performance of tenanted homes	Yes	No	Yes
Consult on increasing future BASIX targets for new homes	Yes	No	Yes
Invest in market capacity to deliver innovative energy efficiency products and services to small businesses	Yes	No	No
Upgrade social housing by reviewing and expanding the Home Energy Action program	Yes	Yes	No
Support councils to upgrade public lighting	Yes	Yes	No
Support large energy users to investigate energy savings opportunities	Yes	No	No
Energy standards for State significant developments and major infrastructure	Yes	Yes	No
Investigate the introduction of energy standards for common areas in apartment buildings	Yes	No	No
Investigate the introduction of energy standards for retail tenancies	Yes	No	No
Support councils to adopt the NSW Government Resource Efficiency Policy	Yes	Yes	No

SNAPSHOT

A Draft Plan to Save NSW Energy and Money – Benefits to NSW

Saving energy

The preferred policies are estimated to save around

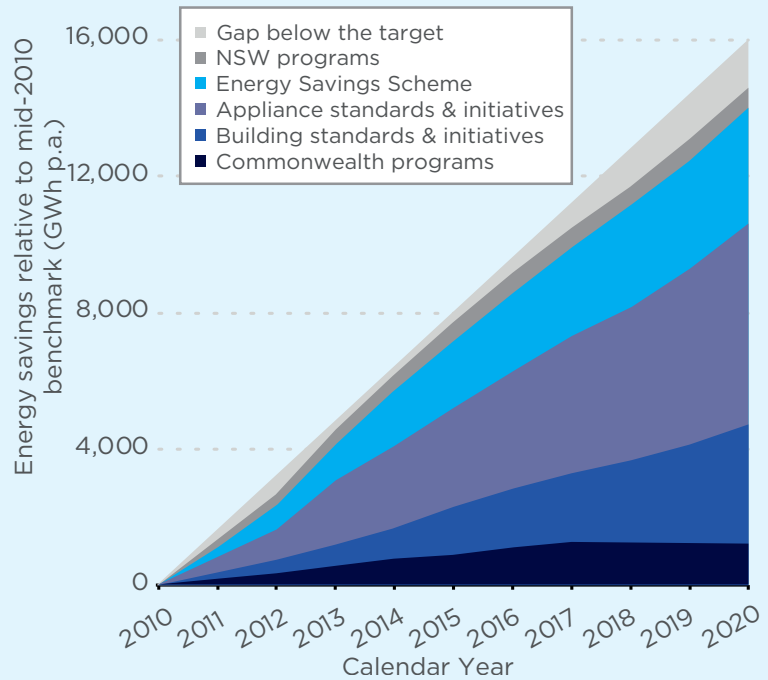
1379 GWh
towards the target

and save around

1.4 PJ
of gas in 2020

Equivalent to powering

230,000
households for a year



Saving money

The preferred policies are estimated to save around



\$7.8 billion

in bill savings from 2017 to 2050 for households



\$4.8 billion

in bill savings from 2017 to 2050 for businesses



\$4.3 billion

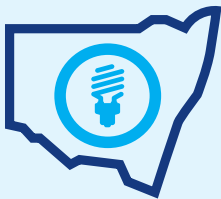
in bill savings from 2017 to 2050 for industry

SNAPSHOT

A Draft Plan to Save NSW Energy and Money – Benefits to NSW

Increasing economic growth

The preferred policies are estimated to grow the NSW economy by delivering around



\$1.8 billion

net economic benefit in present value terms or over \$2.22 for every \$1 spent

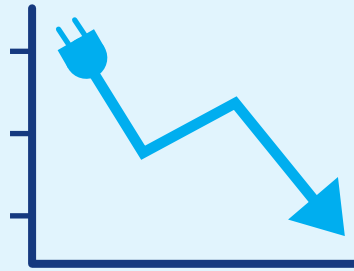


around

\$1.9 billion

of private sector investment to 2025 resulting in up to 870 jobs in NSW

Downward pressure on prices



around

\$336 million

in savings to the energy supply system estimated in present value terms, placing downward pressure on prices

Independent economic consultants found NSW retail electricity prices will be an average of **\$3.58 per MWh** lower between 2008 and 2020 because of existing NSW energy efficiency programs

Help achieve net-zero emissions

Meeting the 16,000 GWh energy savings target is estimated to reduce NSW emissions by around 2.7% by 2025 compared to 2014 levels



around

52 million tonnes

of emissions savings by 2050, the equivalent of planting 21 million trees

at a net benefit to the NSW economy of **\$71 per tonne**

Improving air quality and health

The preferred policies improve air quality and reduce health costs

around

\$349 million

in avoided health costs from air pollution estimated in present value terms



Human health impacts from air pollution cost NSW more than **\$6 billion** a year



Air quality studies indicate that power station sulfur dioxide emissions cause from **10% to 40%** of annual average particulate air pollution in the Sydney, Lower Hunter and Upper Hunter regions

2

ENERGY EFFICIENT HOMES

There are 3 million homes in New South Wales that use around 18,500 gigawatt hours of electricity a year, or 27% of total NSW use. In 2014-15, a typical NSW household paid, on average, around \$1876 a year on electricity bills.

Energy bills have a disproportionate impact on low-income households, where these costs can comprise a much higher share of a household's income. This can lead to electricity disconnection or cutting back on other essentials.

Many households don't choose energy efficient options when making decisions about their home, because they don't know about them, can't afford them, don't own their properties or have other priorities. These barriers burden households with higher running costs over the lifetime of a product or dwelling.

By promoting energy ratings and improving standards, we can encourage building owners to make improvements that unlock long-term energy savings. This will save households money, reduce bill stress and place downward pressure on the cost of living, particularly for vulnerable households.

The NSW Government is consulting on the following options that will help NSW households save energy and money.

Preferred options

2.1 Ratings for homes

Providing energy efficiency ratings information for homes at the point of sale can inform home buyers about comfort and the costs of running a home. Energy efficiency ratings for homes will also assist sellers to communicate the energy efficiency benefits of their homes.

