

Department of Climate Change,  
Energy, the Environment and Water

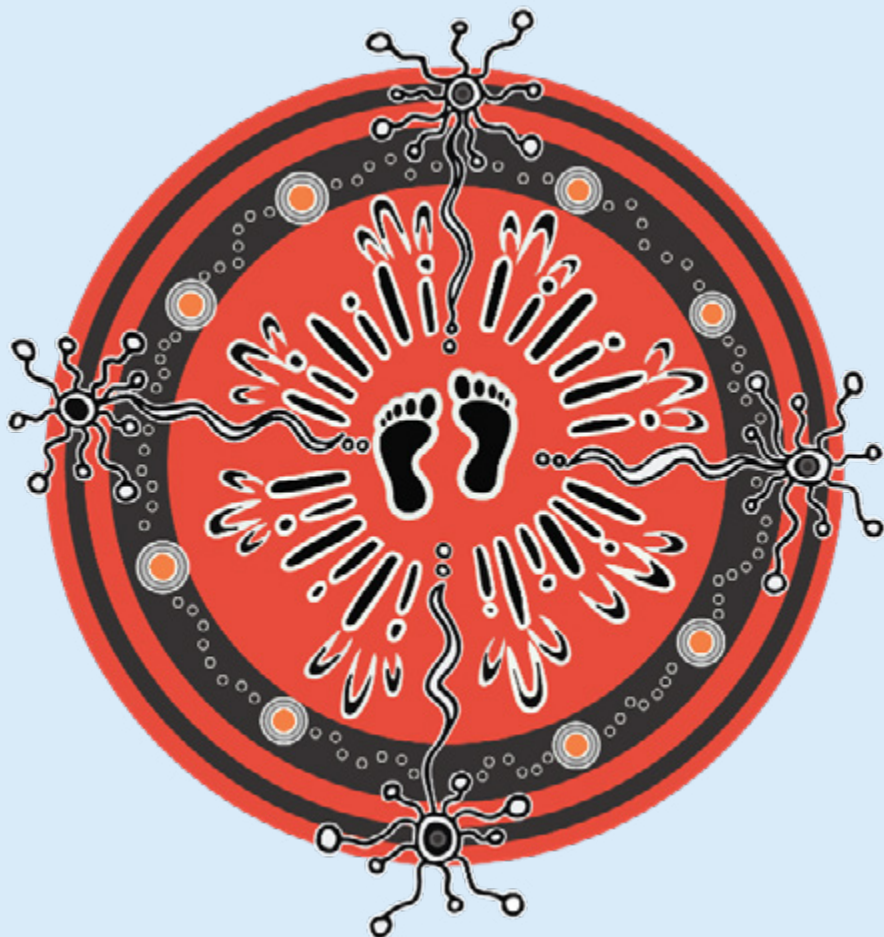
# NSW Consumer Energy Strategy

Powering our people  
and communities

September 2024



# Acknowledgement of Country



Department of Climate Change, Energy, the Environment and Water acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

Artist and designer Nikita Ridgeway from Aboriginal design agency – Boss Lady Creative Designs, created the People and Community symbol.

## NSW Consumer Energy Strategy

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# 1 Minister's Foreword



Our state is undergoing a radical transformation in how we buy and use energy. This brings huge opportunities for households and small businesses to reduce power bills, increase energy efficiency, and contribute to lowering greenhouse gas emissions.



This means the people of NSW can get a better quality of life while also helping the environment.

Households and businesses are already reducing their energy consumption and embracing energy saving technologies like solar, electric heat pumps and efficient heating and cooling. They are realising the benefits, including lower energy bills and more comfortable homes and businesses during the peaks of summer and winter.

Households and businesses are now active participants in our energy system. New energy technologies and services, like batteries and virtual power plants, mean consumers can be rewarded for the energy they generate, and they can store it for when it is needed most. This action is actively helping our energy system become more flexible, secure and reliable, while providing a way to save money at the same time.

This plan builds on the work already underway. We have secured \$175 million of Commonwealth and NSW funding for solar panels and other energy upgrades for social housing residents, and \$30 million for solar for apartment residents. We are investing \$200 million to support the roll-out of public EV charging stations across NSW.

The NSW Consumer Energy Strategy is our plan to supercharge the energy transition and put households and small businesses at the centre of this work. We want to make it easier for people to access these benefits and rebates. No matter if you rent or own your home. No matter where you live, or whether you live in a house or apartment.

We want to make it easier for all consumers to benefit from the energy transition, and make sure that the benefits can be shared by everyone in our community.

This plan has 50 actions and includes \$290 million in new funding over 4 years to support this vision.

Thank you to the community organisations, consumer advocates, industry participants, and energy bodies who have had input to this plan.

I look forward to working to implement the actions set out here to improve the comfort and cost of our homes and small businesses on the way to net zero.

**The Hon. Penny Sharpe, MLC**

Minister for Climate Change, Energy,  
the Environment and Heritage



# 2

## Introduction







We want everyone to benefit from a renewable energy future. That is why we're putting people at the centre of the net zero energy transition.

Hundreds of thousands of NSW households and small businesses are already seizing the opportunity to upgrade to energy saving technologies, like household batteries or energy saving appliances. This is helping them cut their emissions, save an average of \$2,000 a year on their energy bills and helping make our energy grid more reliable.

We want to ensure all homes and small businesses can benefit from these opportunities.

The NSW Consumer Energy Strategy is our plan to make it easier and more affordable for households and businesses to take action. However, while there are huge benefits to joining the energy transition, there are also challenges to overcome, such as:

- The upfront costs of energy upgrades, which can be out of reach for some households and small businesses.
- Ensuring households and small businesses can find practical resources and information to help them understand their energy use and the best options for them.
- Overcoming unique barriers for renters, apartment residents, social housing residents and regional communities.

These are tough issues. We don't want anyone left behind. We're taking action to ensure everyone in the community has the trusted tools they need to make informed choices.

This strategy sets out our plan for NSW that will guide NSW Government energy policy and programs into the future. It has 50 actions that are guided by the principles of accessibility, safety, health and wellbeing, transparency and trust, value of investment, and innovation. We are introducing new targets, incentives, practical resources, consumer protections and reforms. These will help everyone upgrade their homes and businesses to cut their energy use and access more affordable energy, boost their consumer protections, and help make our energy system safer and more reliable.

This strategy sets out our plan for NSW that will guide NSW Government energy policy and programs into the future.



# What are energy saving technologies?



**Energy saving technologies** are upgrades people can make in a home or business to lower their energy bills.







Energy saving technologies include:

**Energy generation and storage**, which refers to technologies like solar panels and batteries that can help households and small businesses generate and store their own energy, and control when and how energy is used.

**Energy efficiency**, which means using less energy to perform the same task. Energy-efficient homes and businesses use less energy to heat, cool, and run appliances and electronics. It can include using more efficient appliances that need less energy to run. It can also mean improving the thermal performance of a building with upgrades like insulation and draught proofing, so it needs less energy to heat and cool.

**Electrification**, which refers to replacing gas appliances, like hot water heaters, with electric alternatives that use less energy.

**Figure 1: Examples of energy saving technologies**

	Replacing inefficient space heating, cooling and hot water systems with more efficient alternatives that use less energy to run.
	Using rooftop solar panels to generate your own energy to reduce how much energy you need to buy from the grid and, in some cases, sell excess energy you generate back to the grid.
	Installing batteries, or using your electric vehicle's battery via a bidirectional charger, to store any excess energy your solar panels generate during the day. You can then use that energy in the evening when it is more expensive to buy.
	Using smart appliances and services to control how and when you use energy, avoid buying energy when it is most expensive and be rewarded for reducing your energy consumption.
	Replacing your gas appliances with electric alternatives.
	Retrofitting your house to improve its thermal performance through insulation, draught-proofing or double glazing.

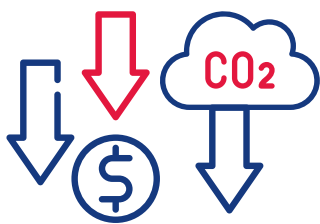
## Why this strategy is needed

### Saving money and cutting emissions

Across NSW, a typical household<sup>a</sup> could save on average \$2,000 a year and 1,100 kilograms of greenhouse gas emissions with energy saving technologies. Apartment residents could save on average \$1,300 a year and 410 kilograms of greenhouse gas emissions.<sup>1</sup>

Energy saving technologies are helping to transform our energy system. They make our electricity system cheaper for everyone, even those who can't make the upgrades themselves. Having more energy saving technologies means we will need less large-scale energy infrastructure in the future, which will mean lower costs for everyone.

Even small steps, like upgrading lightbulbs or reducing heating temperatures by one degree, when made by everyone, can make a big difference in reducing the costs of running our electricity system and lowering greenhouse gas emissions. A full home or business upgrade can save the NSW energy system an average of \$26,000 and 29 tonnes of greenhouse gas emissions per home or business.<sup>2</sup>



Across NSW, a typical household could save on average

**\$2,000**

a year and

**1,100 kilograms**

of greenhouse gas emissions with energy saving technologies

### Promoting efficient and healthy homes and businesses

Households and small businesses have more to gain from using energy saving technologies than bill savings and reduced emissions. Other benefits include:

- **Better health:** reduce indoor pollution by using electric appliances instead of unflued gas appliances inside homes or businesses. Houses with insulation use 19% less energy compared to uninsulated houses and have been attributed to less asthma inflammation and higher general health outcomes.<sup>3</sup>
- **Less damp and mould:** prevent illnesses associated with damp and mould with insulation, efficient heating, window sealing and window glazing.
- **Better comfort:** ensure homes and businesses stays cooler in summer and warmer in winter with more efficient heating and cooling, and better insulation, window sealing and window glazing.

This is especially important for Aboriginal and Torres Strait Islander people. We know they may be more vulnerable to health risks from climate as they may experience higher rates of chronic illness and inadequate housing. Aboriginal and Torres Strait Islander people living in remote communities can also often face inadequate access to health and energy infrastructure.<sup>4</sup>

<sup>a</sup> Savings are averages of houses and apartments across NSW for net savings after the cost of the upgrade. They differ from the case studies in section 3 because the case studies are for specific climate zones and have been adjusted for household and business size.

## Boosting energy reliability

Millions of homes and businesses across NSW are already helping boost the security and reliability of our energy system. The more we can coordinate the energy we produce and use with energy saving technologies, the greater our energy security and reliability. It also lowers our emissions and electricity prices – win, win.

The [Australian Energy Market Operator \(AEMO\)](#) foresees that by 2050, NSW households and small businesses could supply half the power needed in the evenings – when we need it most.<sup>5</sup> Solar, batteries and other flexible options like electric vehicle (EV) chargers are crucial for this integration. Home battery installations across Australia have started to surge, increasing by 21% in 2023 compared to 2022.<sup>6</sup>

AEMO found that the system could save \$4.1 billion worth of investment in the grid if we effectively use and coordinate small-scale batteries at the household and community level.<sup>7</sup> AEMO also forecasts that increases in household and small businesses electricity use – from using electricity to charge EVs and switching from gas to electric appliances – can be offset by the uptake of energy saving methods such as more energy efficient buildings, controllable technologies and behaviour change.

## Supporting the transition to a net zero energy system

We are committed to achieving net zero emissions to help reduce our cost of living and guarantee a safe and secure home for generations to come.

NSW is well on the way to transitioning our energy system thanks to:

- the [Electricity Infrastructure Roadmap](#) that sets out the path to build renewable power stations, large-scale storage, and transmission lines
- legislated whole-of-government action on climate change through the *Climate Change (Net Zero Future) Act 2023*
- the [Net Zero Plan](#), which is driving NSW to reduce emissions through initiatives that target electric vehicles, hydrogen, primary industries, big business, new technology, councils and organic waste.

This strategy will ensure households and small business don't miss out on the opportunities and benefits as we transition to a net zero energy system. It complements the national Consumer Energy Resources Roadmap that was released by Energy and Climate Change Ministers in July 2024.



Shayni Nadelovitz / DCCCEW

# Our vision for the future of household and small business energy use in NSW

Our vision for the long-term future of energy in NSW is that all households and small businesses can enjoy many benefits of energy saving technologies.

**Figure 2: Our vision for the future of household and small business energy in NSW.**





# Our objectives and principles

The 4 key objectives of this strategy are:

- 1 ensure everyone can benefit from and participate in the energy transition
- 2 keep energy bills as low as we can
- 3 maintain a stable and reliable energy system
- 4 help achieve net zero emissions.

To achieve our objectives, we are introducing targets, incentives, information, consumer protections and policy and regulatory reforms. You can find more details on these in the following chapters:

- **Chapter 4:** Setting targets to power our people and communities
- **Chapter 5:** Incentives to help households and small businesses cut their energy bills.
- **Chapter 6:** Practical resources for informed energy decisions.
- **Chapter 7:** Boosting your consumer rights and protections.
- **Chapter 8:** Reforms to put safety and reliability first and help transition to a new energy system.

The actions in the NSW Consumer Energy Strategy have been guided by the following principles:



## Accessibility

Everyone can benefit from the energy transition and can easily access the services and support they need to upgrade their homes and businesses.



## Safety

Households and businesses have confidence that their energy products and services are safe and meet high standards.



## Health and wellbeing

Energy technologies and services help to improve the health and wellbeing of NSW residents.



## Transparency and trust

Households and small businesses are provided with the tools and information they need to make informed choices and can trust that they will get what they pay for.



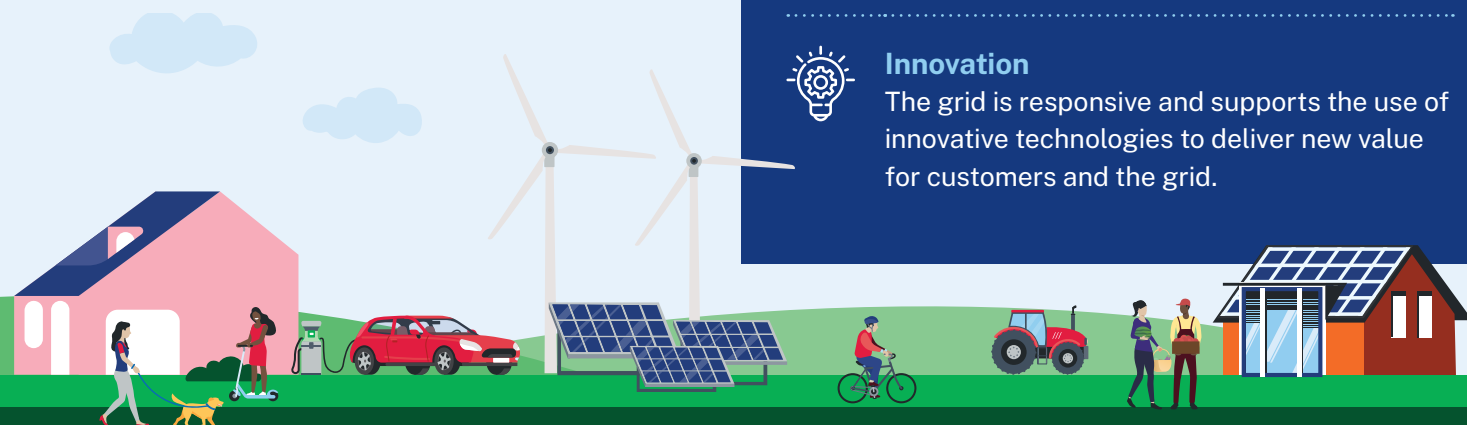
## Value for investment

We promote and support energy technologies and services that deliver net benefits for households, small businesses and the grid.



## Innovation

The grid is responsive and supports the use of innovative technologies to deliver new value for customers and the grid.



## Summary of key actions

This strategy contains 50 actions to help ensure everyone can benefit from energy saving technologies, regardless of whether they own or rent, live or operate in a house or unit, come from an urban or regional area, or have a lower or higher income. We have highlighted some of the key actions on this spread. The full list of actions can be found on [page 76](#).

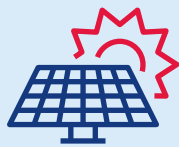
### Actions we've already started



Partnering with the Australian Government to invest

**\$175 million**

of new funding to make energy saving upgrades for approximately 24,000 social housing homes.



Delivering the new

**\$30 million**

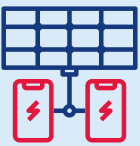
Solar for Apartment Residents (SoAR) program funded under the Commonwealth's 'Solar Banks' program, to help apartment residents benefit from solar.



Providing

**\$435.4 million**

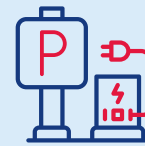
for annual energy bill rebates and debt relief in 2024-25.



Introducing new financial incentives to install batteries and join virtual power plants (VPPs) in 2024.



Reviewing and enhancing the existing NSW incentives for energy efficient appliances and equipment.



Investing

**\$200 million**

to support the roll-out of public EV charging stations across the state.





## New actions on the way



### Incentives

- Designing and delivering a new  
**\$238.9 million**  
**Home Energy Saver program**  
to increase the use of energy saving technologies.
- Designing and delivering a  
**\$5 million**  
community energy program to co-fund or partner with community and not-for-profit organisations on projects to help lower energy bills and emissions.
- Trialling solar and battery VPPs and electrification upgrades with select social housing premises.



### Practical resources for informed energy decisions

- Delivering new education materials and interactive web tools to help households and small businesses benefit from the energy transition, and funding community outreach programs.
- Introducing voluntary disclosure of home energy performance ratings at the point of sale or lease in 2025, beginning with trials, and reviewing the policy to inform when to transition to a mandatory scheme.



### Targets

- Setting new targets to increase uptake of key technologies, boost energy efficiency, increase compliance with critical safety standards and increase uptake of electrification by 2035 and 2050.
- Developing new systems to improve data so we can track the uptake of key technologies.



### Measures to boost consumer rights and protections

- Prohibiting retailers from automatically assigning customers to demand tariffs without their explicit informed consent.
- Introducing a right to install EV chargers in apartments so owners' corporations cannot unreasonably refuse EV chargers.
- Devoting  
**\$15.8 million**  
to boost safety and compliance with standards for energy saving technologies.



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# 3

## Households and small businesses will help power our future



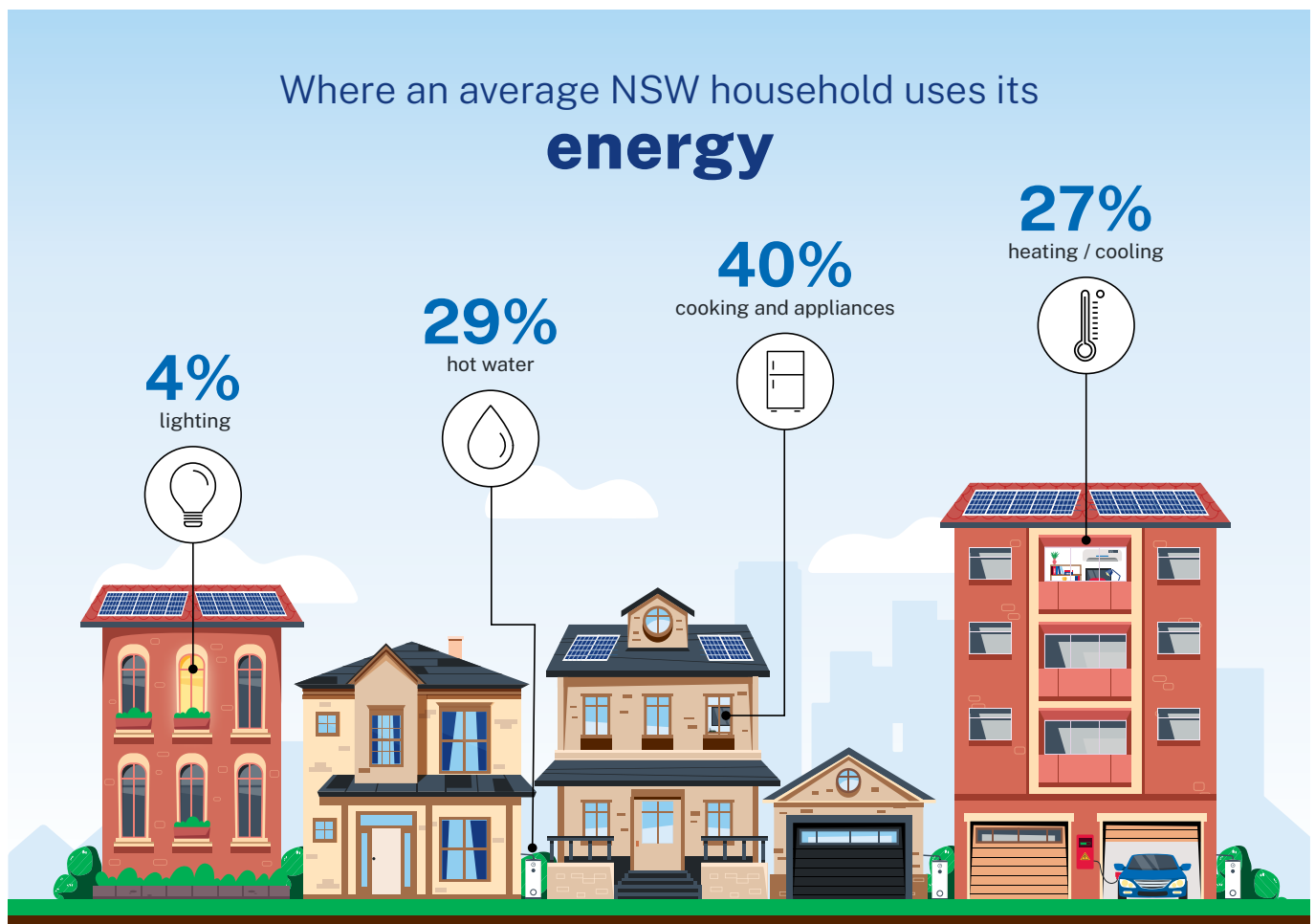


We want to ensure everyone in NSW has the tools and information to make informed decisions about upgrading their home or business. Households and small businesses will play a critical role in our energy transition. This chapter outlines why they are so important and how they can participate in and benefit from this transition. It includes case studies from across NSW.

## How households and small businesses buy and use energy is changing

Households and small businesses use around 26% of the electricity generated in NSW,<sup>8</sup> mainly for heating, cooling and hot water.<sup>9</sup>

**Figure 3: Breakdown of energy use in an average NSW home.**



Source: Energy Rating 2021 Residential Baseline Study for Australia and New Zealand for 2000 to 2040

However, the way households and small businesses buy and use energy is changing as our energy system transforms.

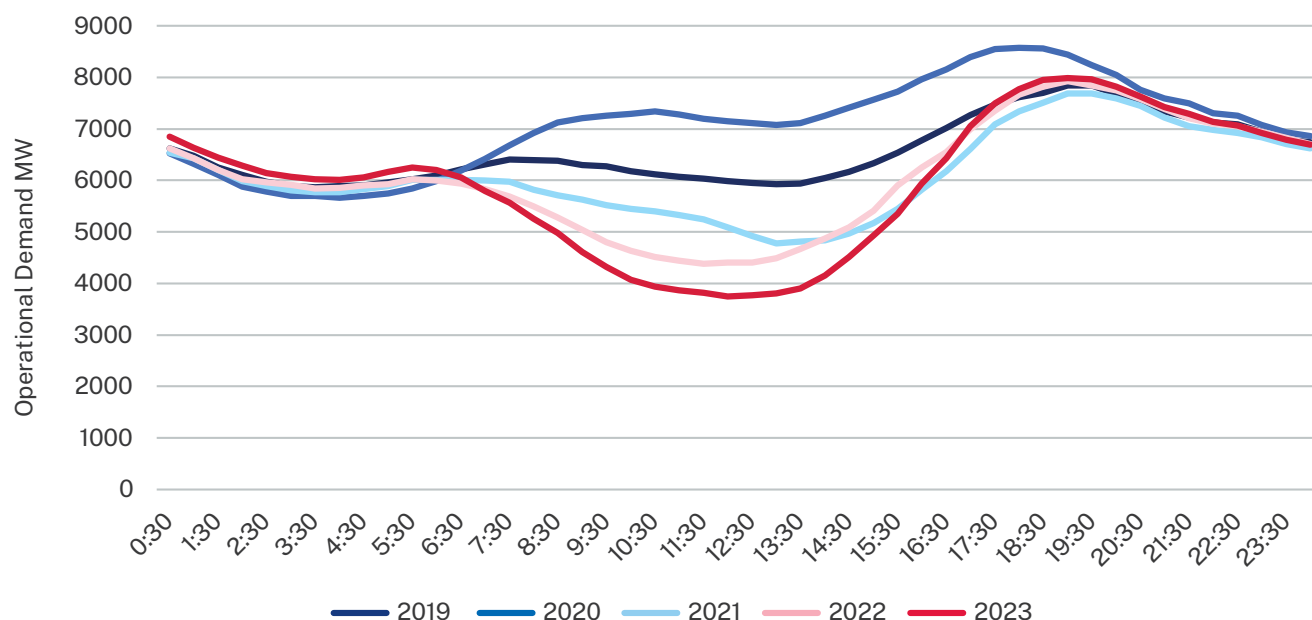
Over 943,000 NSW households and small businesses now have rooftop solar systems.<sup>10</sup> This is roughly a quarter of all NSW households, with a higher proportion in detached houses than in unit

buildings. Households with solar panels supplied 6% of the electricity generated in NSW in 2022-23.<sup>11</sup>

By generating and storing their own energy, and replacing appliances and equipment, businesses are improving the affordability, reliability, accessibility and sustainability of our energy system.

The amazing uptake in NSW rooftop solar continues to reduce the amount of electricity drawn from the grid in the middle of the day. When there is less demand on the grid wholesale electricity prices tend to fall, which is why they are typically lower during the day.

**Figure 4: Operational demand in NSW on the last Sunday in October for the last 5 years over a 24-hr period.**

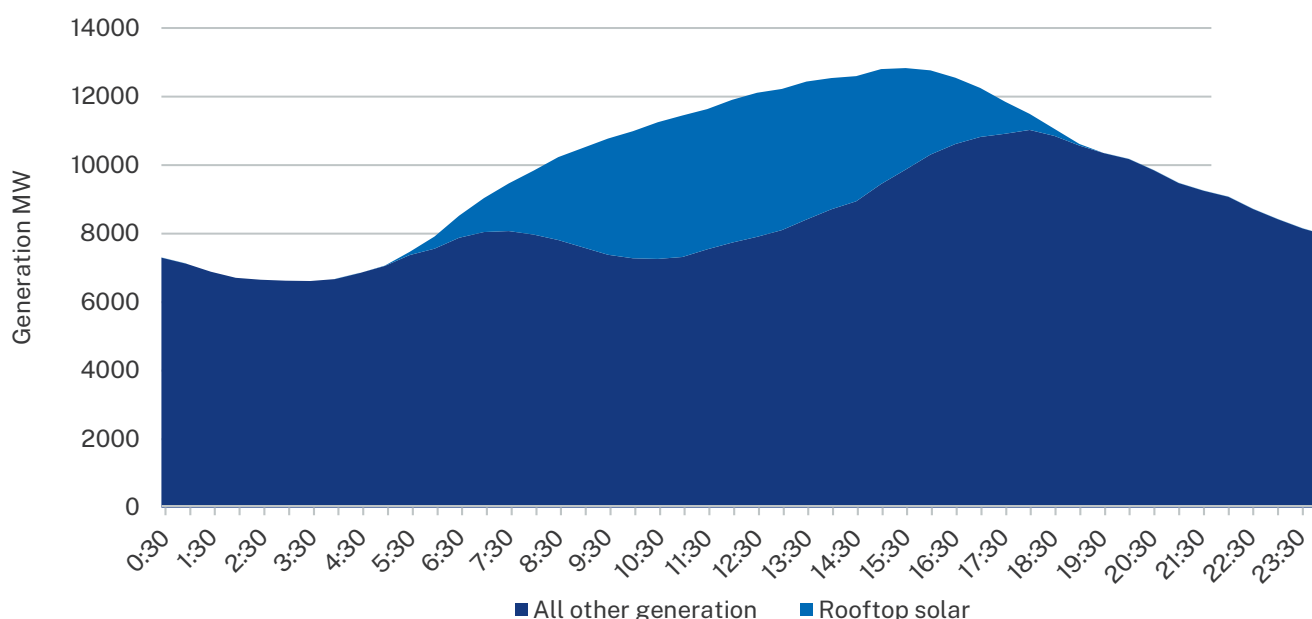


Source: AEMO (2024), NEM Data Dashboard, accessed by NSW DCCEEW via Neopoint

NSW usually uses the most energy in the evening, but the supply of cheap energy can be lower at this time because there is less solar when the sun goes down. This can push electricity prices up in these peak periods. Sometimes there can be more energy supplied on sunny days than what is needed, which can cause issues for the grid. That is why we want to encourage battery storage with solar, to save the cheap energy for when we need it most.

As households and small businesses add more storage and technologies that can be controlled and coordinated to the mix, we will be able to capture more of this midday solar energy and store it for use after the sun goes down.

**Figure 5: Rooftop solar generation in NSW on an average summer day in 2023.**



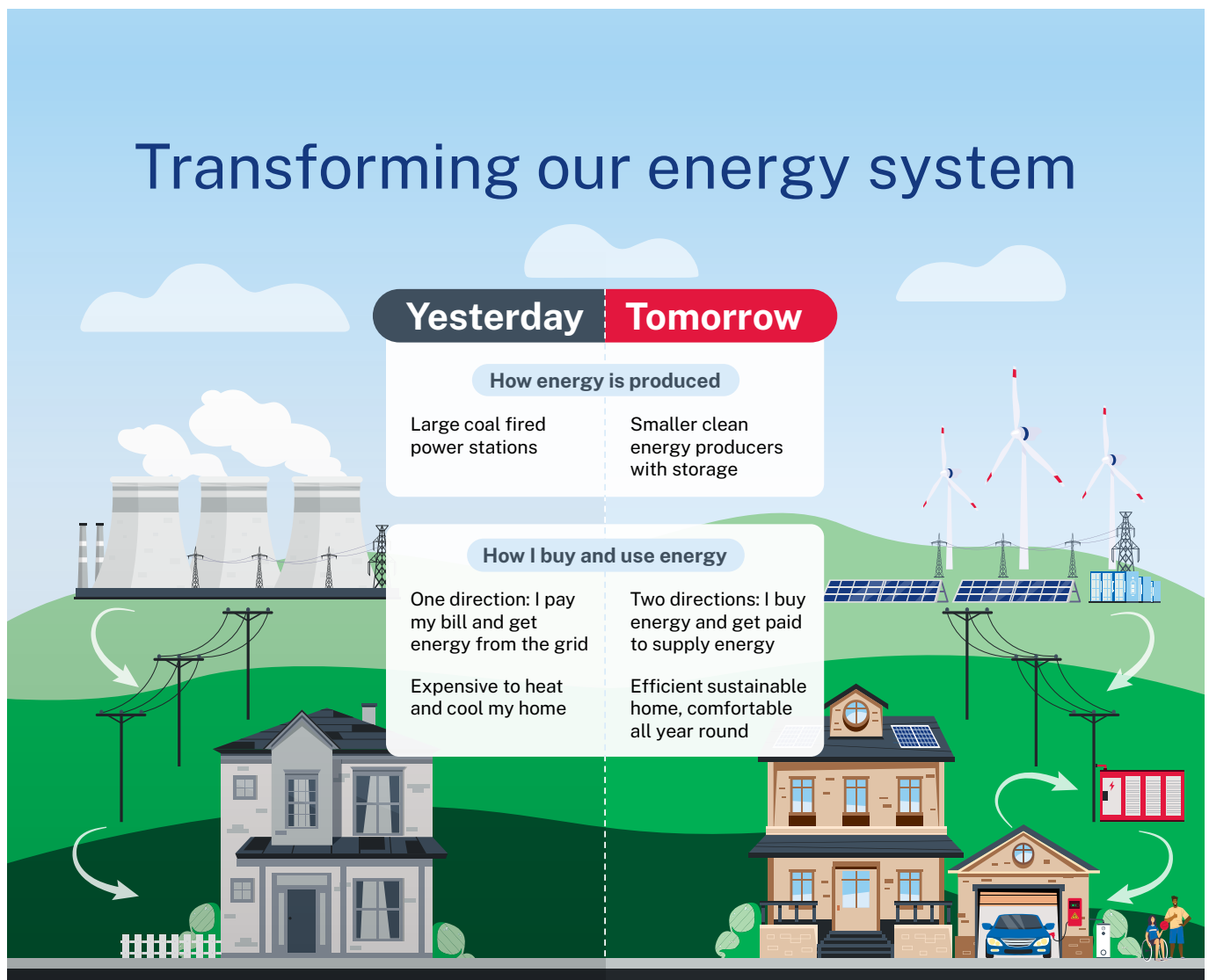
Source: AEMO (2024) NEM Data Dashboard, accessed by NSW DCCEEW via Neopoint, 27 June 2024

Over 50,000 NSW households now have battery storage systems which are helping to improve the reliability of our energy system and lowering costs for everyone. There are over 60,000 battery EVs on the road in NSW. As vehicle to grid technology becomes more common there is big potential for households and businesses to use their EVs' batteries to support the grid and lower costs for all.

When household and small business batteries are coordinated, they can contribute to providing what's called 'flexible' and 'top-up' supply to the grid at peak times. This means adding power back into the grid when we need it to improve reliability and lower prices. This process is called 'orchestration' or 'coordination' and both the customer and the grid can benefit.

Figure 6 shows how the growing role of households and small businesses is helping the NSW energy system evolve from a centralised, fossil fuel-dependent system towards a decentralised, consumer-driven future.

**Figure 6: How the energy transformation impacts households and small businesses.**



# Making everyone's home more efficient, comfortable and healthier

Australian homes are often hot in summer and cold in winter. We need to work together to make them more efficient but also more comfortable and healthier for everyone to live in across the seasons.

Simple upgrades and changes can help to reduce overall energy consumption, which lowers bills and emissions. The combination of insulation with efficient heating and cooling can save an average of \$260 a year in a house or \$160 in an apartment.<sup>12</sup> These can have the added benefit of improving temperature and comfort and reducing illnesses associated with damp and mould.

Energy efficiency upgrades are some of the easiest, cheapest and fastest ways to reduce household

energy costs and greenhouse gas emissions at the same time. The energy saving potential of efficiency upgrades is huge – for example, the energy needed to heat and cool a single 1.5-star home (based on the Nationwide House Energy Rating Scheme (NatHERS) energy efficiency star ratings) is the same amount used to heat and cool three 7-star homes.<sup>13</sup>

Making small behavioural changes can save substantial amounts of energy over time. Simple changes like washing clothes in cold water, choosing appliances and water fixtures with high star ratings, changing air conditioner settings, and closing curtains and doors to stop draughts can save households up to \$500 a year.

## Take control at home

Efficient energy use covers a range of different measures people can take in their home including:

### Sealing the property tight

An effective way to reduce energy consumption is to prevent energy being wasted as much as possible. A major source of energy waste is from warm (or cool) air leaking out of a building due to poor insulation, or gaps in doors, walls and windows. This is otherwise known as a poor 'thermal shell'.

Some of the most affordable methods for improving a home's thermal shell are:

- basic draught proofing including installing bottom door seals/guards or using door snakes
- plugging gaps in walls using silicone sealants or expandable foam fillers
- installing thick blinds or curtains to prevent heat loss.

More advanced methods for improving thermal shell include:

- ceiling and wall insulation to prevent heat loss and outdoor noise
- retrofit double glazing which installs an additional windowpane behind an existing one, reducing heat loss and outside noise
- new double glazing where windows and doors are removed altogether and replaced with custom-made double glazed windows and doors.