By helping home buyers easily identify homes that cost less to run, this option would drive further demand for energy efficient homes and upgrades, save more households money and put further downward pressure on the cost of energy.

Similar successful schemes have been implemented by the European Union and are being considered by other states and territories in Australia as part of the National Energy Productivity Plan.

These schemes encourage cost-effective upgrades by owners before sale, and help purchasers factor lower energy bills into their purchase decisions.

This program would be built with the flexibility to operate nationally, allowing it to be taken up by other jurisdictions as part of the National Energy Productivity Plan and helping facilitate a coordinated national approach.

Provide ratings for homes at the point of sale

What are we consulting on?

- » Introducing a program to enable home owners and investors to assess energy efficiency performance ratings and display a rating at the point of sale.
- » Transitioning the program from a voluntary program in 2018 to a required program in 2020 if it is demonstrated to be efficient and effective.

Why act?

- » An energy efficiency rating program for homes at point of sale will empower and protect NSW home buyers by helping them understand potential energy costs and bill impacts and drive demand for energy efficient homes.
- » This can grow the market for energy efficient homes in New South Wales through greater consumer choice.

Who will benefit?

- » Homebuyers can make informed decisions about where they live and reduce their cost of living.
- » Home sellers can better communicate the benefits of energy efficient features in homes for sale.

Estimated benefits of this action

- » save around **23 gigawatt hours** of electricity a year in 2020
- » deliver around **\$403 million in bill savings** between now and 2050
- » deliver around **\$25 million in net benefit** to New South Wales in present value terms.

Have your say

- Q1:** What are the best approaches to deliver a ratings program in a way that will drive implementation of energy efficiency and grow the market for energy efficient homes and upgrades?
- Q2:** What are the key attributes for a voluntary ratings program to be considered successful and justify transition to a required ratings program?

2.2 Tenanted homes

Tenanted homes face significant split-incentive barriers where landlords are responsible for the building fabric and most energy consuming equipment, but tenants pay energy bills, so landlords have no incentive to make their property energy efficient.

This means tenanted homes are typically less energy efficient and can have higher operating costs than other homes despite the ready availability of many low-cost, high-return energy efficiency opportunities. For example, only 4% of renters in New South Wales have solar hot water or solar electricity generation (compared with 20% of owner occupiers). For efficient heating, only 37% of renters have access to reverse cycle air conditioning (compared to 71% of owners).

Just as NSW introduced water efficiency standards for tenanted homes to help households save water and reduce bills, there is an opportunity to do the same for energy.

Improving energy standards for rental homes would deliver basic energy savings features in all rental properties in New South Wales. This can help tenants achieve significant energy and bill savings and protect consumers from poor performing,

high energy-cost homes, especially vulnerable households. Similar measures have been successfully implemented in New Zealand.

Housing stress includes both rent and energy bill pressures. This option will ease housing stress by reducing energy bill pressures. The NSW Government is seeking feedback on the best ways to make sure that this option leaves tenants better off, reducing cost of living pressures, bill shock and risks of electricity disconnection.

The NSW Government has identified three main approaches to improve standards in rented homes, including:

- » performance standards, where owners can choose from a range of options to meet minimum energy efficiency ratings or targets before lease
- » technology standards, where owners need to upgrade specified poor-performing technologies before lease
- » incentive programs, where the NSW Government provides funds to owners for voluntary technology upgrades to aid transition.

A combination of these measures may be appropriate to address particular technologies or situations. Any program would need to be designed carefully to make sure that biases are not introduced in favour of particular energy sources or technologies, and to provide time for lessors to adjust.

The NSW Government is also proposing to improve energy efficiency in tenanted homes by providing ratings information for homes at the point of lease, consistent with the proposal to provide energy efficiency ratings at point of sale (see section 2.1, above). This will inform renters about comfort and the costs of running a home, and help lessors communicate the energy efficiency benefits of their homes.

By helping renters easily identify homes that cost less to run, ratings could drive demand for energy efficient homes and upgrades, save more households money and put downward pressure on energy bills.

Improve energy performance of tenanted homes

What are we consulting on?

- » Improving energy efficiency for tenanted homes. This could be through:
 - performance standards, such as meeting minimum energy efficiency ratings before properties can be leased
 - technology standards, such as upgrading specific poor-performing technologies before properties can be leased
 - an incentive program, such as funding to owners for voluntary technology upgrades.
- » Providing an energy efficiency rating scheme for rented homes in conjunction with the ratings scheme for homes at point of sale (see section 2.1).
- » Providing assistance for landlords to undertake low-cost energy efficiency upgrades to help meet improved standards.

Why act?

- » Improved energy efficiency in rented homes means all tenants, particularly vulnerable households, will enjoy lower energy bills and reduced cost-of-living pressures.
- » An energy efficiency rating program for homes at point of lease will empower and protect NSW renters by helping them understand potential energy costs and bill impacts and drive demand for energy efficient homes.
- » This can grow the market for energy efficient homes in New South Wales through greater consumer choice.

Improve energy performance of tenanted homes

Who will benefit?

- » Improved energy efficiency in rented homes will put downward pressure on the cost of living for all tenants.
- » Vulnerable households will benefit by reducing the proportion of income they spend on housing costs including energy bills and lowering their risk of electricity disconnection.
- » Renters can make informed decisions about where they live and reduce their cost of living.
- » Lessors can better communicate the benefits of energy efficient features in homes for rent, which can improve the value of their properties.

Estimated benefits of this action

- » save around **106 gigawatt hours** of electricity a year in 2020
- » deliver around **\$987 million in bill savings** between now and 2050
- » deliver around **\$24 million in net benefit** to New South Wales in present value terms.

Have your say

Q3: The NSW Government has identified performance standards, technology standards, and an incentive program as potential approaches to improve energy efficiency standards for tenanted homes.

What is the best approach or combination of approaches and why?

Q4: Housing stress includes rent and energy bill pressures.

What are the best approaches to reduce energy bill pressures for tenants without increasing housing stress and why?

Q5: On-bill financing and other innovative financing mechanisms could allow owners to share upgrade costs with tenants.

What is needed to help landlords to improve the energy performance of tenanted homes?

Q6: What are the best approaches to deliver a ratings program for tenanted homes in a way that will drive implementation of energy efficiency and grow the market for energy efficient homes and upgrades?

Q7: What are the key attributes for a voluntary ratings program for tenanted homes to be considered successful and justify transition to a required ratings program?

2.3 New homes

New home buyers also face split-incentive barriers. Property developers are often not the intended occupier of the home and so have limited incentive to make investment decisions that will reduce energy bills or avoid high retrofit costs to save energy in the future.

In recognition of these issues, the NSW Building Sustainability Index (BASIX) sets energy saving targets for all new homes in NSW. In July 2017, the NSW Government will implement amendments that will increase BASIX energy targets. These changes are estimated to drive energy savings of around 81 gigawatt hours annually by 2020, and deliver bill savings to NSW households of around \$2.6 billion to 2050.

The NSW Government consulted on these amendments in 2014 and over 80% of submissions supported the increase. Compliance costs are now expected to be two thirds lower than 2014 estimates, and the average household is estimated to benefit by over \$4500 in bill savings over the 30 year lifetime of a mortgage. This means a payback on investment in less than five years and reduced bill pressure for owners and renters.

Improved energy efficiency may also improve the value of a property at point of resale. BASIX certificates listing efficiency commitments are currently issued to all new homes that meet BASIX targets. To help consumers understand the benefits of better designed and more energy efficient homes, BASIX certificates will be reviewed to provide better information for householders.

To make sure BASIX targets and standards stay up to date, reflect changes in the market and continue to deliver benefits for NSW households, the NSW Government is seeking feedback on how best to improve BASIX, including the process for future reviews of the target.

Consult on increasing future BASIX targets for new homes

What are we consulting on?

- » Ways to better inform consumers and industry on the benefits of improving BASIX outcomes.
- » A process for future reviews of BASIX targets and keeping BASIX standards up to date.

Why act?

- » In July 2017, the NSW Government will implement recommendations to update BASIX energy targets. Beyond this, there is no clear process in place to make sure BASIX stays up to date.
- » New technologies can make energy savings cheaper and easier to deliver. Updating BASIX targets can drive ongoing energy and bill savings.

Who will benefit?

- » Homes will continue to benefit from new energy efficiency opportunities, saving more energy and money over time.
- » Industry will have improved certainty over when and how BASIX may be adjusted.
- » Households also benefit from potential energy and bill savings.

Estimated benefits of this action

- » save around **12 gigawatt hours** of electricity a year in 2020
- » deliver around **\$932 million in bill savings** between now and 2050
- » deliver around **\$57 million in net benefit** to New South Wales in present value terms.

Have your say

- Q8:** What is the best way to keep BASIX standards up to date?
- Q9:** How can better information on BASIX performance help consumers and industry to understand the benefits of better designed and more energy efficient homes?

2.4 Vulnerable households

Around 27% of low-income households in New South Wales experience hardship in paying their electricity bills. Many low-income households live in rental properties, in public and community housing or own their own home but have limited income (such as pensioners). Helping vulnerable and low-income households reduce their bills is a priority of the NSW Government.

The NSW Government is currently rolling out the \$26.8 million Home Energy Action Program to help vulnerable, low-income households save energy and money.

This program provides grants for high return energy efficiency improvements including hot water upgrades, improvements to building fabric, solar power, and upgrading old fridges and TVs.

Upgrade social housing by reviewing and expanding the Home Energy Action Program

What are we consulting on?

- » Continue the Home Energy Action Program
- » Upgrade social housing by expanding the Home Energy Action program to include public and Aboriginal housing
- » Review the current Home Energy Action Program in 2018
- » Develop innovative financing mechanisms.

Why act?

- » Vulnerable households pay a higher share of their income towards energy bills, meaning they feel bill pressures more acutely.
- » Implementing more energy efficiency upgrades in social housing will provide long-term bill relief to vulnerable households.

Who will benefit?

- » More vulnerable households who live in social housing, including those who live in public and Aboriginal housing.

Estimated benefits of this action

- » save around **14 gigawatt hours** of electricity a year in 2020
- » deliver around **\$171 million in bill savings** between now and 2050
- » deliver around **\$9 million in net benefit** to New South Wales in present value terms.

Have your say

Q10: What is the best approach to help vulnerable households save energy and money?

Other options for investigation

2.5 Common areas of residential buildings

Significant energy and bill savings can be achieved from common areas and shared services in apartment buildings, such as lifts, building management systems, carparks and heating, ventilation and air conditioning (HVAC) systems. In fact, these types of shared services can consume between 30% and 50% of energy in large apartment buildings. Reducing energy use can place downward pressure on strata levies through lower energy bills and maintenance costs.

The NSW Government is currently developing a National Australian Built Environment Rating System (NABERS) rating tool for common areas and shared services in apartment buildings as part of the National Energy Productivity Plan. This can help households and building managers better understand and communicate the benefits of energy efficiency in apartment buildings and identify new opportunities to improve it.

By targeting energy savings from shared services, we can achieve significant bill savings for households who live in apartments.

Some apartment buildings have made use of NSW Government and council programs to improve their efficiency. However, not all strata groups include energy efficiency as part of business planning and there are significant opportunities for improvements in mid and high-rise apartment buildings. Reducing energy use can place downward pressure on strata levies through lower energy bills and maintenance costs.

Investigate the introduction of energy standards for common areas in apartment buildings

What are we investigating?

- » Requiring energy efficiency audits for mid-and high-rise apartment buildings for common areas and shared services (such as central hot water systems, lighting, HVAC and swimming pool pumps).
- » Targeting the removal of worst-performing technologies from common areas in apartment buildings.

Why investigate?