Sylvia Liber / DCCEEW



## Using efficient appliances

Another way to reduce energy demand is to use energy efficient appliances. Australian appliances are given energy efficiency star ratings out of 6 – the more stars, the less energy the product uses, and the more money is saved on energy bills. Households that need to upgrade an appliance can look for the most energy efficient models. Simple upgrades households should consider include:

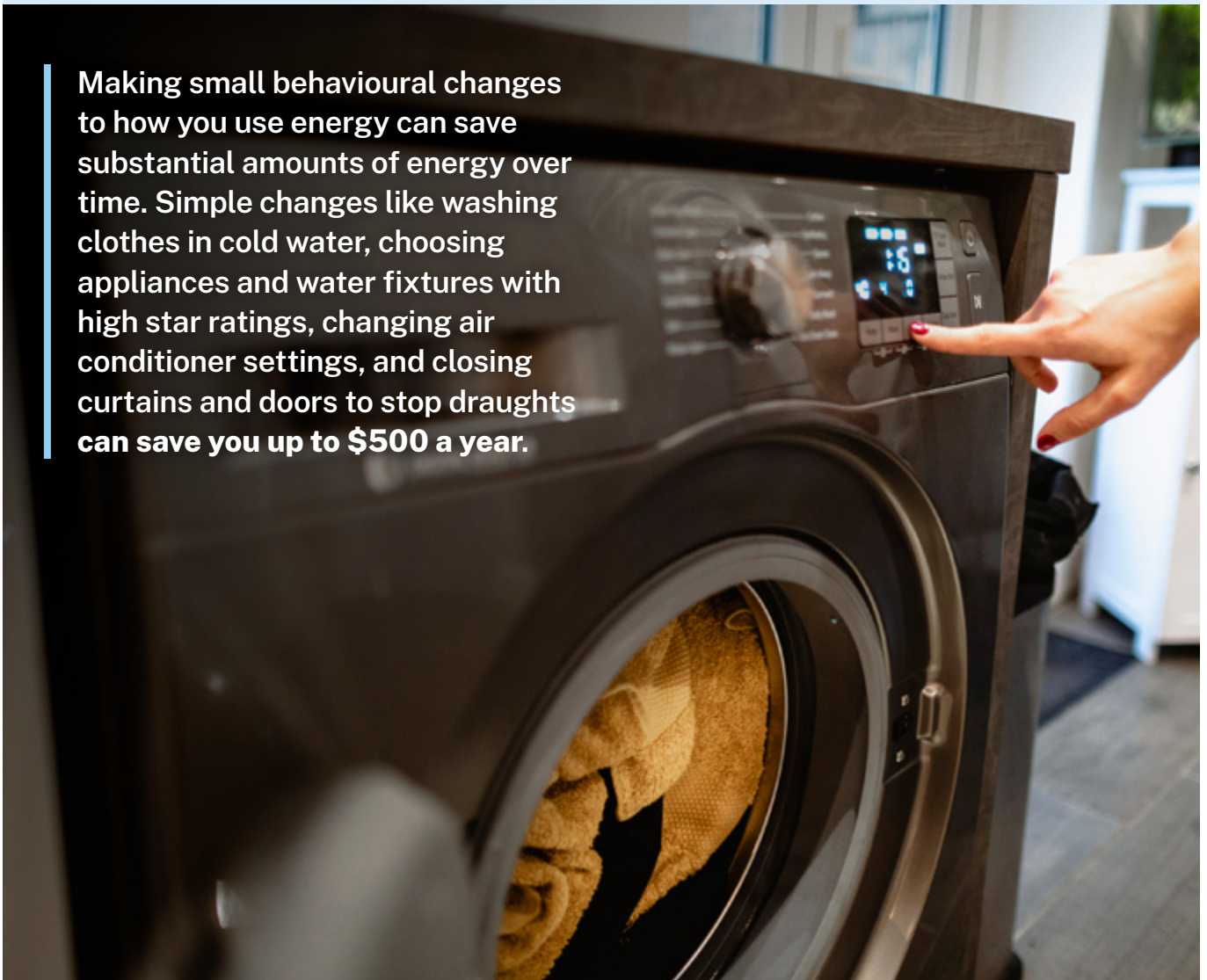
- converting existing lightbulbs to light-emitting diode (LED) lights which use 75% less energy than halogen bulbs<sup>14</sup>
- converting appliances that consume the most energy first, including fridges, reverse cycle air conditioners and televisions.

## Electrifying gas appliances

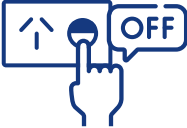












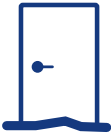


Converting gas appliances to electric can save a substantial amount on energy bills, as heating and cooling appliances and hot water systems, often gas-powered, tend to be the two highest energy drainers in a home. Additionally, gas products attract fixed gas supply charges.

Electrification also benefits residents by avoiding health impacts for those with asthma or other respiratory illnesses. See [page 42](#) for more information on the benefits of electrification.

**Making small behavioural changes to how you use energy can save substantial amounts of energy over time. Simple changes like washing clothes in cold water, choosing appliances and water fixtures with high star ratings, changing air conditioner settings, and closing curtains and doors to stop draughts can save you up to \$500 a year.**



**Figure 7: Top tips for saving energy and money in your home.**

Top tips to save you energy and money around your home				
Anytime	In summer	In winter	In the laundry/ bathroom	In the kitchen
 <p><b>Switch off appliances</b> at the wall when not using them</p>	 <p><b>Use your fan first</b></p>	 <p><b>Set heating</b> between 18°C and 21°C</p>	 <p><b>Wash clothes in cold water</b></p>	 <p><b>Set your fridge</b> between 3°C and 4°C</p>
	 <p><b>Set air conditioning</b> between 23°C and 26°C</p>	 <p><b>Use a ceiling fan</b> on the winter setting to move warm air around your home</p>	 <p><b>Fix leaking taps</b></p>	<p><b>Set your freezer</b> between -15°C and -18°C</p> <p><b>Clean door seals and replace if worn</b></p>
	 <p><b>Close doors, windows and blinds</b> during the day</p>	 <p><b>Close doors, windows and blinds</b> at night to keep the heat inside your home</p>	 <p><b>Have shorter showers</b></p>	
 <p><b>Turn off lights</b> when you leave a room</p>	 <p><b>Open windows at night</b> to let the cool breeze in</p>	 <p><b>Use door snakes</b> to stop draughts</p>	 <p><b>Hang clothes to dry</b></p>	 <p><b>Use lids on pots</b> to speed up cooking</p>

# Case studies: How households and small businesses are cutting their energy bills

## CASE STUDY 1

### The Lee family home

The Lee family live in a 30-year-old, 4-bedroom house in Dubbo. When their home's old gas appliances have needed replacing, they have chosen to save money on their energy bills by replacing them with energy-efficient electric alternatives.

After replacing their old gas heater with an energy-efficient air-conditioner, their gas water heater with an electric heat pump and their gas cooktop with an electric cooktop, they were able to disconnect their gas connection and avoid having to pay an annual gas supply fee. By upgrading their home's insulation, they have made their

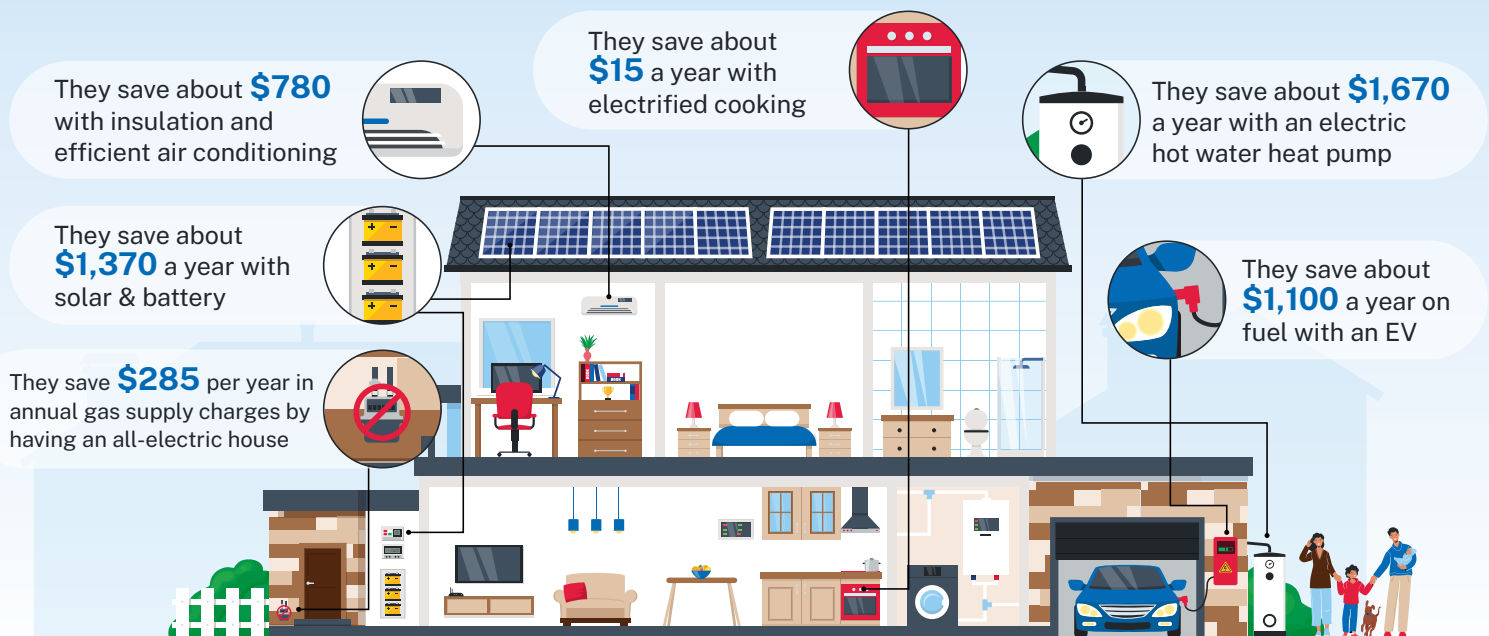
air-conditioner more energy efficient, not only saving money, but making their home cooler in the summer and warmer in winter.

They have also installed a solar and battery system which lets them generate and store their own energy and use this energy when it delivers the most financial benefit. This includes using solar energy to charge their EV.

With these upgrades, the Lees are now saving \$4,125 a year on their home energy bills (not including the fuel cost savings from their EV).

**Figure 8: How the Lee family are saving on their annual energy bill.**

## How the Lee family saves money with an energy efficient house



Source: Common Capital modelling for NSW Department of Climate Change, Energy, Environment and Water, 2024

**CASE STUDY 2****Jane's apartment**

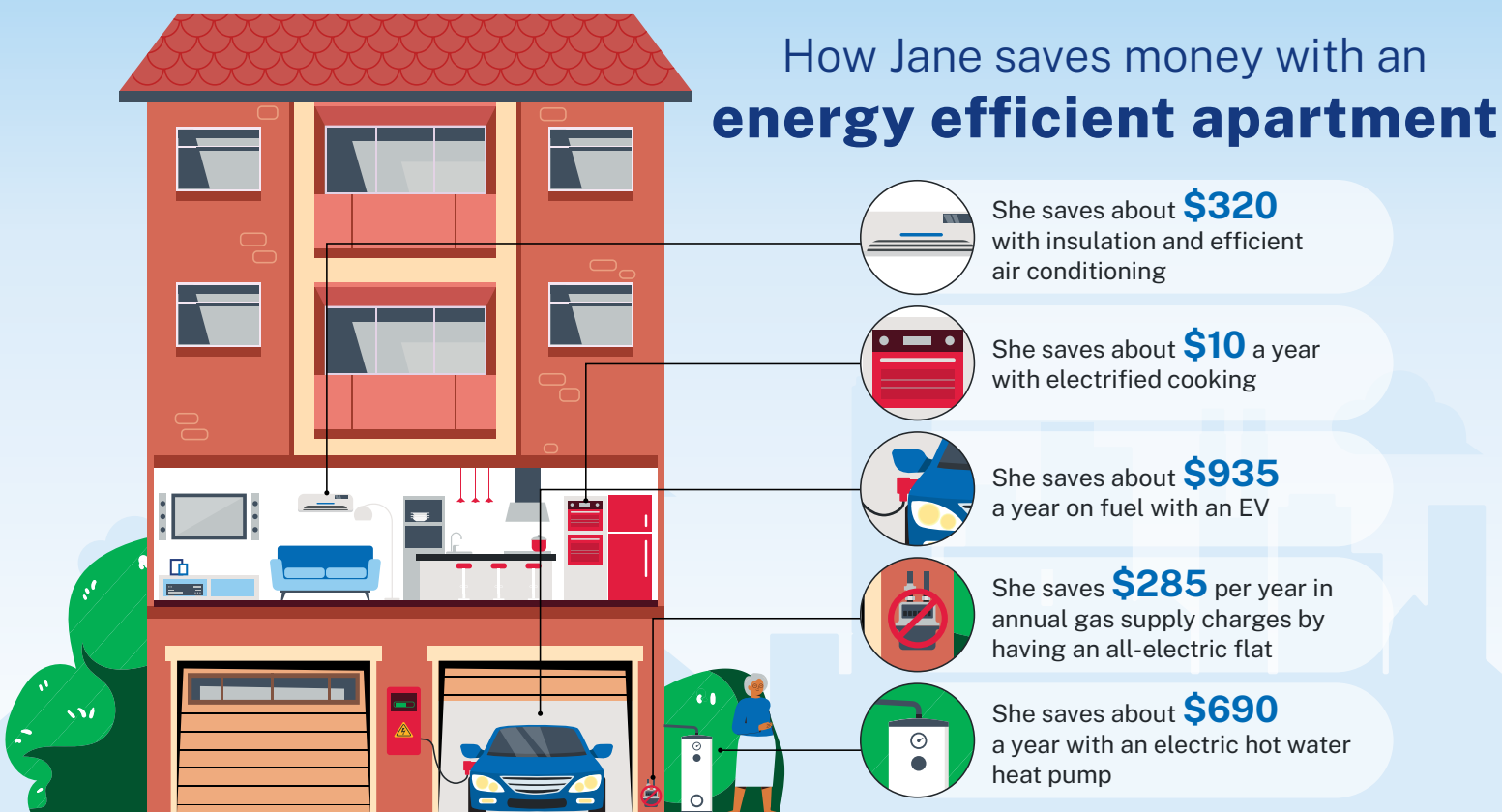
After Jane down-sized to a 2-bedroom apartment in Western Sydney, her gas water heater needed replacing. Jane decided to replace it with an energy efficient electric heat pump alternative, saving her around \$690 a year on her energy bills.

When her gas heater needed replacing, she decided to install an energy efficient air conditioner to heat and cool her apartment. Jane also organised

a shared upgrade to her building's wall and ceiling insulation, making her apartment's temperature much more stable, even during Western Sydney's hot summers.

With these changes, Jane is now saving \$1,305 a year on her energy bills (not including the fuel cost savings from her EV).

**Figure 9: How Jane is saving on her annual energy bill.**



Source: Common Capital modelling for NSW Department of Climate Change, Energy, Environment and Water, 2024



### CASE STUDY 3

## Priya and Dev's cafe

Priya and Dev recently purchased a cafe in Newcastle and wanted to reduce its energy costs and lower its emissions.

Priya first decided to see if they were paying a competitive rate for their energy. She uploaded twelve months of the cafe's bills to the Energy Made Easy website and found they could be saving about \$1,030 a year by switching to a more competitive offer.<sup>15</sup>

Dev wanted to see how efficient their business was and found a local provider to conduct an energy audit. The audit found that the cafe's air conditioner was about to reach the end of its life, its hot water system had a few years left, its substantial lighting was inefficient, but its electric induction cooking system was best in class.

Priya and Dev arranged to swap out all the lights in the cafe for LEDs, which they organised through a local electrician, saving them \$250 a year. When it was time to replace their air conditioner, they invested in a new efficient split air conditioner system to heat and cool the café, using the incentives under the Energy Security Safeguard. This upgrade is saving them \$740 a year.

Priya and Dev also brought forward the replacement of their hot water system and replaced it with an efficient hot water heat pump, saving them \$555 a year. Once the hot water was electrified, Dev arranged to have their gas supply cut off, saving them an additional \$285 a year on fixed gas connection fees.

**Figure 10: How Priya and Dev are saving on their cafe's energy bill.**

## How Priya and Dev saved money with an energy efficient cafe

They save **\$285** in annual gas supply charges by having an all-electric cafe

They save about **\$1030** per year by switching to the most competitive retail electricity plan

They save about **\$740** per year with efficient air conditioning

They save about **\$250** per year with LED lighting

They save about **\$555** per year with an electric hot water heat pump



Source: NSW Department of Climate Change, Energy, Environment and Water analysis, 2024



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# 4 Setting targets to power people and communities





We know major increases in energy saving technologies are needed for NSW to get to net zero emissions by 2050 at the lowest possible cost.<sup>16</sup>

Every small step taken by a home or business, whether it's installing solar panels or using energy-efficient appliances, can help save on energy bills and get us closer to our goal of a sustainable energy future.

We will set and track targets for NSW to:

- ensure we are on track to meet this strategy's objectives and help us set or adjust our policies and incentives to get to where we want to be
- help businesses to attract investment by sending a signal about where we are heading and enable them to plan for increases in demand in energy saving technologies
- complement our existing targets to achieve net zero emissions by 2050 and our programs to save energy and reduce peak demand across NSW.

The Australian Energy Market Operator set out its views on the optimal uptake of energy saving technologies across the national electricity market in its 2024 Integrated System Plan.<sup>17</sup>

This chapter outlines how we will set new targets to increase uptake of key technologies, boost energy efficiency, increase compliance with critical safety standards and increase uptake of electrification for 2035 and 2050.



Jessie Lindsay / DCEEW

Matt Beaver / DCEEW



## We're setting the first ever targets for household and small business solar and battery systems

Increasing the number of households and small businesses with access to rooftop solar and batteries, and promoting a more equitable distribution across renters, apartments and rural areas, is critical to a successful energy transition. The combination of rooftop solar with a battery is one of the most effective ways to keep energy bills down and lower overall system costs for everyone.

The NSW Government has been working hard to transition government assets like schools<sup>18</sup> and hospitals<sup>19</sup> to more renewable energy sources, as well as supporting industry and large businesses with their energy saving upgrades.

As a part of the strategy, the NSW Government is setting a target of 1 million households and small businesses having access to both a rooftop solar and battery system by 2035, rising to nearly 1.5 million by 2050.<sup>b</sup>

We are also going to support customers connecting their solar and battery systems to a virtual power plant (VPP) by adopting a new target for 3,400 megawatts (MW) of VPP capacity in NSW by 2035 and 10,000 MW by 2050.

These targets align with the amount of rooftop solar, battery storage systems, and VPP participation projected in the Step Change scenario in AEMO's Integrated System Plan.<sup>20</sup>

With this strategy, we are increasing the number of electrical safety inspectors and introducing a new digital compliance system. We'll also set compliance targets to ensure all energy-saving technologies meet high safety and grid stability standards, protecting both consumers and workers while maintaining reliability.

### ACTION 1

Introduce new targets for:

#### Solar and batteries:

**1 million** NSW households and small businesses having access to rooftop solar and battery systems by 2035 and **1.5 million** by 2050

#### Virtual power plants:

**3,400 MW** of virtual power plant participation by 2035 and **10,000 MW** by 2050

#### Safety:

Achieving **100%** compliance with safety standards for energy saving technologies.

<sup>b</sup> Targets of 1 million households and small businesses by 2035 and 1.5 million by 2050 are equivalent to 23% and 34% of the 2024 projections of total numbers of households and small businesses in 2035 and 2050.



## More targets are still to come

In addition to our new target for solar and batteries, we are committed to setting additional household and small business targets to support the uptake of energy efficiency and electrification by 2035 and 2050.

We are working to improve data on the energy performance of existing homes, and, if possible, will align the target with the Nationwide House Energy Rating Scheme for existing homes (NatHERS whole of home) once the expanded national framework is developed.

These additional targets will provide a clear measurable framework to help guide policy and ensure we can achieve our objectives. We want to set targets on improving existing home energy efficiency performance as soon as possible and we are working to collect data on the existing housing stock.

We'll set targets to improve the energy performance of existing homes, so that they're cheaper to run and more comfortable to live in.

Because of the benefits of electrification, we'll set targets to electrify more of our homes and businesses, as electricity will increasingly come from affordable renewable sources like wind and solar.

One of the Government's objectives for this strategy is to ensure access to energy saving technologies and services for all households and small businesses. As better data becomes available, we will set sub-targets to help ensure those who have traditionally had less access to energy-saving technologies, like low-income households, apartment residents, and renters can benefit from the energy transition.

### **ACTION 2**

**Set targets for 2035 and 2050 to achieve significant improvements in the energy performance of existing homes in NSW.**

### **ACTION 3**

**Set targets for 2035 and 2050 to increase electrification of homes and small businesses in NSW.**

## We will monitor and report on progress towards targets

Targets are only effective if they can be measured and tracked. The NSW Government will establish new data monitoring systems to collect the data we need to report on our progress towards meeting these targets. We are committed to publicly releasing data on how we are tracking against these targets.

### **ACTION 4**

**Establish a monitoring and reporting framework to collect and publish data on how we are tracking towards meeting these targets.**



# How we will achieve our targets

The targets we are committing to in the NSW Consumer Energy Strategy are ambitious but achievable. To ensure we can deliver on these targets and our objectives, this strategy sets out new incentives, practical resources and reforms to support households and small businesses to participate in and benefit from the energy transition. Some of these new actions are highlighted in the table below and are outlined in more detail in the following chapters.

These actions, combined with existing incentives, practical resources and reforms the NSW Government already has in place, will help ensure we deliver on these new targets.

**Table 1: Actions in the NSW Consumer Energy Strategy that will help us achieve our targets**

Targets	Actions in this strategy to help us achieve these targets
1 million NSW households and small businesses having access to rooftop solar and battery systems by 2035 and 1.5 million by 2050	<ul style="list-style-type: none"> <li>• Introduce a new Home Energy Saver program to encourage investment in activities that reduce bills and emissions.</li> <li>• Introduce new incentives for households and businesses to install batteries through our Peak Demand Reduction Scheme (PDRS).</li> <li>• Deliver new \$30 million Solar for Apartment Residents program to help apartment residents reduce their bills by investing in solar energy.</li> </ul>
3,400 MW of virtual power plant participation by 2035 and 10,000 MW by 2050	<ul style="list-style-type: none"> <li>• Introduce new incentives for households and businesses to join VPPs through our PDRS.</li> <li>• Pilot the roll-out of solar and battery VPPs with selected social housing households.</li> </ul>
Achieving 100% compliance with safety standards for energy saving technologies	<ul style="list-style-type: none"> <li>• Boost compliance with technical and safety standards by increasing the number of electrical safety inspectors.</li> <li>• Introduce a new digital smart compliance system to support monitoring and compliance with a range of standards.</li> <li>• Introduce new support for industry training and investigate new credentials to respond to training gaps.</li> <li>• Reviewing the NSW electricity and gas safety framework.</li> </ul>
Energy efficiency target	<ul style="list-style-type: none"> <li>• Introduce a new Home Energy Saver program to encourage investment in activities that reduce bills and emissions.</li> <li>• Introducing voluntary disclosure of home energy performance ratings at the point of sale or lease in 2025.</li> <li>• Reviewing the voluntary rating scheme to inform when to transition to a mandatory scheme.</li> <li>• Investigate introducing minimum energy efficiency performance standards for rental housing, starting with pilots.</li> <li>• Review the ESS and PDRS by 2025 and consider options to enhance the schemes to help deliver the NSW Consumer Energy Strategy targets and objectives including home and small business efficiency upgrades.</li> <li>• Make energy efficiency upgrades to approximately 24,000 social housing homes.</li> </ul>
Electrification target	<ul style="list-style-type: none"> <li>• Introduce a new Home Energy Saver program to encourage investment in activities that reduce bills and emissions.</li> <li>• Review the ESS and PDRS by 2025 and consider options to enhance the schemes to help deliver the NSW Consumer Energy Strategy targets and objectives including electrification upgrades.</li> <li>• Pilot the roll-out of electrification with selected social housing households.</li> <li>• Develop a NSW Gas Decarbonisation Roadmap.</li> </ul>

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# 5 Incentives to help households and small businesses cut their energy bills





The best way to reduce energy bills is by investing in energy saving technologies like rooftop solar, batteries, insulation, energy efficient appliances and electrification.

These upgrades can provide households and small businesses with ongoing energy bill savings which reduce cost of living pressures. They also help reduce greenhouse gas emissions and can help improve the security and reliability of our energy system.

Households and small businesses across NSW are already investing in rooftop solar, batteries and other energy saving technologies. They are seeing the benefits of lowered energy bills and reduced emissions and are playing an active role contributing to our transition to a net-zero future.

There are more than 1 million free-standing homes in NSW without rooftop solar<sup>21</sup> and less than 2% of apartments in NSW have solar. There is a significant opportunity for more NSW households and small businesses to access these savings.

We understand that many households, particularly low-income households, renters, social housing residents, people in apartments and small businesses find it difficult to install and benefit from the savings that energy saving technologies can provide.

Energy saving technologies can require significant upfront costs for households and small businesses, which can act as a barrier to investment and delay the broader community benefits.

This chapter outlines our plans to deliver new incentives and supports to help supercharge the uptake of these energy saving technologies and ensure all NSW residents and small businesses can access the benefits these new technologies can provide.



## Delivering new incentives for the community

The NSW Government is committed to helping the community access energy saving technologies to unlock greater bill savings and accelerate the transition to a net zero energy future.

We have allocated \$238.9 million over 4 years to develop and deliver Home Energy Saver, a new program to help households cut their energy bills, reduce cost of living pressures, reduce emissions and support grid reliability.

This new program will provide targeted financial support to eligible customers to help cut energy bills by encouraging investment in energy saving technologies.

This new program will be designed to complement existing support available through the Energy Savings Scheme (ESS), Peak Demand Reduction Scheme (PDRS) and Australian Government's recently announced Household Energy Upgrades Fund, as well as existing finance products available through the private market.

We will work with industry and consumer stakeholders on the design of this new program to ensure funding reaches consumers who have typically been unable to access financial support available through existing programs. This will include relevant Commonwealth and state agencies (including from other jurisdictions), consumer and community advocacy groups, energy technology installers, distribution and transmission network service providers, energy retailers, industry associations, academia and other interested stakeholders.

We will commence stakeholder consultation on the design of the Home Energy Saver in the second half of 2024 with the program to be launched in the second half of 2025.

### **ACTION 5**

**Design and deliver a new Home Energy Saver program to help customers cut their energy bills and reduce their emissions.**

## Investing in community action

The NSW Government will help deliver new community projects to help lower bills, reduce emissions and support communities in the energy transition.

We want to enable local communities to benefit from energy saving products and services such as energy efficiency upgrades and electrification at scale, virtual power plants and microgrids.

Our new \$5 million community energy program will co-fund or partner with community and not-for-profit organisations on projects to help lower energy bills and emissions.

In addition to this initiative, and to kick start this work, we have boosted the NSW Government's commitment to the Reliable, Affordable, Clean Energy (RACE) for 2030 project. RACE for 2030 is a Cooperative Research Centre with several NSW-based partners, including the NSW Government. RACE for 2030's research aims to help

reduce energy costs, cut carbon emissions and increase customer energy flexibility to allow more renewables in the grid and improve energy reliability.

The NSW Government is investing \$1.8 million for a new Race for 2030 project to support the delivery of this strategy. This funding will be used for new trials and research that will inform our policies and programs.

### **ACTION 6**

**Design and deliver a new \$5 million community energy program.**

### **ACTION 7**

**Invest \$1.8 million with Race for 2030 to support the NSW Consumer Energy Strategy, including new trials and research to inform our policies and programs.**



## Continuing to improve our existing incentive schemes

The NSW Government already runs 2 schemes which provide incentives to households and businesses to invest in energy saving technologies: the ESS and the PDRS.

We have recently expanded these schemes to include financial support for batteries and VPPs, to make it easier for households and businesses to cut their energy use, lower their bills and make energy more affordable for everyone.

### What is the Energy Savings Scheme?

The ESS provides financial incentives for upgrades that provide year-round energy savings for households and businesses across NSW. The ESS is NSW's largest energy efficiency program and has been operating since 2009.

### What is the Peak Demand Reduction Scheme?

The PDRS provides financial incentives for upgrades that reduce households' and businesses' electricity demand at peak times. This helps lower the cost of electricity and reduces the risk of power outages in NSW. The PDRS started in 2022.

The ESS and PDRS are part of the broader Energy Security Safeguard which aims to improve the affordability, reliability and sustainability of energy. The Safeguard also creates incentives to produce renewable fuels through the Renewable Fuel Scheme (RFS). Both the ESS and PDRS are legislated to operate until 2050.

### How much can you save with the ESS and PDRS?

You can find out how much the ESS and PDRS could save you on the cost of installing an eligible energy saving upgrade by using the savings estimators at <https://www.energy.nsw.gov.au/estimate-certificates>. This calculator will help show you the potential incentives you could get for different makes and models of air conditioners, pool pumps, heat pump water heaters and batteries. Using this information, you can get the best value from Accredited Certificate Providers when they provide quotes, by making sure they pass on as much of the incentive as they can.



The following table shows the potential incentives you could receive for the main household and small business energy saving upgrades available in the ESS and PDRS.

The ESS and PDRS are market-based schemes where the approved suppliers set their own commercial terms, including the locations that they

deliver their services in. This means the incentive values can change over time based on the size and efficiency of products, and the price of the tradable certificates on which the schemes are based. These are estimated values and households and businesses should check with the installers about the potential incentive.

**Table 2: Potential incentives for main energy saving technologies in ESS and PDRS.**

Energy saving upgrade	Potential incentive <sup>c</sup>
Replace an existing electric water heater with an (air source) heat pump water heater	\$400 – 675
Replace an existing electric water heater with a solar (electric boosted) water heater	\$525 – 900
Replace an existing gas water heater with an air source heat pump water heater	\$175 – 300
Replace an existing gas water heater with a solar (electric boosted) water heater	\$275 – 475
Install a new 13.5 kilowatt hour (kWh) Battery Energy Storage System (BESS)	\$1,600 – 2,400
Sign up a 13.5kWh BESS to a VPP	\$250 – 400
Get a 5-star pool pump to replace an old one, or to add a new one	\$150 – 275
Install a new 6 kilowatt (kW) split system air conditioner in Sydney	\$325 – 550
Install a new 6kW split system air conditioner in Bathurst	\$625 – 1000
Replace an air conditioner with a 6kW split system in Sydney	\$425 – 725
Replace an air conditioner with a 6kW split system in Bathurst	\$800 – 1300

In May 2024, the NSW Government committed to expand the PDRS to include incentives for household batteries, making them more accessible and affordable for NSW residents and businesses.

Installing more batteries across NSW will help homes and businesses maximise the use of the solar energy they generate, cut the cost of electricity bills, make the grid more reliable and stable and reduce our reliance on fossil fuels during periods of peak demand.

**From 1 November 2024, homes and businesses with solar will be able to receive:**

An estimated **\$1,600 to \$2,400** off the up-front installation cost of eligible batteries

An additional **\$250 to \$400** for connecting the battery to a VPP.<sup>d</sup>

<sup>c</sup> Actual incentives will depend on the size and efficiency of the product, price of certificates at the time, way that suppliers price their offer, and location.

<sup>d</sup> Incentives may be more than this for a bigger battery, or less for a smaller battery.

## What is a virtual power plant?

VPPs are networks of energy saving technologies. They can include solar, batteries and other devices that can be remotely controlled to use or release power at certain times to save money for customers and the grid. They bring together lots of small amounts of energy generated through individual solar or battery systems to create a large amount of energy which can then be used to provide power for others when demand is high.

Household customers with eligible energy saving technologies can sign up to a VPP and receive financial benefits for providing energy into the grid when it's needed most.

The above battery incentives are in addition to existing incentives under the ESS and PDRS for high efficiency air conditioners, hot water heaters, pool pumps and other energy saving technologies.

The NSW Government adds new energy saving technologies as they become commercially available and modifies or removes them as markets develop. This could include extending the scheme to incorporate EV batteries that can help to charge a home or business in the future.

The NSW Government reviews the ongoing suitability and design of the schemes every 5 years. The next review is due in 2025.

As part of this review, the NSW Government will consult in the second half of 2024 on potential changes to enhance the effectiveness of these schemes and potential reform opportunities to help deliver the targets set out in this strategy.

We are already working to improve the reach of the scheme through the Safeguard Acceleration Program, particularly to improve access for regional households and small businesses. Our review will consider additional opportunities to enhance the reach of the scheme to improve access for households and small businesses.

### **ACTION 8**

**Deliver new incentives for households and businesses to install batteries and join VPPs through the PDRS.**

### **ACTION 9**

**Review the ESS and PDRS by 2025 and consider options to enhance the schemes to help deliver the NSW Consumer Energy Strategy targets and objectives.**





## Driving change in EV charging

The transition from fuel-consuming vehicles to electric vehicles will be critical in reducing household energy costs and supporting decarbonisation across NSW. EVs have huge benefits for consumers, including reduced running costs, much lower emissions, and the capacity to act as home batteries if using bidirectional chargers.

NSW is investing almost half a billion dollars from 2021-22 onwards to incentivise the uptake of EVs and reduce barriers for the transition to EVs, as part of its [EV Strategy](#). We are working to make NSW the easiest place to own and drive an EV in Australia, with an almost \$200 million investment in public charging infrastructure, including \$149 million to develop a world-class fast charging network across NSW and \$50 million to co-fund destination, commuter carpark and kerbside charging.

Our EV fast charging grants program will add approximately 280 fast and ultra-fast charging stations across NSW. This will ensure that fast charging stations are no more than 5 km apart in metropolitan areas and no more than 100 km apart on major roads and highways across NSW.

This will support regional residents and businesses to share the benefits of EVs by improving their access to charging infrastructure and encouraging more city-based EV drivers to travel to regional areas, boosting local tourism.

Right now, we are calling on site operators and owners to register their interest in [hosting public EV fast charging sites](#). We will then create connections with charging providers that apply for funding to install and operate EV charging stations at identified sites. We're particularly interested in optimal zones shown on the [interactive NSW EV fast charging master plan](#).

We are helping develop charging infrastructure in or near commuter car parks. This encourages drivers to use public transport as part of their commute and takes vehicles off congested roads.

We are co-funding destination charging infrastructure at regional tourist locations, such as motels, restaurants, caravan parks, wineries, and other points of interest through our [\\$20 million Electric vehicle destination charging grants](#).



We are also investing \$10 million to assist eligible NSW apartment buildings by co-funding the assessment and installation of EV infrastructure upgrades. This funding is available through [our EV ready buildings grant](#).

Fleet buyers are important participants in the vehicle market in NSW, making up a large portion of annual new vehicle sales. They often drive more kilometres and have higher expenses for fuel and maintenance when compared to vehicles used privately. This represents a huge opportunity for fleet operators to reduce their emissions and save around \$3,100 in running costs per vehicle per year by switching to EVs.

This is why we are investing \$105 million to help NSW private businesses, not-for-profits and local councils to accelerate their transition to EVs.

Finally, we will investigate new incentives and other support for EV owners to install smart or bidirectional chargers in their properties. More information on the benefits of smart and bidirectional EV chargers is available in chapter 8 of this strategy.



Sylvia Liber / DCCEE

## ACTION 10

**Investigate incentives and other support for EV owners to install and use smart or bidirectional chargers.**

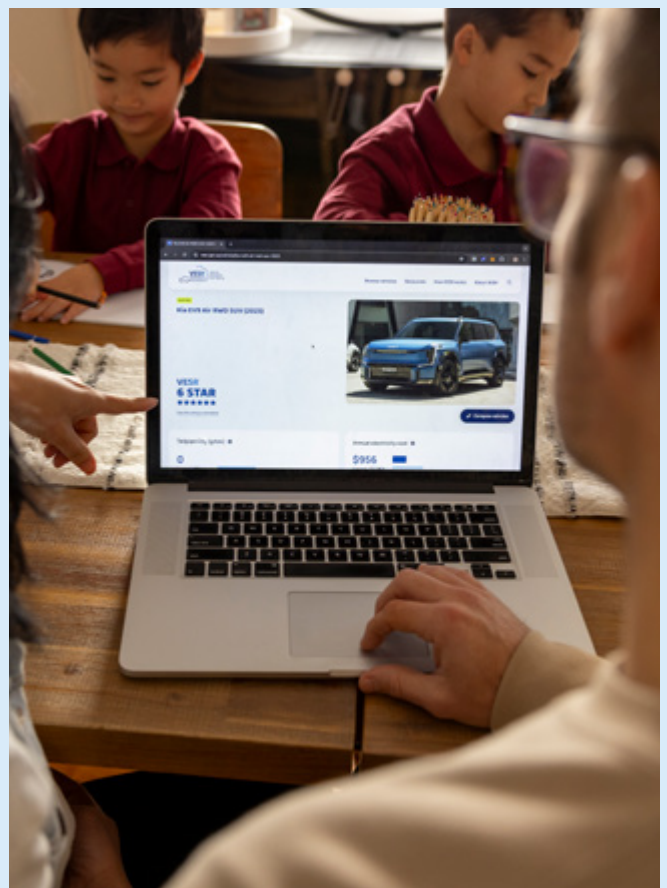
## Saving money with an EV

The NSW Government has launched a new [Vehicle Emissions Star Rating website](#) to help vehicle buyers make an informed decision about the running costs and environmental impact of their next vehicle purchase.

The website features a simple 6-star rating system which allows consumers to compare the carbon dioxide emissions of new and second-hand cars, utes, and vans. The more stars a vehicle has, the lower the vehicle's CO<sub>2</sub> emissions.

The website also provides estimates of the running costs of different vehicles. By switching from a petrol car to an EV, buyers can make significant savings on their car's annual running costs.

For example, a buyer who purchased a fully electric 2023 BYD Seal could save around \$1,100 in annual fuel costs compared to a similarly sized 2023 Toyota Camry (based on 14,000km annual travel distance). Driving the same petrol-fuelled Camry also results in about twice the CO<sub>2</sub> emissions of the BYD Seal charged with electricity from the grid (based on average emissions intensity).



Katherine Griffiths / DCCEE



## Making energy bills cheaper for renters

Renters should not be left behind in the transition to a new energy system. We're making sure they too can access the benefits and bills savings from energy saving technologies.

Renters are often at a disadvantage compared to homeowners when it comes to accessing the benefits of solar and energy saving technologies. Under tenancy laws, renters are unable to upgrade or renovate the homes they live in without their rental property owner's permission, and short-tenancy periods mean there is no guarantee of a return on investment. Rental property owners do not receive direct savings from the installation of energy saving technologies, which can reduce the incentive to make the upgrades. This means many renters can have higher energy bills compared to households who make these upgrades.

Introducing minimum energy efficiency standards for rental homes in NSW could help ensure renters, particularly vulnerable households, are not forced to live in poor-performing homes with excessive energy costs. Even simple upgrades to rental properties, like upgrading ceiling insulation and efficient heating and cooling could save renters an average of \$160 to \$750 each year in energy cost savings.<sup>22</sup>

Similar standards have already been implemented in New Zealand, UK, France, the Netherlands, Canada, as well as Victoria and the ACT. Lessons from these jurisdictions will inform our plan.

Improved energy efficiency can also benefit rental property owners by reducing their tenants' bill stress and increasing the value of their properties.

The NSW Government is supporting the development of a national framework for minimum energy efficiency standards in rented homes, in collaboration with the Australian Government and other states and territories.