- » Specific barriers are preventing apartment dwellers from realising bill savings from energy efficiency measures. Strata processes, for example, can make it difficult to upgrade equipment in common areas, even where there is a clear and demonstrable benefit for affected households.
- » A 'one-off' measure could flush out outdated, inefficient technologies from the market for good and bring forward energy and bill savings for occupiers. Analysis suggests this could deliver significant bill savings benefits for apartment dwellers.

Who could benefit?

- » Households in apartments, who could achieve lower bill costs from more efficient common areas.
- » Apartment owners and tenants, through lower maintenance, operating and strata costs.

Have your say

Q11: What is the best approach to achieve energy and bill savings from common areas and shared services in apartment buildings?

2.6 Other ways to save energy

The NSW Government is also exploring other opportunities that could help meet our energy savings target.

We are seeking your feedback on the idea we've suggested below, or any others you might have.

Precincts, high-growth areas and local government areas

Precinct-scale developments and high-growth areas present an opportunity to achieve further energy savings from new homes and other buildings. These savings can be achieved by using economies of scale across a whole precinct or high-growth area, as well as by targeting shared services in these developments.

This could be extended to facilitating increased energy saving requirements for new land releases and high-growth areas in selected local government areas, where requested by the relevant local council.

Have your say

Q12: Could the NSW Government achieve energy savings from precinct-scale developments, high-growth areas and by partnering with local government areas?

Q13: What would be the benefits and impacts of encouraging precinct-scale or local government area energy savings for new homes and other buildings?

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- » a submissions form.



Have your say

- » Do you have any comments on the actions we are proposing to drive energy efficiency?
- » Are there particular issues we need to consider to ensure these actions are effective?
- » Are there particular communities or industry sectors we should be targeting to improve energy efficiency?
- » Are there other opportunities for energy efficiency we should be encouraging?

3

ENERGY EFFICIENT BUSINESS

Businesses are expected to use 45,000 gigawatt hours of electricity in 2016, or around 67% of total NSW electricity use. Helping businesses to implement energy efficiency projects provides significant benefits.

Energy efficiency avoids spending money on wasted energy and frees up business resources for more productive uses. This lowers the cost of doing business, helping grow NSW businesses, grow the NSW economy, and keep jobs in New South Wales.

Options in this plan help to overcome market barriers that prevent large and small businesses from saving energy and money, and provide targeted assistance to help businesses take up energy efficiency.

Preferred options

3.1 Large energy users

The 500 largest commercial and industrial energy users in New South Wales use over 30% of the electricity consumed in New South Wales each year. Saving a small fraction of this energy use would significantly reduce current and future energy needs, putting downward pressure on electricity prices for all NSW households and businesses.

While many large energy users have already taken steps to minimise their energy use, there are still unachieved opportunities to improve energy efficiency.

Saving energy can reduce operating costs, increase competitiveness and boost productivity.

Large energy users in Germany have found that they can save 5% of their energy use by implementing the best practice international energy management system standard, ISO 50001. The US Department of Energy's Superior Energy Performance program, also based on ISO 50001, delivers an average 12% reduction of energy use for businesses within 15 months of joining the program.

The NSW Government's preferred option is to target savings of around 1% of electricity consumed by large users each year, by helping these users to identify cost-effective energy savings opportunities and to prepare plans to implement these opportunities.

While large energy users would be required to prepare a plan, the decision to undertake any of those options would be left up to them.

The NSW Government would provide financial support from the Climate Change Fund for large energy users to prepare plans to implement energy savings opportunities. Low-cost financing options are available in the private sector and from the Clean Energy Finance Corporation to provide capital for implementation.

There may be instances when it is not necessary for a business to prepare a plan (such as where businesses are already implementing best practice energy management), and the NSW Government intends that appropriate exemptions would be designed to address these situations.

The NSW Government is seeking feedback on whether this program is the most effective way to support large energy users to achieve energy savings, and the best framework to recognise circumstances where large energy users should be exempt from any requirement to prepare a plan.

If the voluntary uptake of cost-effective energy efficiency projects identified in plans is insufficient, the NSW Government would consider a stronger framework to drive opportunities in the future.

Support large energy users to investigate energy savings opportunities

What are we consulting on?

- » Supporting large energy users to prepare a plan that identifies energy efficiency opportunities.

Why act?

- » Large energy users represent a significant proportion of New South Wales's total energy use.
- » Saving a small fraction of this energy use would significantly reduce New South Wales's current and future energy needs, putting downward pressure on electricity prices for all households and businesses.

Who will benefit?

- » Large energy users are estimated to save up to 239 gigawatt hours a year in 2020 and achieve around \$2.7 billion in bill savings between now and 2050.
- » NSW industry will benefit through increased productivity and strengthen its place in the economy.
- » All households and businesses benefit from downward pressure on electricity bills through deferred electricity network infrastructure.

Estimated benefits of this action

- » save around **239 gigawatt hours** of electricity a year in 2020
- » deliver around **\$2.7 billion in bill savings** between now and 2050
- » deliver around **\$467 million in net benefit** to New South Wales in present value terms.

Have your say

Q14: What is the best approach to providing funding or other support for large energy users to prepare plans?

Q15: The NSW Government could determine program participation by covering a set number of large energy users, or by setting an energy consumption threshold.

What is the best approach to determine which large energy users could be included in a program?

Q16: Payback periods or internal rates of return could be suitable ways to determine what makes a 'cost-effective' energy efficiency opportunity.

What is the best approach to define 'cost effectiveness'?

Q17: Are there instances where large energy users should be exempt from preparing a plan? If so, under what circumstances?

Q18: Is requiring energy management systems similar to those applied in Germany or the United States appropriate for large energy users in NSW?

Q19: Are there other initiatives or approaches that NSW should consider that could be effective in enabling large energy users in NSW to implement cost effective energy efficiency opportunities?

3.2 Commercial buildings

Commercial buildings represent one of the largest opportunities to achieve low-cost energy savings in New South Wales. Focusing on commercial buildings can provide direct, cost-effective savings for all sizes of businesses.