We will investigate introducing minimum energy efficiency standards for rental properties, aligned with the forthcoming national framework. We will undertake extensive stakeholder consultation to ensure any standards that may be considered or piloted are appropriate for both renters and rental property owners. We will make sure any standards do not contribute to punitive rent increases or undue pressure on property owners. For example, the framework could set modest initial standards and then gradually raise them over time, provide a long implementation timeframe, use targeted incentives and provide guidance material on which energy saving upgrades suit different types of homes. Lessons from stakeholder consultation, experience from other places with standards and NSW pilots will inform the development of any long-term minimum rental standards.



NSW already mandates minimum greenhouse gas emissions and water consumption standards for new homes, apartments and alterations above \$50,000 through the Building Sustainability Index (BASIX). The NSW Government introduced changes to BASIX in October 2023 that require all new homes to have a minimum 7-star thermal energy performance rating and reduce greenhouse gas emissions by 7-11% (depending on location and type of residential development proposed). These standards apply to all new homes and alterations, whether they will be owner occupied or rented. An average home meeting these higher BASIX standards will save \$1,070 a year in energy bills.

Rental property owners seeking to upgrade their rental properties can access financial incentives through the ESS and PDRS that will reduce the cost of many energy saving technologies. We will also investigate how landlords could be supported with the cost of upgrading their rental properties to the new standards by accessing additional financial support through the new Home Energy Saver program.

#### **ACTION 11**

**Investigate introducing minimum energy efficiency performance standards for rental housing.**

## Helping apartment residents invest in solar

NSW households have been leading the way in investing solar energy to lower their bills and reduce their greenhouse gas emissions. However, while 37% of standalone houses in NSW currently have solar, only 2-3% of residential apartment buildings in Greater Sydney have solar installed.

It is challenging for households living in apartments to install solar panels because of the need for owners' corporation approval, physical limitations like insufficient roof space, and the need to share roof space among multiple households.

With over 20% of NSW households currently living in apartments, there is great potential to unlock bill savings by helping apartment residents invest in solar and other energy saving technologies. This will be supported by new products and services that enable sharing of power between apartments.

To reduce price barriers and help eligible strata corporations invest in shared rooftop solar, the NSW Government is partnering with the Australian Government to deliver a new \$30 million Solar for Apartment Residents (SoAR) program.<sup>e</sup> This program will deliver grants to contribute to the costs for multi-unit dwellings to install shared-rooftop solar. This could save households up to \$600 a year on their energy bills.



Katherine Griffiths / DCEEW

#### **ACTION 12**

**Deliver the new \$30 million Solar for Apartment Residents program to help apartment residents reduce their bills by investing in solar energy.**

<sup>e</sup> Also referred to as Solar Banks.



## Cutting energy bills for social housing residents

Most of the social housing in NSW was built more than 20 years ago, before the introduction of modern energy efficiency standards that apply to all newly built homes.

This means that many of our social housing properties lack the energy saving technologies that new homes across NSW have benefitted from since the introduction of BASIX.

By upgrading our social housing stock, we can help reduce cost-of-living pressures for families living in social housing and make social housing more comfortable in summer and winter.

The NSW Government is partnering with the Australian Government to invest \$175 million to upgrade approximately 24,000 social housing properties across NSW.

The Social Housing Energy Performance Initiative (SHEPI) is delivering a range of energy performance upgrades in homes that will help social housing tenants reduce their energy bills. These include appliance upgrades for air conditioning, heat pump hot water systems, LED lighting, thermal shell upgrades such as insulation, draught proofing and window shading, as well as installation of solar systems and solar sharing.

These upgrades are expected to save social housing residents an average of 10% annually on their energy bills.

SHEPI brings together the NSW Department of Climate Change, Energy, Environment and Water Homes NSW, Aboriginal and Community Housing Providers, and the Australian Government for a joint approach to upgrading public, community, and Aboriginal social housing.

SHEPI will have a particular benefit for Aboriginal and Torres Strait Islander families living in social housing in NSW. There are more than 13,000 Aboriginal Housing Office or Aboriginal Community Housing Provider owned homes across the state.

Of these, over 35% will receive energy performance upgrades as a result of the SHEPI program.

We are also investing in 2 new trials to help understand and demonstrate the costs and benefits of electrification and emerging energy services for low-income households. These pilots will help reduce energy bills for participating households and inform future policy development.

We are going to trial VPPs for select social housing properties to demonstrate how social housing tenants may be able to receive additional benefits from our investment in solar for social housing.

We also want to support low-income households access the benefits of electrification. This will start with trial electrification upgrades for social housing premises. Fully electrified households will have lower emissions and energy bills than dual-fuelled households using gas. The cost of electrification can be significant, particularly when there are upgrades required to the electrical infrastructure of a home or apartment. Low-income households will be disproportionately affected by these costs and may be the last to electrify if there is no government support.

### **ACTION 13**

**Make energy efficiency upgrades to approximately 24,000 social housing homes by June 2027.**

### **ACTION 14**

**Pilot the roll-out of solar and battery VPPs and full home electrification with select social housing premises.**

## Benefits of electrification (switching from gas appliances to electric alternatives)

As new renewable energy makes our electricity system greener and cleaner, the benefits of electrifying a home and business grow too.

Households and small businesses that currently use gas for heating, hot water and cooking could be saving on average \$4,000 a year and 2,120 kilograms of greenhouse gas emissions if they switch to all electric appliances and install solar and a battery in their house or building. Apartment residents can also access the benefits of electrification, saving on average \$2,400 and 820 kilograms of emissions a year.

These bill savings include the benefit of only paying one daily supply charge for electricity, instead of paying daily supply charges for both gas and electricity. Switching from gas to electricity can also reduce indoor air pollution from burning unflued gas which can make asthma and other respiratory diseases worse.<sup>23</sup>

## Delivering additional financial relief for those who need help paying their bills

We understand some households will require direct financial relief to help pay their energy bills. Some households may be experiencing a short-term financial hardship, crisis, or emergency, while others may require longer-term energy bill relief.

The NSW Government invests around \$330 million a year in 6 annual energy rebates and 1 crisis support scheme, Energy Accounts Payment Assistance (EAPA). Energy rebates help eligible concession cardholders, family tax benefit recipients, and people with certain medical conditions pay their energy bills. The crisis support scheme EAPA helps people having trouble paying their electricity and/or gas bill due to a short-term financial hardship, crisis or emergency (such as loss of income, unexpected costs or natural disaster) stay connected to essential services.

Through EAPA, eligible customers can receive up to \$500 twice a year for their electricity and gas bills in 2024-25, totalling up to \$1,000 a year for each utility type. This means that people who receive EAPA payments for both electricity and gas can receive up to \$2,000 total in 2024-25.

In 2024-25, we are providing an additional \$88.5 million to increase energy rebate values for eligible low-income households, pensioners, self-funded retirees, families, and people who use medical equipment covered by the Life Support

Rebate. Most energy rebate recipients will receive more than 20% increases in their rebates.

We are also investing \$11.5 million in 2024-25 in a trial debt-relief program to help around 5,000 NSW households reduce or eliminate their energy debt. Debt-relief payments to customers will be matched by an equivalent investment by retailers. This is planned to commence in late 2024.

We are currently reviewing our overall approach to rebates to address cost-of-living pressures more effectively, and to better target the rebates system and support those most in need. The review aims to consolidate the existing 6 rebates to simplify the rebate application process. The consolidated approach will improve customer experience and support increased uptake.

### **ACTION 15**

**Trial new energy bill debt relief program for around 5,000 NSW households.**

### **ACTION 16**

**Conduct a review of NSW energy rebates to streamline existing rebates, improve the customer experience and ensure support reaches customers who need it most.**

## Supporting community battery storage

Batteries are one of the key enabling technologies which support the growth of renewable energy and help lower our energy costs. Household and small-scale batteries can store power generated through solar panels so this power can be used at times when drawing energy from the grid is more expensive. This reduces the need to draw energy from the grid and can help cut household and small business bills. We will support the roll-out of household batteries through the PDRS and potentially through additional incentives developed for this strategy.

While all batteries can support the grid, not all households and small businesses can share in the direct benefits of them. For households and small businesses that are unable to install a battery, community batteries could provide an alternative to lower bills and support the transition to a net-zero energy future. We want to encourage the types of batteries that can benefit the whole community and will investigate options to support this.

### Batteries can be used in different ways to benefit customers and the grid

Batteries benefit both the electricity system and customers, by storing energy when it is cheap and abundant to use later when it is more expensive and demand is high. This can lower costs and bills for all customers. These technologies also support the greater take-up of renewable generation that helps NSW transition to net zero. There are a range of new business models for batteries emerging, with different benefits and advantages for each.

**Household battery:** A household battery sits behind an individual customer's meter at their home or business and is owned by the property owner. The battery stores excess electricity generated by your solar panels. This can be used in your property or fed back into the electricity grid. Not only do household batteries help you cut your electricity bill, but you also receive a financial benefit for the energy you provide to the grid. You could receive an additional benefit if you join up to a VPP.

**Community battery:** A community battery is a shared solution for a local neighbourhood. It allows the community to benefit from a battery, even when they can't install one on their property. A community battery connects directly to the distribution network by a third party, such as a retailer, distributor, or aggregator. This new business model allows local households or businesses to buy capacity in the battery or sign up to a plan where they can access the energy in the battery. This reduces their bill, even if the battery is not directly connected to their property.

**Local network battery:** Local network-owned batteries are connected to the distribution network and store excess energy produced by local rooftop solar. These batteries provide network services, such as voltage management, that allow the greater uptake of rooftop solar and reduce the need to limit solar exports. They also help avoid costly network upgrades. These batteries help to reduce the cost of electricity for all customers.

**Grid-scale battery:** Large-scale batteries operate to stabilise large-scale renewable energy generation. They participate in the electricity generation market similarly to solar, wind, or gas-powered generators.



**Figure 11: The whole community benefits from a community battery.**

In June 2024, the NSW Parliament passed legislation creating the NSW Energy Security Corporation (ESC). The ESC will partner with industry to accelerate investment in clean energy projects that improve the reliability, security and sustainability of electricity supply and help NSW meet its emissions reduction targets.

The ESC will seek a return on its investments and co-finance projects to attract additional private investment to NSW. It will be seeded with \$1 billion to co-invest in projects that are not attracting sufficient private sector investment but are critical for the transition to a decarbonised grid. These could include community batteries, local network batteries, medium to long-duration storage and commercially viable grid stability technologies.

Distribution networks are uniquely placed to identify where local network batteries can be most efficiently integrated into the electricity network in a manner that best supports unlocking the greatest financial value. However, national rules prevent distribution networks from leasing out the spare capacity of local-network batteries that they own.

The NSW Government is reviewing the definition of long-duration storage under the *Electricity Infrastructure Investment Act 2020*, which could help incentivise more battery storage. We will also investigate seeking a class waiver from the Australian Energy Regulatory (AER) on behalf of distribution networks. This could allow the distribution networks to lease out the spare capacity of their proposed local network batteries that are successful in bidding for co-investment through a competitive government process. These reforms could help the NSW distribution networks to accelerate their local network battery programs.

#### **ACTION 17**

**Investigate seeking a regulatory class waiver from the AER to enable NSW distribution networks to support the uptake of local network batteries, subject to meeting criteria.**

#### **ACTION 18**

**Investigate options to support household and small business access to community batteries.**

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# 6

## Practical resources for informed energy decisions







The NSW energy system is changing. Renewable energy is making up an increasing proportion of total energy generation in NSW, and much of it is produced by households and small businesses.

Customers now have more choice about how they purchase and use energy in their home and business. New technologies are enabling households and small businesses to generate their own energy, store their energy, and shift their energy use to times that suit them the most.

New energy services are emerging that can help energy customers take advantage of these opportunities. Customers can cut their energy bills by taking advantage of energy when it is cheapest, and reduce demand, or use their own generated and stored energy when it is more expensive to purchase. However, all these new services also bring added complexity for most consumers. This chapter covers how we will address these challenges.

We want to make sure energy customers have access to clear and simple information about energy products and services so they can make informed decisions about how to manage their energy use and reduce their energy costs.

This strategy introduces new measures to increase transparency for energy customers. This will help those customers make informed decisions about their energy purchase and provide clear and simple information to help them save on their energy bills. We are also working to make it easier for customers to access and understand the range of government incentives and support available to them.

## Helping buyers and renters make informed decisions about the cost of running their home

Since star ratings for appliances were introduced in NSW in 1986, consumers have been able to access information about the energy efficiency of different appliances. This has helped consumers make informed decisions about the running cost of their appliances for almost 40 years.

In comparison, very little information is available about the energy consumption and costs of a home. This makes it difficult to make an informed decision about annual running costs when buying, renting or renovating a home.

Around 80% of homes were built before modern building standards were introduced in 2004 and have an average rating of 1.7 stars.<sup>24</sup> These poorly

rated homes use 3 times the energy for heating and cooling as highly rated homes.<sup>25</sup>

We will help address this issue by introducing simple energy rating information at the point of sale or lease of a residential property. This will inform buyers and renters about the anticipated annual energy running costs of the home. It will also help sellers and lessors communicate the energy efficiency benefits of the property they are selling or leasing.

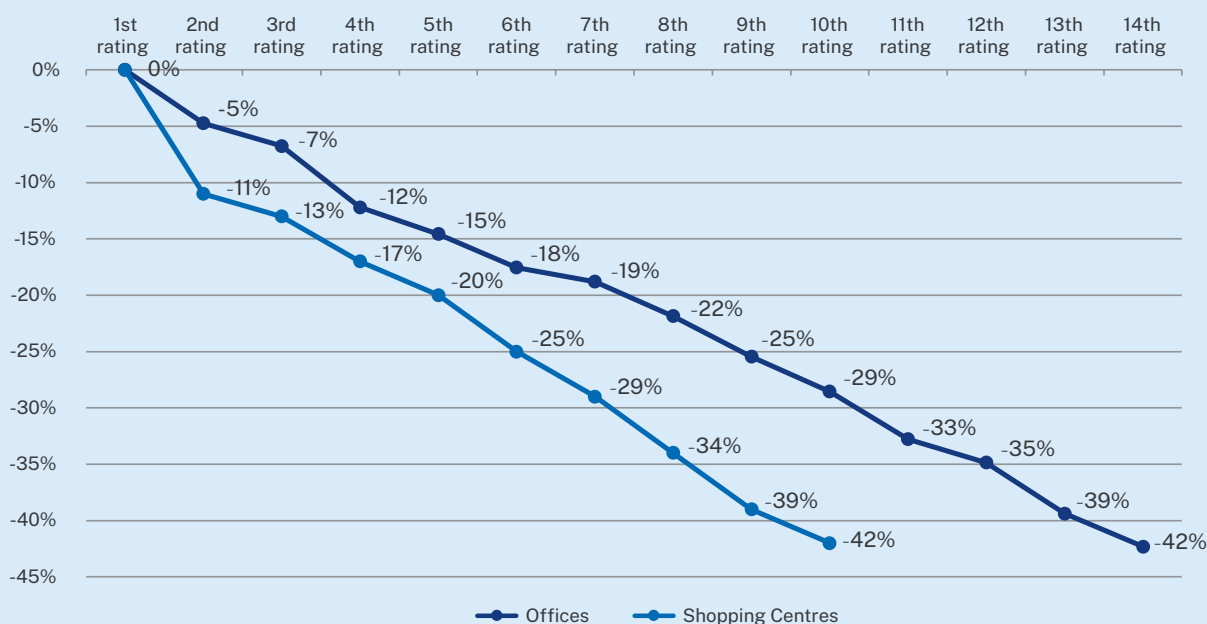
Energy ratings will also provide homeowners with information about practical and effective steps to improve the energy performance of their homes, reduce their energy bills, and make their homes more comfortable and healthier to live in.



## Ratings for commercial buildings drive investments in energy saving technologies

The National Australian Built Environment Rating System (NABERS) is a prominent example of how addressing transparency barriers can result in major adoption of energy saving technologies. Data from NABERS ratings shows that mandating the disclosure of NABERS energy ratings in offices resulted in the average office building in Australia reducing their energy use by 42% between 2009 and 2023.<sup>26</sup> NABERS ratings have an unmistakable impact. The following graph shows the average reduction in energy use for offices and shopping centres after obtaining NABERS ratings.

**Figure 11: Average reduction in energy use after multiple NABERS ratings (2023)**



Source: NABERS (2023) NABERS Annual Report 2022/23: Life of Program Statistics, <https://nabers.info/annual-report/2022-2023/lops-average-energy-reduction-after-multiple-ratings/>, accessed 1 August 2024.

The Nationwide House Energy Rating Scheme (NatHERS) is a national scheme that provides energy ratings for new dwellings. The NSW Government is collaborating with the Australian Government to expand NatHERS to provide energy ratings for all homes, not just new properties. This will ensure that all NSW households have access to nationally recognised standards and resources about home energy performance.

Once available, the NSW Government will work with key sectors – such as banks, real estate and legal/conveyancing – to introduce disclosure of home energy ratings at the point of sale or lease and explore opportunities for the entire housing sector to benefit.

The NSW scheme will commence with trials under a voluntary regime. The voluntary scheme will be reviewed to inform when to transition to a mandatory disclosure scheme. This phased approach will provide the market with time to prepare for the commencement of the mandatory scheme.

### **ACTION 19**

**Introduce voluntary disclosure of home energy performance ratings at the point of sale or lease in 2025, beginning with trials. The policy will be reviewed to inform when to transition to a mandatory disclosure scheme.**

# Giving energy customers practical resources they need to make informed energy decisions

Households and businesses need clear, simple and easy-to-access information to help them benefit as our energy system transitions to net zero.

The NSW Government will deliver a customer-centred energy information campaign and resources to help households and small businesses understand how they access and use energy and navigate the various existing and new energy incentives schemes. By developing simple and trusted resources and locating them within a central website, we will help households and small businesses take meaningful action to lower their emissions and reduce their energy bills. We will also review the delivery architecture of our programs, streamline application processes and customer interfaces to support a more seamless customer experience.

This project will deliver:

- New interactive web tools to help households and businesses navigate existing and new government energy incentives schemes.
- High-quality educational material and online resources, including updates to existing online channels including the [energy.nsw.gov.au](https://energy.nsw.gov.au) website and [Service NSW Savings Finder](#) website. This will enable the people of NSW to make more informed decisions about how to use energy more efficiently in their homes, cut their bills and reduce emissions.
- Communications that meet the needs of our diverse audiences. This includes supporting small businesses, low-income households, renters, Aboriginal and Torres Strait Islander peoples and culturally and linguistically diverse communities.

In addition to the new energy information campaign and resources, the NSW Government will co-fund community organisations to deliver new community energy outreach initiatives. This program will provide funding for grassroots engagement to educate and empower households and small businesses, including community events and on the ground face-to-face engagement (such as bring your bill days).

The outreach program will provide grant funding to community-based organisations across NSW. These organisations will help ensure all our diverse audiences, including Aboriginal and Torres Strait Islander peoples, culturally and linguistically diverse communities, and rural and regional areas are included in the energy transition.

## **ACTION 20**

**Improve the customer interface and delivery infrastructure of the government to make it easier for households and businesses to access government programs and support.**

## **ACTION 21**

**Deliver a new energy information and resources campaign to help households and small businesses save money on their bills and benefit from energy saving technologies.**

## **ACTION 22**

**Fund community outreach programs to provide practical energy information and tips directly to energy consumers.**

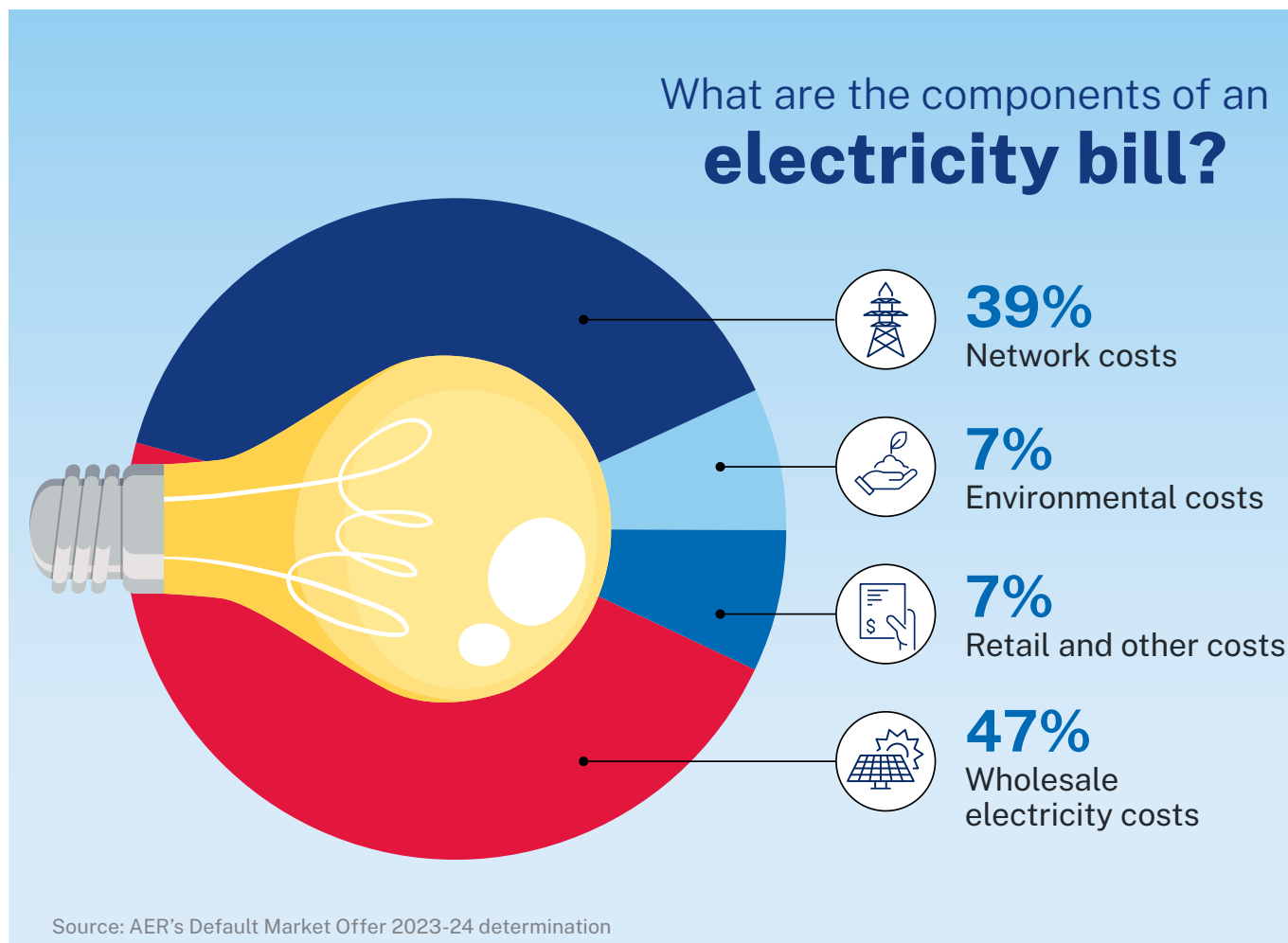


Katherine Griffiths / DCCCEW

## Helping energy customers understand their energy bill

Energy bills can be complicated. The energy system is changing with new types of tariffs and services emerging. We want to make it as easy as possible for customers to understand if they are getting a good deal, ensure they continue to get information about their energy plan, and make informed choices.

**Figure 12: What charges make up your energy bill.**



### Energy Made Easy

Energy Made Easy is a free and independent service to help households and small businesses compare energy deals and check if they could save by switching plans. Customers can upload a PDF bill, enter their National Meter Identifier, or enter their consumption information manually. Customers with smart meters will receive personalised information based on their energy usage. Customers can visit [energymadeeasy.gov.au](https://energymadeeasy.gov.au) to use the service. Service NSW staff can also assist customers to use this service via phone on 13 77 88 or in person at a [Service NSW](#) centre.

We want to make sure the [Energy Made Easy website](#) stays up to date with changes in tariff structures and technologies. We are advocating for urgent reforms to ensure Energy Made Easy enables customers to compare their bills with demand tariffs and two-way tariffs for solar exports.



In 2023, the Australian Government updated the [Better Bills Guideline](#) to simplify energy retail bills for customers and outline what information energy retailers must include on a bill. This included a new rule to require retailers to inform customers if they could be on a better offer, and how to switch to the better deal. We support this change to make sure customers can access the best deal for them, but we want to make it even easier for customers

to know if they could save money on another deal. Energy Made Easy is a trusted source of information for customers to help energy offers in the market. However, it currently doesn't have the capability to compare demand tariffs and two-way solar export prices. It is critical that Energy Made Easy keeps pace with the changing energy market and tariff options to remain a reliable source of advice.

## National protections from high electricity prices

The AER sets an annual electricity price cap for households and small businesses called the [Default Market Offer \(DMO\)](#). This is the maximum price retailers can charge electricity customers on standing offer contracts (the default contract if a customer hasn't switched to a retail offer). The DMO also helps customers on all contracts as retailers must compare their plans to the DMO when marketing or promoting. This helps customers assess whether they are getting a fair deal.

### ACTION 23

**Advocate for urgent improvements to the Energy Made Easy website to include solar export charges, demand tariffs and other new types of tariffs that emerge.**

## Increasing transparency about new energy products and services

When solar and batteries are connected to VPPs, households and small businesses can be financially rewarded for generating energy and making it available to the grid at peak demand times.

New programs for smart appliances and demand response are also emerging, which can provide payment to households and businesses for avoiding energy use when demand is highest. We want to ensure customers have a trusted source of information about the offerings and benefits of these new services.

This is why we are going to introduce new rules to increase transparency about new and emerging energy products and services. Starting in 2025, we will require the [Independent Pricing and Regulatory Tribunal \(IPART\)](#) to report on demand response and VPP services of energy retailers in its annual energy retail market monitor report. This

will provide independent advice to households and small businesses on the different energy retail offerings on the market, and the potential benefits to customers to help them make more informed decisions.

We will use this information to determine if new consumer protections are required to ensure that customers receive the expected benefits from participating in these programs and promote new energy saving services to customers.

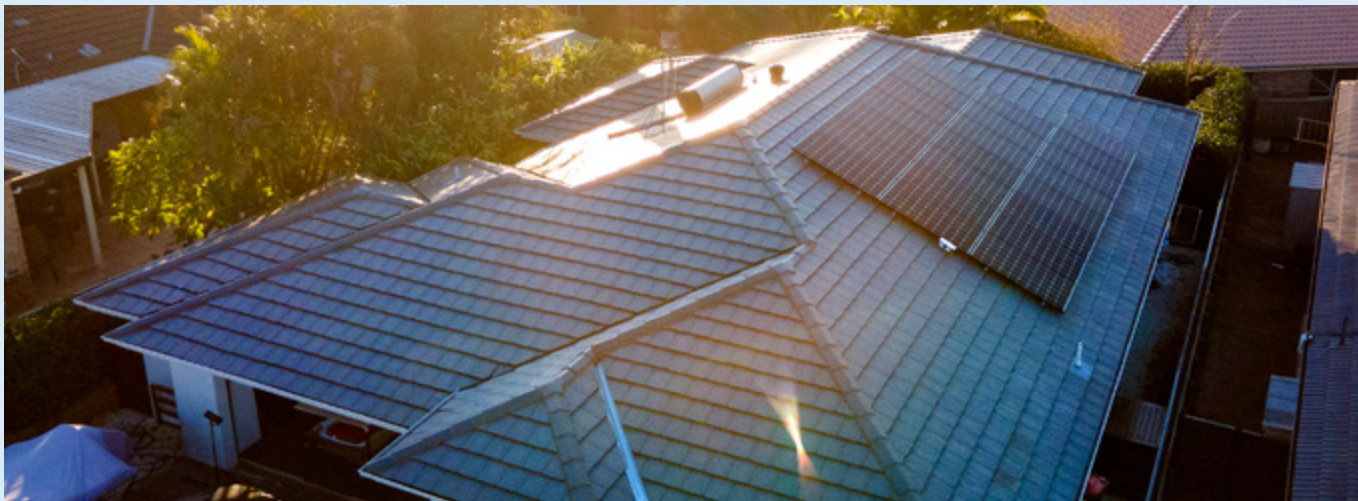
### ACTION 24

**Require IPART to report on demand response and VPP services of retailers in the annual energy retail market monitor report.**

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# 7 Boosting your consumer rights and protections





New energy products and services are emerging to help households and small businesses unlock the full range of benefits from energy saving technologies.

These new energy services, such as VPPs, aggregation services and home energy management services, are being increasingly integrated with the essential services consumers rely on.

In this strategy we are delivering new reforms to boost consumer rights and protections to help support greater use of energy saving technologies and new energy services.

As more consumers embrace energy saving technologies, we want to bring greater transparency to the energy system and help consumers make informed energy decisions.

We want to ensure consumers benefit from new energy technologies and services and have confidence that they are receiving value from their energy investments. This chapter outlines the actions we will take to do this.

## Resolving issues with your energy providers

The Energy and Water Ombudsman NSW (EWON) is the approved independent dispute resolution scheme for household and small business customers in NSW. Energy customers who are not able to resolve an issue with their energy retailer, distributor or transmission service can contact EWON for advice or lodge a dispute. EWON will then work with the customer and the retailer to come up with a solution. The service is free for household and small business customers.

EWON is funded through the membership fees that its members organisations are legally required to pay. EWON is independent and does not represent the interests of industry or energy customers. It is a mediation service that can make binding determinations to resolve a case, including requirements for energy providers to pay compensation to customers.

### How EWON is helping customers resolve their energy complaints

In 2022-23, EWON received 17,852 complaints from households and small businesses about electricity, gas and water issues.

EWON was able to resolve 94% of these complaints within 30 days and \$1.16 million in customer compensation was paid because of EWON's findings.



In the past, energy only flowed in one direction from the grid to the premises, with customers buying energy to use in their homes and businesses. Customers are now engaging with a wide range of energy providers, products and services (such as solar, batteries, VPPs and aggregators), and energy is flowing back and forth between customers and the grid. This has made the energy system more complex, as customers deal with more than one energy provider for their services.

The energy regulatory framework is working to keep pace with the changing technologies and services to ensure customers have fair consumer protections and rights. We want to make sure customers continue to have free and independent dispute resolution for issues with new and emerging energy services and providers. We also want to ensure customers have a seamless customer experience and minimise the need to resolve issues with multiple dispute resolution services.

We will investigate options to expand EWON's dispute resolution jurisdiction to cover issues related to new energy services, VPPs, aggregators and demand response providers. This will include a regulatory impact assessment to assess the costs and benefits of different options for businesses and customers.

## How Fair Trading helps customers and traders

NSW Fair Trading provides information to consumers and traders to assist them in resolving marketplace disputes. When parties are unable to reach a settlement, a complaint may be lodged and Fair Trading then provides informal dispute resolution and advice.

Complaints about safety, product performance, advertising and the installation of energy saving technologies are typically the responsibility of NSW Fair Trading. If it's more appropriate for the matter to be handled by another organisation, Fair Trading will advise which organisation it is and provide contact details. You can lodge a complaint online, download a complaint form for mailing or contact Fair Trading on 13 32 20.

### **ACTION 25**

**Begin public consultation to expand EWON's jurisdiction to new energy services providers, such as VPPs and demand response services.**



# Boosting consumer protections for customers in embedded networks

## What is an embedded network?

Embedded networks are private energy networks that supply energy to multiple premises through a parent connection to a distribution or transmission network. They are commonly found in apartment blocks, caravan parks or shopping centres. An embedded network operator buys energy from the National Electricity Market (NEM) and sells it to the residents or businesses of the embedded network. These are known as 'on-supply' customers for the purpose of applying for NSW energy rebates.

In contrast, standard energy customers are supplied energy directly from the NEM by an 'on-market' retailer. These customers are directly connected to the distribution system and can easily switch between energy retailers.

Embedded networks can provide cost savings and energy efficient solutions for households. They can also facilitate the installation of energy saving technologies and sharing of bill savings more easily than in apartments with on-market energy services. This is because the whole building has the same energy retailer which can improve coordination and efficiency.

However, operators within an embedded network are effectively a monopoly provider of energy to a site and customers currently have limited ability to change their energy provider or switch to different plans on the market. Many embedded network customers, particularly those who have embedded networks that supply the heating and chilling of water, do not have access to the full range of national consumer and price protections available to on-market energy customers.

The NSW Government is changing the way embedded networks are regulated so customers can benefit from the savings possible with this type of supply arrangement. We are developing a comprehensive plan of reforms that will ensure equity for customers in embedded networks. We have requested that IPART provide advice to the government on the appropriate price protections for embedded network customers.

Because embedded network customers can't easily shop around and switch retailers, IPART has recommended that the maximum price they can be charged is set below the maximum price for customers who can benefit from retail competition. We are working through IPART's recommendations and will release a comprehensive plan for embedded network customers.

As part of this reform, we will also expand consumer protections and other supports for customers in embedded networks. This includes extending the [Energy Accounts Payment Assistance](#) scheme, ensuring hot and chilled water embedded network customers have access to national energy consumer protections, and the ability to use [NSW Energy and Water Ombudsman](#) to resolve billing and other complaints.

### ACTION 26

Release a comprehensive package of reforms to improve consumer outcomes for embedded network customers in NSW.

## Reducing bill shock



Katherine Griffiths / DCEEW

Customers are often switched to new types of tariffs when they have a smart meter installed. This is because smart meters provide greater visibility of when customers are using electricity, and new tariffs can be applied to help customers save money depending on when they use energy.

### Explaining flat rate tariffs, time of use tariffs and demand tariffs

Electricity retail tariffs are changing to help make the system more efficient and ensure consumers don't pay more than they need to for what they use. These new types of tariffs can enable customers to lower their bills by using electricity at times where it is cheaper for retailers and networks to make that supply available.

**Flat rate tariff:** Customers are charged the same price for electricity all day.

**Time-of-use tariff:** Customers are charged less for electricity during 'off-peak' or low demand periods, and a higher rate for electricity used during 'peak' or high demand periods.

**Demand tariff:** A demand charge is based on the highest amount of electricity usage at any time typically during peak periods. It is usually charged as a daily rate based on the highest usage during the month, quarter, or year. A demand charge is applied in a demand tariff on top of a flat rate or time-of-use pricing structure for electricity consumption.



As we move to widespread smart metering, customers will have the opportunity to move to different tariff types. However, if a customer has not had a smart meter before, there is no way to tell whether they will be better or worse off on any given tariff type, as there is no accurate data on when they use electricity. Many customers could save money with time of use tariff or demand tariff without making any changes to when they use electricity. Customers can further maximise savings by shifting their discretionary electricity use, such as the dryer or dishwasher, to cheaper off-peak pricing periods.

We want to help customers make informed choices about their energy plans to make sure they are on the best deal for their needs. The [Australian Energy Market Commission \(AEMC\)](#) has commenced a pricing review examining how customers are experiencing changes to their tariff structures following smart meter installation.

We will support this review and recognise the need for a broader review of household and small business tariffs. We are committed to making the tariff regime simpler and easier for customers to derive benefits, while supporting the transition to more cost-reflective tariff structures. We will advocate for opportunities to require retailers to:

- collect data on customers' energy use so that retailers can provide customers with accurate information about whether their bill will be higher or lower if they switch to a new tariff
- be required to advise customers of how they can access other tariff types, if available.

This will help to prevent bill shock and help customers make more informed choices.

Demand tariffs are particularly complicated, and they are not currently covered by the free and independent [Energy Made Easy](#) service. This makes it even more difficult for a customer to assess if a demand tariff is right for them. We need new consumer protections quickly to support customers from bill shock and unintended consequences from new and complex demand tariffs. To address this, we will prevent the automatic assignment of customers to demand tariffs so that customers have the option of a time-of-use tariff and consult with retailers on the design of the measure. We will also look at options to provide customers who have already been switched to demand tariffs with more choices.

We will continue to assess the consumer protections in the national framework to determine whether this NSW-specific protection remains necessary and consult closely with energy retailers and other stakeholders on the reforms.

#### **ACTION 27**

**Advocate for national reforms to require retailers to collect and provide advice to customers on the potential bill impact of new tariffs before their tariff is changed.**

#### **ACTION 28**

**Prohibit retailers from automatically assigning customers to demand tariffs without their explicit informed consent.**



Katherine Griffiths / DCCEEW

# Improving access to energy saving technologies for people in strata buildings

We understand there are unique challenges for people living in apartments to install energy saving technologies. We want to ensure people are not left behind in the energy transition based on where they live.

Navigating the approval process of an owners' corporation can be complicated and costly. The installation of energy saving technologies can often require new by-laws to be introduced by the proponent or the owners' corporations. These by-laws are often drafted or reviewed by lawyers and involve legal costs.

Model by-laws introduced by government in the Strata Schemes Management Regulation 2016 could make it easier and cheaper for owners' corporations to approve, install and manage certain kinds of energy saving technologies. Model by-laws provide standard wording that can be adopted by owners' corporations instead of having to pay for legal drafting services. Additionally, model by-laws set community standards by providing widely acceptable solutions to commonly encountered issues.

We will develop new model by-laws to support the installation of a range of energy saving technologies, such as solar panels, batteries and heat pumps in strata organisations, to help guide apartment residents and lower costs.

We have heard concerns that some owners' corporations may legally restrict the installation of energy saving technologies because of their appearance. Given the benefits of lower bills and lower emissions, we want to ensure strata residents are not prevented from taking up solar, for this reason.

We are introducing new changes to prevent owners' corporations from banning or objecting to energy saving technologies solely due to appearance. However, there may be valid reasons for schemes to prohibit energy saving technologies and to pass by-laws containing such prohibitions. For example, not all roof space in strata schemes may be suitable or safe for the installation of solar panels, so we will consult on reasonable exemptions to this requirement. We will also consult with interested stakeholders on these reforms to ensure they reflect community interests and priorities.