In the National Energy Productivity Plan, the Commonwealth Government estimates that commercial buildings could contribute a cumulative 104 petajoules of electricity, gas and fuel savings towards the 2030 energy productivity target to improve Australia's energy productivity by 40%.

The commercial building sector could improve energy performance. By encouraging this activity, the NSW Government can drive significant energy savings from commercial buildings. This will reduce ongoing costs for tenants and building occupants, including small businesses.

Improved energy performance standards for new commercial buildings are being developed for implementation nationally in 2019. New South Wales can help shape this process to ensure new standards help deliver bill savings for businesses in our State.

Improve energy standards for new commercial buildings by advocating for new standards

What are we consulting on?

- » Advocating for the Australian Building Codes Board to introduce robust, cost-effective standards for new commercial buildings.

Why act?

- » While energy efficiency reduces ongoing costs for tenants of commercial buildings, split incentives and information barriers prevent projects from being achieved, resulting in higher energy bills for tenants.
- » Reports indicate standards reflecting a 70% energy saving compared to 2010 levels are estimated to be cost effective.
- » Better standards could help lock in energy savings for the lifetime of a building. This will mean lower ongoing costs for tenants.

Who will benefit?

- » Small, medium and large businesses that occupy commercial buildings, through lower energy bills.

Estimated benefits of this action

- » save around **219 gigawatt hours** of electricity a year in 2020
- » deliver around **\$2.6 billion in bill savings** between now and 2050
- » deliver around **\$198 million in net benefit** to New South Wales in present value terms.

Have your say

- Q20:** What level of stringency increase should the NSW Government advocate for to deliver significant and cost-effective energy savings?
- Q21:** What role, if any, could the NSW Government play to help businesses access private finance to help them adjust to improved energy standards for new commercial buildings?
- Q22:** What other approaches could be taken to achieve energy and bill savings from commercial buildings?

Other options for investigation

3.3 Existing large retail buildings

Given their size, large retail buildings should have the capacity to deliver energy savings effectively and efficiently. However, the landlord-tenant split incentive in retail buildings means that building owners do not face the cost imposed by inefficient buildings and shop owners have little ability to reduce their energy bills.

National Australian Built Environment Rating System (NABERS) currently has a tool for shopping centre managers to voluntarily rate and display their energy efficiency performance. While there has been some movement at the top of the retail building market to undertake energy efficiency upgrades, there is significant scope for improvement in the rest of the sector.

Investigate the introduction of energy standards for retail tenancies

What are we investigating?

- » The NSW Government could apply voluntary or required standards to large tenanted buildings in the retail sector, including large shopping malls.
- » This could use the existing NABERS tool or another approach to identify appropriate performance or technology standards.

Why investigate?

- » Large retail buildings can deliver more energy and bill savings, such as through low-cost improvements to lighting.

Who could benefit?

- » Businesses leasing space in large retail buildings would have lower energy bills.

Have your say

- Q23:** What are the potential benefits and impacts of this option?
- Q24:** What other approaches could be taken to achieve energy and bill savings from large retail buildings?

3.4 Commercial building disclosure

Large commercial office buildings (over 2000 square metres, changing to over 1000 square metres from 1 July 2017) are required to disclose their energy performance under the national Commercial Building Disclosure (CBD) Program. This helps prospective tenants take into account energy running costs before entering a lease.

A review of the program in 2016 indicated that required disclosure had driven improvements to building performance will save over 10,020 terajoules of electricity and gas across Australia between 2010 and 2023. The review noted limits to extending these requirements to other building types. However, there may be opportunities to drive more energy and bill savings by extending these requirements in the future.

Expand Commercial Building Disclosure where appropriate

What are we investigating?

- » Advocating for the Commonwealth Government to require commercial buildings other than medium to large office buildings (such as retail buildings and data centres) to disclose their energy performance under the CBD program.

Why investigate?

- » Extending disclosure requirements could overcome split-incentive and information barriers by increasing transparency regarding building energy performance in more sections of the market.

Who could benefit?

- » Tenants in smaller commercial buildings (including small businesses in the retail sector) would be better able to estimate ongoing costs.

Have your say

Q25: What are the potential benefits and impacts of this option?

3.5 Other ways to save energy

The NSW Government is exploring other opportunities that could help meet our energy savings target.

We are seeking your feedback on the idea we've suggested below, or any others you might have.

Waste heat recovery

The NSW Government has identified heat recovery from industrial plant and equipment as an opportunity to deliver energy savings for large energy users. For example, the exhaust from an industrial process can be used to preheat the incoming gas for the same, or other nearby, industrial processes.

Heat recovery could also be a significant opportunity for precinct-level heating infrastructure. Heat recovery provides an opportunity to help drive further energy savings from industry and other large energy users.

Have your say

Q26: What opportunities may be available to the NSW Government to further promote waste heat recovery?

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Have your say

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- » Are there other opportunities for energy efficiency we should be encouraging?

4

ENERGY EFFICIENT GOVERNMENT AND INFRASTRUCTURE

The NSW Government Resource Efficiency Policy (GREP) is working to save government agencies energy and money. However, there are also big opportunities to save energy and money for local governments and major new developments funded or approved by the NSW Government.

Long-term energy savings opportunities in major new developments and infrastructure are often overlooked. Sometimes there is also a split-incentive barrier where some developers will not end up paying the energy bills, so they do not have a financial incentive to put in place energy-saving measures during design and construction.

Local governments manage a network of public lighting, public facilities and buildings that collectively consume large amounts of energy. However, councils may sometimes lack the money, skills or time to implement energy-saving opportunities.

This means there are significant opportunities to save energy and money in local government operations and NSW infrastructure projects.

New standards to save, for example, 10% of energy in State significant development and major infrastructure are estimated to save around 524 gigawatt hours of electricity each year in 2025. Subsequent occupiers would save money on ongoing running costs.

Helping councils to implement energy-saving opportunities can benefit the community through downward pressure on council rates or by freeing up government funds for frontline services.