## **ACTION 29**

Develop new model by-laws to help owner's corporations with the installation of energy saving technologies.

## **ACTION 30**

Prohibit by-laws that block energy saving technologies due to appearance and examine any necessary exemptions to this requirement.

# Helping households and small businesses access an EV charger

We are making EV charging more accessible so all households and businesses can take advantage of the benefits of an EV.

Guaranteed widespread EV charging across NSW is a priority in the NSW EV Strategy, so EV drivers can be confident they can drive their vehicles whenever and wherever they need to. The NSW Government has a range of programs to help improve access to charging stations across the community.

Having kerbside charging available on more streets in their neighbourhood will give drivers confidence their charging needs can be met. They will have convenient options to charge their EV if there is no charger at their home or office. We are already co-funding over 500 kerbside charging points to ensure ease of access, convenience and flexibility through kerbside charging grants. However, we want to do more to help households and businesses who want an EV but don't have access to private off-street parking.

Distribution networks can have a role to play in supporting this roll-out. They already own the power poles on our streets and have the knowledge of where EV charging infrastructure can be most efficiently integrated into the electricity network. They also have teams out in the community to provide maintenance and support for infrastructure. However, current legislation prevents them from owning kerbside chargers.

We will work to identify opportunities to facilitate the delivery of kerbside charging infrastructure by distribution networks where appropriate to speed up the roll out of kerbside EV chargers. We want to ensure growth in the EV charging market and will work with charging providers to ensure any outcome promotes competition in the market.

Many residents in strata schemes are facing opposition when putting forward proposals to install EV charging infrastructure in their buildings. The voting threshold for owners' corporations to install sustainability measures (including EV charging) was reduced from 75% to 51% in favour to help support energy saving upgrades. This amendment has

helped EV owners install EV charging in some cases, but feedback from residents in apartment buildings has shown us that more needs to be done to reduce the barrier faced by EV owners in apartments.

We will support apartment residents to install EV charging infrastructure on the property by introducing a 'right to charge'. This measure will ensure residents who are prepared to pay for their charging infrastructure are not blocked for spurious reasons. We will consult with stakeholders on the measure and the new rights for EV charging, while balancing these with protections and exemptions for owners' corporations, including upholding safety standards.

## **ACTION 31**

**Investigate opportunities to facilitate the delivery of kerbside EV charging infrastructure by distribution networks.**

## **ACTION 32**

**Introduce a right to install EV chargers in the Strata Schemes Management Act 2015 so owners' corporations cannot unreasonably refuse EV chargers.**





## Helping customers get the most from their solar



Shayni Natalovitz / DCCEW

Our electricity distribution networks were designed to deliver electricity in one direction – from central power stations to households, businesses and other energy customers. Our distribution networks are now expected to operate in two directions, facilitating the flow of power from generators to consumers, and from rooftop solar and batteries back to the grid.

As the penetration of rooftop solar increases, distributors are increasingly facing technical constraints on the amount of solar they can host on each distribution line. This can affect power quality and the reliability of our distribution networks, causing disruptions for other customers. To avoid disruptions, distributors may sometimes need to limit how much solar energy customers can export back to the grid in some locations. It can also mean costly upgrades to energy distribution systems, pushing up costs for all consumers.

From 1 July 2025, new national rules will allow distribution networks to charge customers for their solar exports during the day, and reward customers who export energy during peak demand periods (from batteries). This is intended to encourage more efficient pricing and incentivise households and small businesses to invest in batteries to store their solar energy and export it during peak periods. This will enable the grid to accommodate more solar and batteries in the future.

## Two-way pricing for rooftop solar

Australia is moving to a system called two-way pricing for households with rooftop solar.

This new system functions like a reward program. You get a higher credit for exporting electricity during peak times, typically during the evening when the community needs more power. On the other hand, there might be a small charge if you export past a certain level during the day. This is intended to encourage households to use their solar power production or store it in a battery for when the grid needs it most. It also disincentivises additional solar exports when there is not enough demand to use it all, which can cause blackouts. All NSW electricity networks are offering export thresholds up to which households will face no charges.

The exact charges and credits will vary depending on your location and energy provider. The export charges and rewards should lead to lower bills for customers with batteries.

The NSW Government will investigate introducing new measures to ensure customers with solar panels are not worse off than if they did not have solar panels under these new national rules. This could include introducing a minimum net solar feed-in tariff rate at zero. This would mean export charges cannot exceed the value customers with solar receive from their solar feed-in tariff.

We will also work with NSW energy distributors to introduce new trials for customers with rooftop solar panels, household batteries, and EV chargers to participate in flexible exports. This means that rather than having a fixed limit on how much solar can be exported from a site, the amount can vary based on the needs of the grid. This will help customers with solar panels and EV chargers to maximise the amount of energy exported to the grid and increase benefits. This will also help distribution networks manage grid stability and reliability.

We are also supporting new standards to make sure customers in multi-tenanted sites can invest in rooftop solar. Multi-tenanted sites, such as apartment buildings and retirement villages, currently face solar export restrictions if the total solar system size on the site is greater than 30kW. These limits are applied to ensure the distribution network can continue to operate efficiently and safely. Customers can pay for the installation of protective devices to enable them to install and export solar, but they can be costly.

New technical standards for solar inverters can help to address this challenge and enable distribution networks to increase the limits for multi-tenanted sites. We will work with [Standards Australia](#) to accelerate the adoption of these technical solutions in NSW to support more solar in apartments and buildings.

### **ACTION 33**

**Ensure customers do not pay net solar feed-in tariff charges after the introduction of two-way export charges.**

### **ACTION 34**

**Work with NSW distributors to trial new ways to make solar export limits more flexible so customers can get more value from their solar panels.**

### **ACTION 35**

**Work with Standards Australia to accelerate the adoption of new standards to enable greater solar capacity and energy exports at multi-tenanted sites in NSW.**



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# 8

## Reforms to put safety and reliability first and help transition to a new energy system





Energy saving technologies are transforming our energy system. Fully realising the benefits of these technologies means having the right systems and supports in place to maximise opportunities while minimising risks.

To do this, we must:

- have the right standards in place to ensure these technologies are delivering on their promise
- have the proper mechanisms in place to ensure compliance with these standards.
- put customer and worker safety first, by having an electrical safety regulatory system that is keeping pace with the current energy transition and the changing needs of energy customers.

This chapter outlines new measures to ensure our energy standards, safety, and compliance systems are ready to meet the needs of households and businesses as we transition to a new energy system.



Matt Beaver / DCCEEW

## Upholding safety and upskilling our workers

Households and small businesses are increasingly making sustainable choices and purchasing energy saving technologies. We must ensure these technologies are being installed in a way that upholds customer and worker safety, and the reliability of our energy system.

That is why we are investing \$15.8 million over 4 years to strengthen consumer safety for energy saving technologies across NSW. We will increase electrical safety and compliance inspections of home energy installations, update regulations to reduce grid instability, and increase compliance with standards. This investment will help make our energy system safer, more reliable and more secure.

This new funding will be used to:

- Increase Building Commission NSW's resources to conduct electrical safety and compliance inspections. This will make sure energy saving technologies being installed in NSW homes and businesses are complying with relevant electrical and grid stability standards.
- Develop a new digital smart compliance system that will enable installers to register and confirm their compliance with relevant standards. This will be modelled off successful systems being used in South Australia, and which have increased compliance with some solar technical standards from 40% to 90% within a year of operating.

- Introduce new support for industry training to ensure our installers are upholding the safety, reliability and security of the energy system. We will also investigate the development of micro-credentials to respond to training gaps and needs identified through electrical safety inspections.
- Undertake a review of our electricity and gas safety regulatory framework. Currently, electrical and gas safety and compliance responsibilities in NSW are split across at least 4 regulators – the Department of Climate Change, Energy, the Environment and Water, IPART, Building Commission NSW and Safe Work NSW. Metering, installation and product standards are also fragmented across state, territory and the Australian government.

This review will ensure our electrical safety and gas regulatory system is keeping pace with the current energy transition and the changing needs of energy customers. It will examine the adequacy of the current framework and make recommendations to improve the governance, obligations and other arrangements of the NSW electricity and gas safety framework.

### **ACTION 36**

Boost compliance with technical and safety standards by increasing the number of electrical safety inspectors.

### **ACTION 37**

Introduce a new digital smart compliance system to support monitoring and compliance with a range of standards.

### **ACTION 38**

Introduce new support for industry training for energy saving technology installers and investigate new credentials to respond to training gaps.

### **ACTION 39**

Conduct a review of the NSW electrical and gas safety regulatory framework.

## Improving standards for new energy saving technologies



Katherine Griffiths / DCEEW

Many energy saving technologies are rapidly evolving with changes in performance and potential offerings. To maintain consumer confidence, standards and enforcement, we must keep up with the evolution of these technologies and their installation. We also want to make sure the standards for energy saving technologies help to promote a reliable energy system and reduce grid instability.

At the July 2024 Energy and Climate Change Ministerial Council meeting, Ministers released a National Consumer Energy Resources Roadmap. This roadmap will unlock consumer benefits from new energy technologies, such as solar, batteries, and EV chargers. It will also develop a consumer protection framework as customers access new and emerging technologies and services such as demand response and VPPs.

The roadmap includes the establishment of a new National Regulatory Framework for energy saving technologies to provide a nationally consistent approach to setting and enforcing technical standards for these technologies. The NSW Government will work with the Australian Government to deliver the roadmap and the new National Regulatory Framework.

We will also look at opportunities to accelerate compliance with new technical standards to improve integration of energy saving technologies, ahead of the development of the National Regulatory Framework. This will include ensuring that energy saving technologies that directly benefit from

NSW Government programs comply with best practice technical standards.

Additionally, we will investigate options to accelerate the adoption of CSIP-AUS and IEEE 2030.5 standards to improve two-way communication and exchange of data and enable better compatibility (or interoperability) between devices. Adoption of these standards could support innovative new products and services for households and small businesses.

Interoperability and remote communication will be increasingly important standards in the future to enable a smart homes and businesses. We want to promote nationally consistent approaches where possible to achieve our vision of a smart home that can help to maximise savings for the customer and the grid.

We will help to support national reform on standards by requiring best practice standards for NSW Government programs and incentive schemes, including the ESS and PDRS as well as new incentives developed for this strategy. This can help to accelerate the adoption of new standards and provide information to inform national standards setting.

### **ACTION 40**

**Use NSW Government programs to accelerate adoption of technical and performance standards for energy saving technologies.**



## Minimum appliance standards save consumers billions of dollars

Minimum energy performance standards and energy rating labelling saved Australians up to \$18 billion in energy costs between 2011-2022.<sup>27</sup>

These measures have also avoided the release of between 40 to 60 megatonnes of carbon dioxide, which is around the same amount of emissions produced by Australia's entire manufacturing industry in 2021.

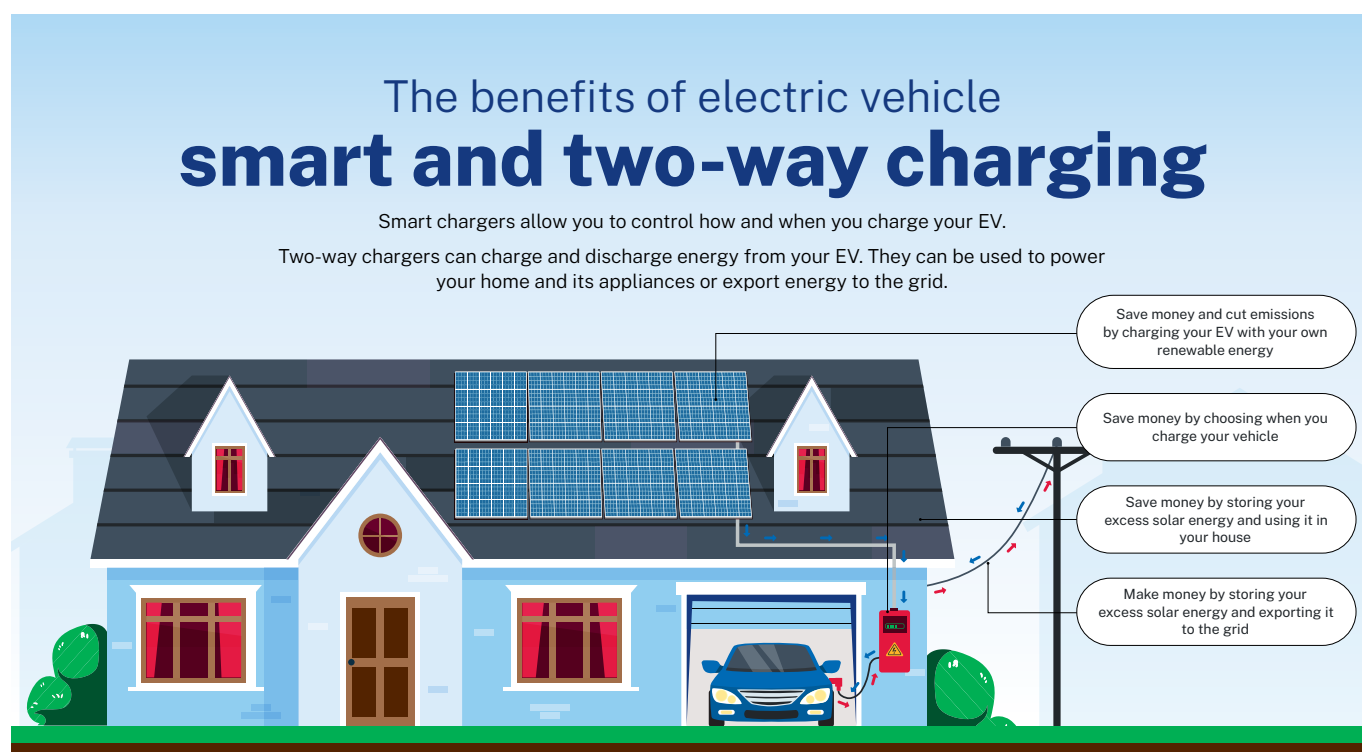
The national Greenhouse and Energy Minimum Standards (GEMS) apply to certain appliances and equipment including air conditioners and fridges, and will soon apply to electric heat pump water heaters. These standards save energy, reduce costs for consumers and protect them from the worst-performing products. The NSW Government supports minimum energy performance standards and labelling through the national GEMS working group. We are working to ensure our appliance standards remain up to date and support the potential bill and emissions savings that new technologies and features can provide as new markets develop.

## Helping households and small businesses get the most from their EV

Australia's EV fleet has grown from just over 300 EVs (including battery electric and plug-in hybrid vehicles) in 2011<sup>28</sup> to over 180,000 EVs as of December 2023.<sup>29</sup> NSW already has nearly 66,000 EVs and by 2030 it is predicted that 1.5 million EVs will be on Australian roads.<sup>30</sup> We are refreshing the NSW EV Strategy with new and updated measures to ensure that NSW is ready for EV ownership on a massive scale.

We want to help customers access the full benefits of their EV. Smart charging technologies can help EV drivers save money by charging their vehicle when energy is cheapest. Bidirectional charging technologies can allow EV drivers to power their home from their EV battery or be rewarded for allowing their vehicle battery to support the grid when it is needed most.



**Figure 13: How EV owners can benefit from two-way and smart EV charging.**

Research has found that the average EV owner could have earned between \$2,000 and \$12,000 in 2022 by providing power from their EVs when it is needed to prevent blackouts and system failures.<sup>31</sup>

We are already working with the Commonwealth and other jurisdictions to develop nationally consistent standards for smart and bidirectional EV charging. This includes an update to the AS4777 standard to allow bidirectional EV chargers to be connected to the grid.

We will continue to progress work on EV grid integration and support national reforms that allow EV users to maximise the benefits they can gain from their vehicle's battery.

We want to support the uptake of EVs and smart charging as they can lower fuel costs for customers and lower emissions and pollution for our communities.

Australia's EV fleet  
has grown to over  
**180,000 EVs**  
as of December 2023.

#### **ACTION 41**

**Support the introduction of national smart EV charging standards and vehicle to grid standards in NSW.**



Katherine Griffiths / DCCEE

## Keeping our energy system safe during emergencies

The NSW Government wants to ensure we're not only helping consumers save money and reduce emissions, but we're also working to improve reliability for all.

There is an untapped opportunity to work with NSW households to reduce energy consumption during potential energy shortfall events. This means households could play a much more active role in preventing blackouts and helping to lower the overall costs of the energy system.

We will trial a system where we send notifications to NSW energy users to request households voluntarily change the way they use energy on days where a significant risk of shortfalls in energy supply is forecast. By working together, NSW consumers can support the energy system to avoid the need for expensive energy generation and the risk of blackouts.

We will also investigate new measures to manage solar exports in emergency situations. There may be some circumstances where controls are needed to restrict solar exports to support energy security and safety. We will consult on options to introduce new regulatory and technical powers to restrict solar exports during grid emergencies. Our goal will be to lower distribution network costs, develop long-term protections for all customers by preventing blackouts and grid instability, and enable more energy saving technologies to be installed in the future.

In NSW, electricity network providers must meet certain standards for service reliability. This includes things like not having outages too often or for too long. Where a network fails to meet these standards, affected customers are eligible for a guaranteed service level (GSL) payment.

These GSL payments are based on how much time a customer was without electricity in a year. Payments are automatic and paid quarterly to the customer's retailer, who then apply it as a credit to the customer's electricity bill.

From 1 July 2024, the GSL payment rates increased from \$80 to \$120 and will be indexed to inflation annually. For the very worst outages, networks will be required to provide affected customers with GSL payments equivalent to the typical annual distribution network charge for residential customers. In the 2024-25 financial year, these payments will be around \$145 to \$460. This creates a strong incentive for the NSW distribution networks to meet their reliability targets for NSW customers.

### **ACTION 42**

**Establish a notification system to encourage voluntary reductions in energy usage during risk of energy generation shortfall events.**

### **ACTION 43**

**Begin public consultation on new measures to restrict solar export during emergencies when necessary to prevent blackouts and improve reliability.**





## Accessing data on energy technologies and use



Renaë Saxby / DCCEW

Access to data about the grid and energy technologies is critical to enable a smart, optimised grid and efficient infrastructure planning. AEMO needs real-time information about the grid and where technologies like solar and battery systems are located to be able to respond effectively if things don't go to plan, such as, when a storm shuts down a large transmission line.

The national [Distributed Energy Resources Register](#) was designed to allow AEMO to plan and operate a power grid with high levels of installation of energy saving technologies and deliver enhanced benefits to customers. We know there are already challenges for distribution networks and AEMO to access the data they need for optimal grid management.

Our energy system is going to become more dependent on household and small business energy saving technologies than ever before. Because of this, it will become increasingly important for AEMO to know the size and location of the technologies. This knowledge will provide more opportunities for consumers to become active participants in the energy market and help reduce overall costs.

We will clarify the rules in NSW to ensure installers are required to provide the information under the AEMO Distributed Energy Resources Register to their distribution network.

We will also invest new funding for the measurement and verification of the performance and benefits of technologies that support the ongoing delivery of NSW Government energy programs. This includes the new incentives developed for this strategy, as well as the existing Energy Savings Scheme, the Peak Demand Reduction Scheme and NABERS. This will fund the production of biannual reports on installation costs, technology performance, bill savings, tariff optimisation, and societal benefits to improve the effectiveness of these schemes and inform future policy development.

### **ACTION 44**

**Require installers of energy saving technologies to provide necessary information required under AEMO's Distributed Energy Resources Register to the relevant distribution network.**

### **ACTION 45**

**Develop and implement a new energy technology data measurement and verification framework for NSW and publish data publicly where possible.**

## Supporting the national rollout of smart meters

A smart meter is a device with a digital two-way communication system that measures how much electricity you use and when you use it.

Smart meters are critical to enabling a smart and efficient energy grid. Smart meters can help to lower bills for all customers by removing the need for manual meter reads, and manual connections and disconnections. Smart meters are also necessary for households and businesses to reduce their energy bills by exporting excess solar energy to the grid and participating in VPPs and demand response programs.

Since December 2017, national rules require all new and replacement meters to be smart meters. In 2023, the [AEMC](#) completed a review of the regulatory framework for metering services, which recommended a target of 100% smart meters in

households and small business by 2030. The AEMC is progressing the *accelerating smart meter deployment* rule change which includes reforms to achieve its smart meter target. The rule change includes the following reforms:

- New legacy meter retirement plan arrangements, whereby networks must outline a schedule to replace all old meters.
- Retailer performance reporting and compliance to the [AER](#) to create regulatory oversight.
- Better coordination and communication, particularly for apartments.
- Processes and safeguards to encourage customers to remediate site defects and support for vulnerable customers who need to carry out site remediation.



Matt Beaver / DCCCEW



### Your smart meter data is safe and protected

Your energy data and personal information is classified as confidential information under the *National Electricity Rules* and the *Privacy Act 1988*. There are strict safeguards in place to protect customers from unauthorised access to metering data and its services.



NSW will support the AEMC's target of achieving universal access to smart meters for households and small businesses. NSW stakeholders have proposed a range of options to enhance the rollout of smart meters in NSW and further reduce barriers to uptake in regional and rural areas and apartments. We have also been provided with options to improve access to data from smart meters for customers and trusted market participants. Improved data access can enable new services to help customers to lower their bills and allow for more effective grid management, which lowers overall costs. We will investigate options to address these issues, including working with the AEMC on the current national rule change process to improve data access from smart meters.

In 2021, the NSW Government introduced a new safety framework to enable remote energisation and de-energisation of smart meters. Removing the requirements for manual energisation and de-energisation of a household promotes cost savings for customers and can improve timeframes for connections.

We've heard from some stakeholders that the current framework is burdensome for customers and retailers and is preventing the benefits of the reform from being realised. The 2023 Statutory Review of the *Gas and Electricity (Consumer Safety) Act 2017* recommended a review of the remote energisation and de-energisation framework and safety management plan requirements. The review will consider the effectiveness of the framework in promoting safe and compliant electrical work

and use, customer experience, and opportunities to reduce the administrative burden of the scheme while maintaining safety.

This review will consider:

- whether to remove the need for customers to be on site for the re-energisation
- if the requirement to receive a Certificate of Compliance for Electrical Works (CCEW) form after a premises is empty should be shifted from 6 to 12 months
- the impact of the work of Building Commission NSW to digitise CCEWs on administrative burdens for electrical licence holders and those carrying out remote re-energisation and de-energisation.

These changes could help to improve the customer experience and lower costs, while upholding safety standards.

#### **ACTION 46**

**Review the re-energisation de-energisation framework and safety management plan rules to take advantage of the benefits smart meters can deliver for households.**

#### **ACTION 47**

**Investigate options to ensure an equitable roll-out of smart meters and enhance the benefits of smart meters for NSW customers and the grid.**



# Ensuring the national regulatory framework supports innovation and the changing energy market

The electricity network is going through a fundamental shift. The traditional one-way supply and demand system is being supplemented by local electricity supply resources, such as community batteries and innovative approaches to electricity supply. As the electricity network continues to change, grow and innovate, we need to ensure the national regulatory framework remains fit for purpose.

The way that distribution networks and other operators participate in electricity market should be clearly defined at the national level. Currently, the key areas that need specific definition and clarification include:

- the role of distribution networks, and other third parties in community batteries connected to the grid
- the role of distribution networks in owning and operating community batteries
- whether the tariffs for community battery providers are appropriate and support innovation
- the role of distribution networks and other third parties in kerbside EV charging
- the role of distribution networks in supplying microgrids (a small 'subset' of the electricity grid that provides energy generation and storage at a local level)
- how distribution networks, VPPs and market operators can remotely operate energy saving technologies to benefit customers and the energy system
- whether distribution networks are providing sufficient public access to network data or whether additional reporting should be required
- whether the revenue and incentive frameworks for distribution networks support government objectives, including in relation to the uptake of energy saving technologies.



Leo-Pol Letronnier / DCCCEW

A review of the roles and responsibilities of operators in the energy market will help to provide greater clarity as it transitions to a two-way system. The review will consider how competitive markets can supply network services traditionally provided by distribution networks, such as voltage regulation support and peak demand management.

The NSW Government will advocate for a national work program to consider the appropriate role of distribution network operators in the future energy system and how the framework can better support household and business uptake of energy saving technologies.

## **ACTION 48**

**Advocate for a national review of the regulatory framework for distribution networks in the changing energy market.**

# Supporting the safe and sustainable recycling and disposal of energy saving technologies



Matt Beaver / DCEEW

As more households and small businesses install energy saving technologies like solar and batteries, we want to make sure these products are used for as long as possible, repaired, reused and then recycled or disposed of properly. This helps ensure we get the most value out of our resources and safety risks are managed when products are treated properly at their end-of-life.

By recycling these technologies when they reach their end-of-life, we can convert them into materials that can be reused in the manufacturing of new products. This diverts waste from landfill and reduces the need for new materials.

The NSW Government has invested \$10 million under the [Circular Solar program](#) in projects that increase the reuse and recycling of solar panels and batteries.

These projects will help keep solar panels and batteries out of landfill and provide end-of-life recovery options for this growing waste stream across NSW.

By 2025, NSW will see the construction of 3 new solar panel recycling facilities to recycle more than 10,000 tonnes of solar panel waste a year. We will also have our State's first lithium-ion battery recycling facility, capable of processing up to 2,000 tonnes of lithium-ion batteries a year.

We are also working with Victoria and Queensland to lead action on reforms to product stewardship arrangements for all batteries. Product stewardship is the act of minimising the health, safety, and environmental impacts of a product and its packaging throughout the entire lifecycle.

Environment Ministers from across Australia have agreed to accelerate work towards reforming the product stewardship arrangements for all batteries. We collectively recognise intervention is needed through the entire lifecycle of batteries and battery-powered devices. This includes reducing the risk of battery fires in the community, in waste trucks and waste and resource recovery sector facilities.

A key focus will be on ensuring the safe disposal of all types of batteries, particularly consumer electronics and e-mobility devices such as e-bikes and e-scooters, which pose the highest fire risk when not disposed of properly. This effort aims to reduce the chance of batteries ending up in our bins and landfills and posing risks to safety and property.

The NSW Government is preparing a draft Regulatory Impact Statement, which will assess the costs and benefits of potential product stewardship models to manage batteries through their lifecycle.

This work will enable governments to quickly identify the best reform option to reduce the risk of fires and deliver the most cost-effective and efficient approach for businesses and consumers.

## **ACTION 49**

**Prepare a draft Regulatory Impact Statement analysing options to reform product stewardship arrangements for all batteries.**





Leo-Pol Letromier / DCCEW

## Delivering a Gas Decarbonisation Roadmap

With growing rates of electrification and tight gas supply constraints across the country, we have committed to deliver a NSW gas decarbonisation roadmap in this term of government. This will provide clarity to the community on gas decarbonisation and the role of gas in the future of the energy system.

While many households and businesses are embracing cheaper and more sustainable alternatives to fossil gas, gas will likely remain an important fuel source for some sectors. Gas is used in a variety of ways, so we'll need to explore a range of approaches and decarbonisation pathways to reduce gas emissions without putting additional pressure on household energy bills.

Fossil gas is currently used by more than 1.5 million NSW households and businesses<sup>32</sup> and makes up just over 5% of NSW greenhouse gas emissions.<sup>33</sup> For many households and commercial businesses, gas is used for cooking, heating, and hot water. For some manufacturing businesses, it is used as a feedstock or for its high heating properties.

We will consult with community and industry to develop the gas decarbonisation roadmap.

### **ACTION 50**

**Develop a NSW Gas Decarbonisation Roadmap.**



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# 9

# Delivering the NSW Consumer Energy Strategy





The NSW Consumer Energy Strategy represents our vision for the future of the energy system for households and small businesses in NSW. A future where everyone can benefit from the energy transition. This includes lower energy bills, improved comfort and liveability of homes, and contributing to the global effort to reduce greenhouse gas emissions. We hope all households and businesses can join us on this journey to a more sustainable, affordable energy future.

At the same time, this strategy is just the beginning of the NSW Government's work to prioritise consumers and ensure everyone can benefit from and participate in the energy transition. We know there is more to do, and we will continue to build on this plan into the future.

We are working to improve the institutional architecture within the Government to ensure we can operate at our best, deliver this ambitious reform agenda and make it easier for customers to access government incentives and supports. This includes work across a range of education, skills, and industry sectors to help ensure the economy has the training and skills it needs to deliver on the energy transition.

As the policies and programs in this strategy are delivered, we commit to evaluating the success of their delivery and their outcomes, adjusting and amending actions as lessons are learned, and reporting on implementation of the strategy. We will provide an update on the implementation of this strategy's actions after 2 years, in late 2026.



# 10 List of actions

**Table 3: Actions in the NSW Consumer Energy Strategy.**

Setting targets to power our people and communities	
Measures	Delivery start date
<b>1.</b> Introduce new targets for: <ul style="list-style-type: none"> <li>• Solar and batteries: 1 million NSW households and small businesses having access to rooftop solar and battery systems by 2035 and 1.5 million by 2050.</li> <li>• Virtual power plants: 3,400 MW of virtual power plant participation by 2035 and 10,000 MW by 2050.</li> <li>• Safety: achieving 100% compliance with safety standards for energy saving technologies.</li> </ul>	2024
<b>2.</b> Set targets for 2035 and 2050 to achieve significant improvements in the energy performance of existing homes in NSW.	2025
<b>3.</b> Set targets for 2035 and 2050 to increase electrification of existing homes and small businesses in NSW.	2026
<b>4.</b> Establish a monitoring and reporting framework to collect and publish data on how we are tracking towards meeting these targets.	2025
New incentives to help households and small businesses cut their energy bills	
Measures	Delivery start date
<b>5.</b> Design and deliver a new Home Energy Saver program to help customers cut their energy bills and reduce their emissions.	Second half of 2025
<b>6.</b> Design and deliver a new \$5 million community energy program.	Second half of 2025
<b>7.</b> Invest \$1.8 million with Race for 2030 to support the NSW Consumer Energy Strategy, including new trials and research to inform our policies and programs.	2024
<b>8.</b> Deliver new incentives for households and businesses to install batteries and join virtual power plants through the Peak Demand Reduction Scheme.	Second half of 2024
<b>9.</b> Review the Energy Savings Scheme and Peak Demand Reduction Scheme by 2025 and consider options to enhance the schemes to help deliver the NSW Consumer Energy Strategy targets and objectives.	2025



New incentives to help households and small businesses cut their energy bills (continued)	
Measures	Delivery start date
10. Investigate incentives and other support for EV owners to install and use smart or bidirectional chargers.	2025
11. Investigate introducing minimum energy efficiency performance standards for rental housing.	2025
12. Deliver the new \$30 million Solar for Apartment Residents program to help apartment residents reduce their bills by investing in solar energy.	First half of 2025
13. Make energy efficiency upgrades to approximately 24,000 social housing homes by June 2027.	2027
14. Pilot the roll-out of solar and battery virtual power plants and full home electrification with select social housing premises.	2026
15. Trial new energy bill debt relief program for around 5,000 NSW households.	Second half of 2024
16. Conduct a review of NSW energy rebates to streamline existing rebates, improve the customer experience and ensure support reaches customers who need it most.	Second half of 2025
17. Investigate seeking a regulatory class waiver from the Australian Energy Regulator to enable distribution networks to support the uptake of local network batteries, subject to meeting criteria.	2025
18. Investigate options to support household and small business access to community batteries.	2026
Practical resources for informed energy decisions	
Measures	Delivery start date
19. Introduce voluntary disclosure of home energy performance ratings at the point of sale or lease in 2025, beginning with trials. The policy will be reviewed to inform when to transition to a mandatory disclosure scheme.	2025 <sup>f</sup>
20. Improve the customer interface and delivery infrastructure of the government to make it easier for households and businesses to access government programs and support.	2025
21. Deliver a new energy information and resources campaign to help households and small businesses save money on their bills and benefit from energy saving technologies.	2025
22. Fund community outreach programs to provide practical energy information and tips directly to energy consumers.	2025

<sup>f</sup> Contingent on the Australian Government completing the expansion of the nationwide House Energy Rating Scheme in the first half of 2025.

Practical resources for informed energy decisions (continued)	
Measures	Delivery start date
<b>23.</b> Advocate for urgent improvements to the Energy Made Easy website to include solar export charges, demand tariffs and other new types of tariffs that emerge.	2024
<b>24.</b> Require the Independent Pricing and Regulatory Tribunal to report on demand response and virtual power plant services of retailers in the annual energy retail market monitor report.	First half of 2025
Boosting your consumer rights and protections	
Measures	Delivery start date
<b>25.</b> Begin public consultation to expand the Energy and Water Ombudsman's jurisdiction to new energy services providers, such as virtual power plants and demand response services.	2025
<b>26.</b> Release a comprehensive package of reforms to improve consumer outcomes for NSW embedded network customers.	2025
<b>27.</b> Advocate for national reforms to require retailers to collect and provide advice to customers on the potential bill impact of new tariffs before their tariff is changed.	2025
<b>28.</b> Prohibit retailers from automatically assigning customers to demand tariffs without their explicit informed consent.	2025
<b>29.</b> Develop new model by-laws to help owner's corporations with the installation of energy saving technologies.	2026
<b>30.</b> Prohibit by-laws that block energy saving technologies due to appearance and examine any necessary exemptions to this requirement.	2026
<b>31.</b> Investigate opportunities to facilitate the delivery of kerbside EV charging infrastructure by Distribution Network Service Providers where appropriate.	2025
<b>32.</b> Introduce a right to install EV chargers in the <i>Strata Schemes Management Act 2015</i> so owners' corporations cannot unreasonably refuse EV chargers.	2026
<b>33.</b> Ensure customers do not pay net solar feed-in tariff charges after the introduction of two-way export charges.	2026
<b>34.</b> Work with NSW distributors to trial new ways to make solar export limits more flexible so customers can get more value from their solar panels.	2026

<b>35.</b> Work with Standards Australia to accelerate the adoption of new standards to enable greater solar capacity and energy exports at multi-tenanted sites in NSW.	2026
<b>Reforms to put safety and reliability first and help transition to a new energy system</b>	
<b>Measures</b>	<b>Delivery start date</b>
<b>36.</b> Boost compliance with technical and safety standards by increasing the number of electrical safety inspectors.	2025
<b>37.</b> Introduce a new digital smart compliance system to support monitoring and compliance with a range of standards.	2026
<b>38.</b> Introduce new support for industry training for energy saving technology installers and investigate new credentials to respond to training gaps.	2026
<b>39.</b> Conduct a review of the NSW electrical and gas safety regulatory framework.	2026
<b>40.</b> Use NSW Government programs to accelerate adoption of technical and performance standards for energy saving technologies.	2025
<b>41.</b> Support the introduction of national smart EV charging standards and vehicle to grid standards in NSW.	2025
<b>42.</b> Establish a notification system to encourage voluntary reductions in energy usage when there are risks of energy generation shortfall events.	2025
<b>43.</b> Begin public consultation on new measures to restrict solar export during emergencies when necessary to prevent blackouts and improve reliability.	2025
<b>44.</b> Require installers of energy saving technologies to provide necessary information required under the Australian Energy Market Operator's Distributed Energy Resources Register to the relevant market participants.	2025
<b>45.</b> Develop and implement a new energy technology data measurement and verification framework for NSW and publish data publicly where possible.	2026
<b>46.</b> Review the re-energisation de-energisation framework and safety management plan rules to take advantage of the benefits smart meters can deliver for households.	2026
<b>47.</b> Investigate options to ensure an equitable roll-out of smart meters and enhance the benefits of smart meters for NSW customers and the grid.	2025
<b>48.</b> Advocate for a national review of the regulatory framework for distribution network service providers in the changing energy market.	2025
<b>49.</b> Prepare a draft Regulatory Impact Statement analysing options to reform product stewardship arrangements for all batteries.	2024
<b>50.</b> Develop a NSW Gas Decarbonisation Roadmap.	Second half of 2026



# 11

## List of acronyms

<b>AEMC</b>	Australian Energy Market Commission
<b>AEMO</b>	Australian Energy Market Operator
<b>AER</b>	Australian Energy Regulator
<b>BASIX</b>	Building Sustainability Index
<b>BESS</b>	Battery Energy Storage System
<b>CCEW</b>	Certificate Compliance Electrical Work
<b>CSIP-AUS</b>	Common Smart Inverter Profile Australia
<b>DCCEEW</b>	NSW Department of Climate Change, Energy, Environment and Water
<b>DMO</b>	Default Market Offer
<b>EAPA</b>	Energy Accounts Payment Assistance
<b>ECMC</b>	Energy and Climate Change Ministerial Council
<b>ESC</b>	Energy Security Corporation
<b>ESS</b>	Energy Savings Scheme
<b>EV</b>	Electric vehicle
<b>EWON</b>	Energy & Water Ombudsman of NSW
<b>GEMS</b>	Greenhouse and Energy Minimum Standards

<b>GSL</b>	Guaranteed Service Level
<b>IEEE</b>	Institute of Electrical and Electronics Engineers
<b>IPART</b>	Independent Pricing and Regulatory Tribunal
<b>kW</b>	Kilowatt
<b>kWh</b>	Kilowatt-hour
<b>LED</b>	Light Emitting Diode
<b>MLC</b>	Member of the Legislative Council
<b>MW</b>	Megawatt
<b>MWh</b>	Megawatt-hour
<b>NABERS</b>	National Australian Built Environment Rating System
<b>NatHERS</b>	Nationwide House Energy Rating Scheme
<b>NEM</b>	National Electricity Market
<b>NSW</b>	New South Wales
<b>PDRS</b>	Peak Demand Reduction Scheme
<b>REZ</b>	Renewable Energy Zone
<b>SHEPI</b>	Social Housing Energy Performance Initiative
<b>SoAR</b>	Solar for Apartment Residents
<b>STC</b>	Small Technology Certificates
<b>VPP</b>	Virtual power plant

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# 12

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