The NSW Government is consulting on the following preferred options to save energy and reduce the long-term costs of local government facilities and major new developments.

Preferred options

4.1 State significant developments and major infrastructure

There is a large opportunity to incorporate energy efficiency standards into major developments and infrastructure projects to achieve energy savings from the outset. This includes major projects such as large energy, mining, manufacturing and hospital projects or new railway lines, road tunnels and water supply systems.

The Department of Planning and Environment currently requires some major projects to take sustainability concerns (including energy efficiency opportunities) into account as part of the approvals process. However this is not uniformly required for all major projects. Clear standards would provide a consistent approach to achieving energy savings or other sustainability outcomes, such as renewable energy sources or reduced waste or water use. Any new standards would only be developed and supported where they do not impact on other key business factors, such as safety and reliability.

Energy standards for new State significant developments and major infrastructure

What are we consulting on?

- » A mechanism for new State significant developments and major infrastructure to achieve higher sustainability and energy efficiency standards and/or implement cost-effective energy-saving opportunities.

Energy standards for new State significant developments and major infrastructure

Why act?

- » Split-incentive barriers may prevent developers from ensuring major developments save energy and money over the long term if they are not the operator.
- » Requiring less energy to run large developments delivers significant energy bill savings and reduces the need for future electricity network investment.

Who will benefit?

- » Developers will have clear direction from the outset on including energy efficiency measures in new projects.
- » Operators of large developments will pay less for their energy bills.
- » Major infrastructure will cost government and private operators less to operate.
- » All households and businesses will benefit from downward pressure on energy bills through deferred electricity network investment.

Estimated benefits of this action

- » save **524 gigawatt hours** of electricity a year in 2025
- » deliver **\$1.6 billion in bill savings** between now and 2050
- » deliver **\$283 million in net benefit** to New South Wales in present value terms.

Have your say

Q27: What is the best approach to develop higher sustainability and energy efficiency standards that can apply across a range of infrastructure types?

Other options for investigation

4.2 Public lighting

There are almost 600,000 public lights across New South Wales, using over 300 gigawatt hours of electricity every year. Almost half of this energy could be saved by upgrading public lighting with more energy efficient technology. Inefficient public lights burden councils and ratepayers with higher energy and maintenance costs.

The upgrade to more energy efficient public lighting may be slowed by the existence of split-incentives, where the electricity distribution network owns the street lighting asset, but the council pays maintenance and energy costs. Upgrades may also be held back by large upfront costs or a lack of transparent information for councils to build a business case for upgrades.

By supporting councils to upgrade public lighting, improving information and reducing upfront costs, the NSW Government could accelerate energy efficient lighting upgrades and help councils save money on energy and maintenance bills.

Support councils to upgrade public lighting

What are we investigating?

- » Expanding the role of Accredited Service Providers in upgrading and maintaining public lighting.
- » Minimum performance standards and reporting requirements in the NSW Public Lighting Code.
- » Other measures, such as targeted grants to accelerate replacement of inefficient fittings that have a long remaining economic life and high residual capital value.
- » A program to support councils to access specialist services and build capacity to upgrade public lighting.

Support councils to upgrade public lighting

Why investigate?

- » Old and inefficient public lighting results in higher maintenance bills and energy costs for councils across New South Wales.
- » Split incentives create a barrier to the upgrade of these assets.
- » Information barriers impede councils identifying and developing the business case for an upgrade.
- » Inefficient lights with long remaining economic lives are costly to replace.

Who could benefit?

- » Councils would pay less for public lighting energy and maintenance.
- » Households and businesses could benefit from downward pressure on council rates due to lower energy and maintenance costs.

Have your say

Q28: What are the best policy options to facilitate the installation of energy efficient public lighting?

4.3 Council operations

The NSW Government Resource Efficiency Policy (GREP) provides targets for cost-effective actions to save energy; it is currently voluntary for local councils.

Larger councils such as City of Sydney have implemented energy efficiency upgrades. Several smaller councils have also implemented energy savings projects with funding assistance from the Clean Energy Finance Corporation, but most councils lack the support, time and resources for these projects.

This option would expand the GREP by providing implementation support for local councils through resourcing, support and outreach. This could target council facilities and assets consuming large amounts of energy, including council chambers, sports facilities, swimming pools, parking lots and functions centres.

If there is insufficient council participation or uptake of cost-effective energy efficiency projects, the NSW Government could consider a stronger framework to drive opportunities in the future if appropriate.

Support councils to adopt the Government Resource Efficiency Policy

What are we investigating?

- » A program to support local councils to apply GREP and target facilities and assets which consume large amounts of energy.

Why investigate?

- » GREP is voluntary for local government, but resources have not been allocated for communication or supporting local governments' participation and delivery against the targets.
- » Councils may lack the skills, time and resources to understand their options, compare technologies and develop business cases.

Who could benefit?

- » Councils would develop expertise to identify and implement energy-saving opportunities.
- » Households and businesses would benefit through downward pressure on council rates due to lower energy bills for councils, or through increased investment in improved council services.

Have your say

Q29: What is the best way to support councils to apply GREP?

4.4 Hotels and other services used by the NSW Government

The GREP includes energy performance standards for government tenanted office buildings, which have continued to raise the bar for energy performance across the commercial office market.

The NSW Government could drive better energy practice through government procurement. One opportunity could be requiring hotels used by government for accommodation and events to meet minimum energy performance standards. Initially, this could be restricted to larger hotels and metropolitan areas, or areas with a sufficiently developed hotel industry. The National Australian Built Environment Rating System (NABERS) for Hotels tool is one way we could set a minimum energy performance standard.

Minimum standards for hotel services used by the NSW Government

What are we investigating?

- » Minimum energy performance standards for hotels used by government for accommodation and events in metropolitan areas.

Why investigate?

- » There may be untapped opportunity to achieve energy savings from hotels.
- » The NSW Government has significant purchasing power to drive improved energy standards.

Who could benefit?

- » Hotels that adopt good practice in energy use would benefit from government business and reduced energy bills.
- » Safeguards would be put in place to avoid increased costs to government or negative impacts on regional businesses.

Have your say

Q30: What is the best way to achieve energy and bill savings from hotels used by NSW Government?

Q31: Are there other ways to save energy through government procurement?

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Have your say

- » Do you have any comments on the actions we are proposing to drive energy efficiency?
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- » Are there other opportunities for energy efficiency we should be encouraging?

5

ENERGY EFFICIENT MARKETS AND APPLIANCES

Growing the market for energy efficiency while phasing out poorly performing products in New South Wales can improve consumer choice to manage energy use, empower and protect NSW consumers when making important purchasing decisions and deliver significant energy savings.

There is significant potential to grow and transform the market for energy efficiency in New South Wales through energy savings upgrades for households, businesses and government agencies.

Investing in the energy efficiency market can increase its capacity to deliver low-cost energy efficiency and support sustained growth. This can make it easier for service providers to help households and businesses save energy and make it cheaper to deliver savings through the NSW Government's largest energy efficiency program, the NSW Energy Savings Scheme.

Updating and extending appliance standards to phase out high-cost, low-efficiency appliances can deliver major benefits, including significant bill savings and reduced bill shock for consumers.

Preferred options

5.1 Energy efficiency products and services

The energy efficiency market in New South Wales is emerging, and there is significant opportunity for it to grow and transform.

Building the capacity of the energy efficiency industry to deliver new energy-efficient technologies such as air conditioners and building management systems can accelerate learning rates that reduce the costs of saving energy. This can unlock more benefits of energy efficiency and improve equity of access to Energy Savings Scheme benefits, particularly for small businesses in New South Wales.

The NSW Government's preferred option is to provide short-term, targeted financial incentives to kick-start industry capacity to deliver new energy savings opportunities and bring down transaction costs.

When incentives come to an end, service providers should be able to deliver these new, low-cost energy savings activities through the Energy Savings Scheme, reducing the cost of the scheme and increasing its net economic benefit. This will also help create a more

diverse and sustainable energy efficiency services market in New South Wales.

Technologies and services to improve household participation in the ESS, such as efficient pool pumps, may also be considered.

Invest in market capacity to deliver innovative energy efficiency products and services for small businesses

What are we consulting on?

- » Targeted financial incentives to build the capacity of the energy efficiency industry to deliver low-cost technologies and services.
- » Incentives would target technologies and services for small businesses that are not currently taken up under the Energy Savings Scheme.

Why act?

- » Transaction costs to deliver new activities through the ESS are high.
- » Experience with the ESS shows once an activity achieves a certain market share, the cost of delivering the activity comes down dramatically.
- » More low cost activities can reduce the costs of current or higher ESS targets.

Who will benefit?

- » Targeted incentives could help energy service providers develop business models to improve learning rates, reduce transaction costs and overcome information barriers associated with efficient energy use.
- » Consumers could benefit from a more diverse and sustainable energy efficiency services market.
- » More small businesses could access the benefits of the scheme.
- » Households and businesses could benefit from lower ESS costs passed on through their bills.

Estimated benefits of this action

- » save around **77 gigawatt hours** of electricity a year in 2020
- » deliver around **\$160 million in bill savings** between now and 2050
- » deliver around **\$25 million in net benefit** to New South Wales in present value terms.

Have your say

- Q32:** Are targeted incentives an effective way to deliver energy savings and kick-start new activities in the Energy Savings Scheme?
- Q33:** Are there more effective ways to grow and transform the market for energy efficiency products and services?

5.2 Appliances

By using more efficient appliances, NSW homes and businesses can achieve significant bill savings. The national Greenhouse and Energy Minimum Standards (GEMS) program encourages the sale of efficient, cheaper-running appliances through requiring minimum standards. GEMS currently helps NSW households save up to \$120 a year on bills.

Updating and extending appliance standards under GEMS would deliver major benefits to NSW consumers including significant bill savings. This will help consumers avoid the shock to their bills from purchasing a new or replacement appliance with poor energy performance. Appliance standards in the USA have seen energy efficiency improve while the cost of products has gone down.

For example, GEMS covered 41 products in 2014, compared to an equivalent program in the United States that covered 70. Expanding GEMS would mean consumers could benefit from more efficient, cheaper-running appliances.

The NSW Government's preferred option is to work with the Commonwealth Government to accelerate appliance standards by funding the development of more standards and Regulatory Impact Statements in

the next three years. We would play our part and help the GEMS program achieve its full potential. NSW would collaborate with other jurisdictions to trial them in situations where it could advance a national rollout.

Accelerate energy efficient appliance standards under the national GEMS program

What are we consulting on?

- » Supporting the GEMS program by advocating to the COAG Energy Council that the work be better resourced.
- » Undertaking supporting work to assess international standards and develop new standards.
- » Where appropriate, cooperate with other states to collectively trial accelerated standards.

Why act?

- » The Commonwealth Government reviewed GEMS in 2015 and found it could deliver an additional net benefit of \$1.5 billion if implementation was accelerated.
- » To capture the opportunities to help NSW households and businesses save on their energy bills while helping to meet our NSW energy savings target.

Who will benefit?

- » Households and businesses with more efficient appliances could benefit from lower energy bills.
- » Impacts on retailers and manufacturers will be considered before proceeding with any new product standards.

Estimated benefits of this action

- » save around **454 gigawatt hours** of electricity a year in 2020
- » deliver around **\$4.3 billion in bill savings** between now and 2050
- » deliver around **\$482 million in net benefit** to New South Wales in present value terms.

Have your say

Q34: What is the best approach for the NSW Government to support the acceleration and expansion of GEMS?

5.3 Other ways to save energy

The NSW Government is exploring other opportunities that could help meet our energy savings target.

We are seeking your feedback on the ideas we've suggested below, or any others you might have.

Hot water system innovation

The uptake of more efficient hot water systems can drive significant energy savings. New and alternative technologies can help reduce hot water energy use while offering significant cost savings in the long term.

However, there can be significant costs and barriers for changing systems or retrofitting technology to existing systems. There could be potential to address these high costs and other barriers by pairing electric hot water with solar power.

Have your say

Q35: Are there opportunities for the NSW Government to work with the hot water industry to explore innovations that can save energy and money?

Appliance labelling

Labelling is important in driving energy and bill savings from appliances. It can help consumers choose energy efficient products with low running costs and encourage manufacturers to adopt best practice in product design.

A standalone label for best performing products (such as the EnergyStar label used in the United States and European Union) could improve on the current labelling system by encouraging manufacturers to sell high-performing products.

Have your say

Q36: Are there opportunities to enhance the national Energy Rating Label system that could deliver significant energy savings?

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Have your say

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- » Are there other opportunities for energy efficiency we should be encouraging?

SUMMARY OF QUESTIONS



Have your say

- » Do you have any comments on the actions we are proposing to drive energy efficiency?
- » Are there particular issues we need to consider to ensure these actions are effective?
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Please use the submissions form when responding to the consultation questions.

Energy efficient homes

Provide ratings for homes at the point of sale

- Q1.** What are the best approaches to deliver a ratings program in a way that will drive implementation of energy efficiency and grow the market for energy efficient homes and upgrades?
- Q2.** What are the key attributes for a voluntary ratings program to be considered successful and justify transition to a required scheme?

Improve energy performance of tenanted homes

- Q3.** The NSW Government has identified performance standards, technology standards, and an incentive program as potential approaches to improve energy efficiency standards for tenanted homes.
- What is the best approach or combination of approaches and why?
- Q4.** Housing stress includes rent and energy bill pressures.

What are the best approaches to reduce energy bill pressures for tenants without increasing housing costs and why?

- Q5.** On-bill financing and other innovative financing mechanisms could allow owners to share upgrade costs with tenants.

What is needed to help landlords to improve the energy performance of tenanted homes?

- Q6.** What are the best approaches to deliver a ratings program for tenanted homes in a way that will drive implementation of energy efficiency and grow the market for energy efficient homes and upgrades?
- Q7.** What are the key attributes for a voluntary ratings program for tenanted homes to be considered successful and justify transition to a required scheme?

Consult on increasing future BASIX targets for new homes

- Q8.** What is the best way to keep BASIX standards up to date?
- Q9.** How can better information on BASIX performance help consumers and industry to understand the benefits of better designed and more energy efficient homes?

Upgrade social housing by reviewing and expanding the Home Energy Action Program

- Q10.** What is the best approach to help vulnerable households save energy and money?

Investigate the introduction of energy standards for common areas in apartment buildings

- Q11.** What is the best approach to achieve energy and bill savings from common areas and shared services in apartment buildings?

Precincts, high-growth areas and local government areas

- Q12.** Could the NSW Government achieve energy savings from precinct-scale developments, high-growth areas and by partnering with local government areas?

Q13. What would be the benefits and impacts of encouraging precinct-scale or local government area energy savings for new homes and other buildings?

Energy efficient business

Support large energy users to investigate energy savings opportunities

Q14. What is the best approach to providing funding or other support for large energy users to prepare plans?

Q15. The NSW Government could determine program participation by covering a set number of large energy users, or by setting an energy consumption threshold.

What is the best approach to determine which large energy users could be included in a program?

Q16. Payback periods or internal rates of return could be suitable ways to determine what makes a 'cost-effective' energy efficiency opportunity.

What is the best approach to define 'cost effectiveness'?

Q17. Are there instances where large energy users should be exempt from preparing a plan? If so, under what circumstances?

Q18. Is requiring energy management systems similar to those applied in Germany or the United States appropriate for large energy users in NSW?

Q19. Are there other initiatives or approaches that NSW should consider that could be effective in enabling large energy users in NSW to implement cost effective energy efficiency opportunities?

Improve energy standards for new commercial buildings by advocating for new standards

Q20. What level of stringency increase should the NSW Government advocate for to deliver significant and cost-effective energy savings?

Q21. What role, if any, could the NSW Government play to help businesses access private finance to help them adjust to improved energy standards for new commercial buildings?

Q22. What other approaches could be taken to achieve energy and bill savings from commercial buildings?

Investigate the introduction of energy standards for retail tenancies

Q23. What are the potential benefits and impacts of this option?

Q24. What other approaches could be taken to achieve energy and bill savings from large retail buildings?

Expand commercial building disclosure where appropriate

Q25. What are the potential benefits and impacts of this option?

Waste heat recovery

Q26. What opportunities may be available to the NSW Government to further promote waste heat recovery?

Energy efficient government and infrastructure

Energy standards for new State significant developments and major infrastructure

Q27. What is the best approach to develop higher sustainability and energy efficiency standards that can apply across a range of infrastructure types?

Support councils to upgrade public lighting

Q28. What are the best policy options to facilitate the installation of energy efficient public lighting?

Support councils to adopt the NSW Government Resource Efficiency Policy

Q29. What is the best way to support councils to apply GREP?

Minimum standards for hotel services used by the NSW Government

Q30. What is the best way to achieve energy and bill savings from hotels used by NSW Government?

Q31. Are there other ways to save energy through government procurement?

Energy efficient markets and appliances

Invest in market capacity to deliver innovative energy efficiency products and services for small businesses

Q32. Are targeted incentives an effective way to deliver energy savings and kick-start new activities in the Energy Savings Scheme?

Q33. Are there more effective ways to grow and transform the market for energy efficiency products and services?

Accelerate energy efficient appliance standards under the national Greenhouse and Energy Minimum Standards (GEMS) program

Q34. What is the best approach for the NSW Government to support the acceleration and expansion of GEMS?

Hot water system innovation

Q35. Are there opportunities for the NSW Government to work with the hot water industry to explore innovations that can save energy and money?

Appliance labelling

Q36. Are there opportunities to enhance the national Energy Rating Label system that could deliver significant energy savings?

