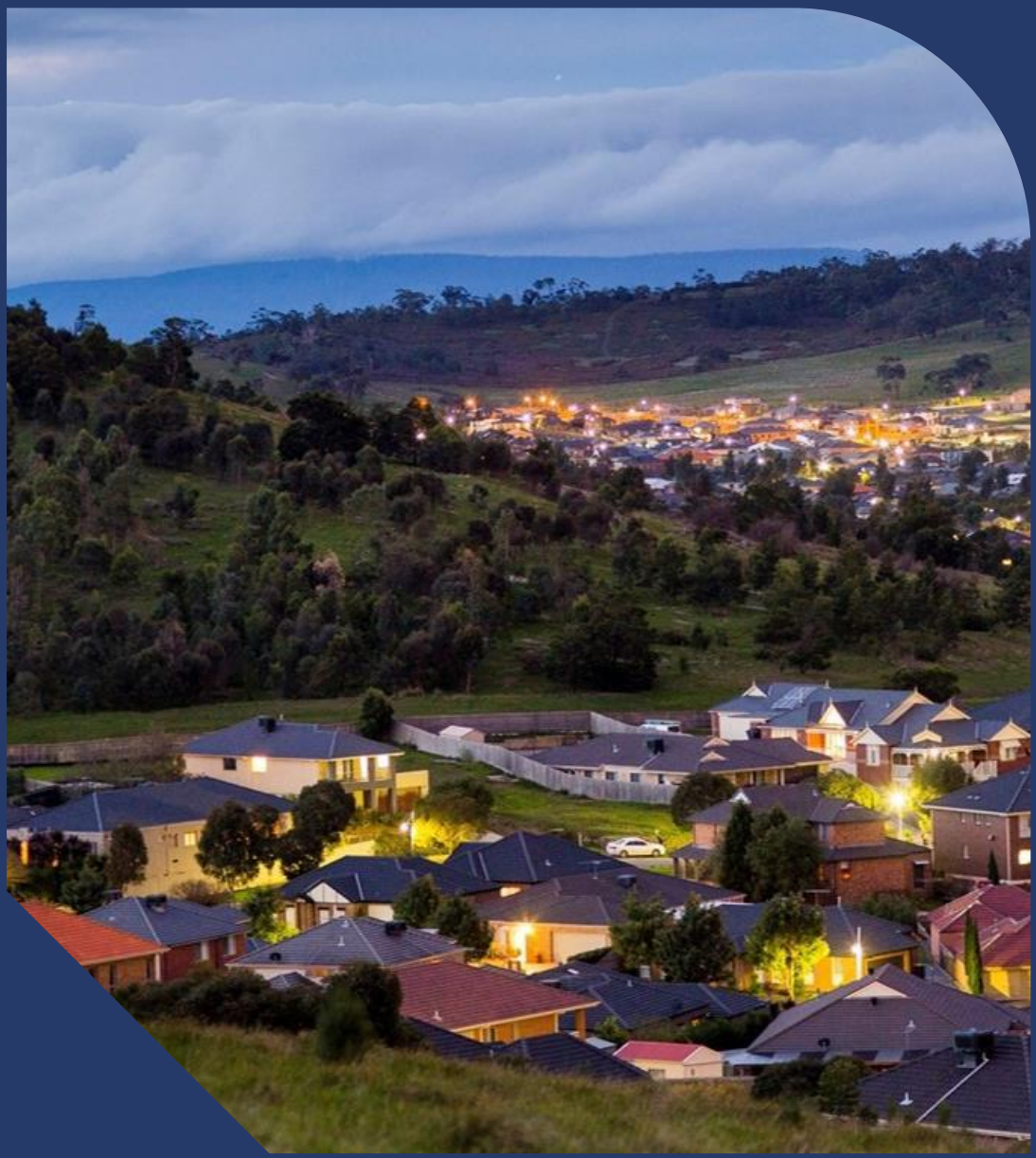
AusNet

Consumer Energy Resources (CER) Integration Strategy

Electricity Distribution Price Review (EDPR) 2026-31

Friday, 31 January 2025



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1. Purpose of this document

The consumer energy resources (**CER**) Integration Strategy (**Strategy**) sets out:

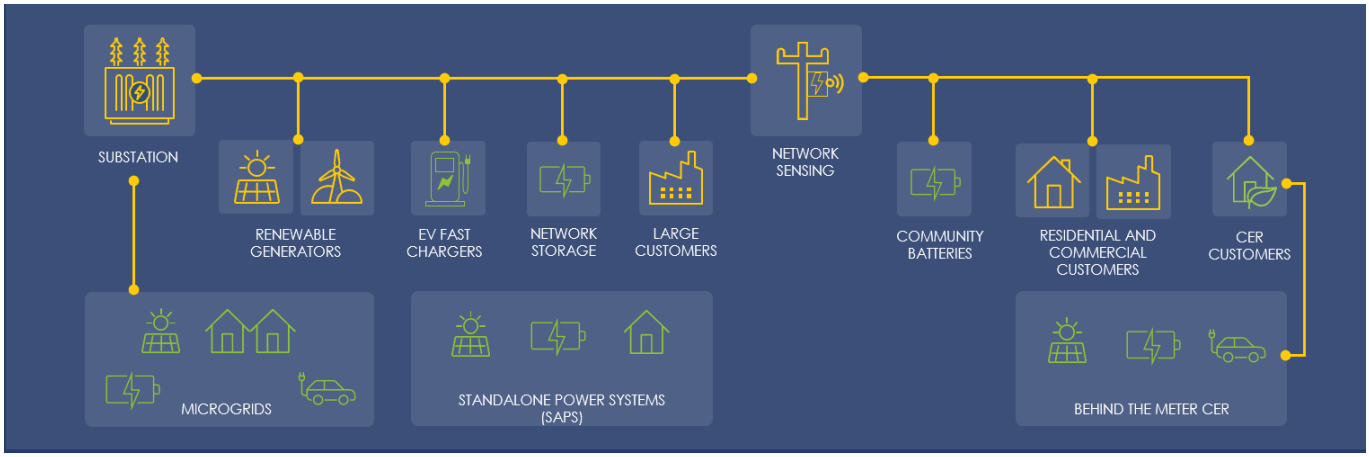
- AusNet's vision and objective for effective CER integration into the grid and the whole energy system.
- How AusNet plans to efficiently invest to integrate rapidly growing CER on our network, unlocking benefits for all AusNet customers and electricity users today and into the future.
- AusNet's transition to the role of the Distribution System Operator (**DSO**), to enable an effective integration of CER.
- Services and tariffs AusNet will offer to enable customers to maximise the value from their investment in CER.

For the purposes of this document, CER is defined as:

- rooftop solar
- batteries in the low voltage (**LV**) network (household and community batteries)
- electric vehicles (**EV**) and smart EV chargers (home or street level)
- flexible load (e.g., controllable hot water systems)
- stand-alone power systems (**SAPS**)
- microgrids.

Figure 1 summarises the different CER we expected will form part of AusNet's customer base by 2031.

Figure 1: Different CER AusNet expects to have connected to the network by 2031



Note: CER is shown in green.
Source: AusNet.

At present, the penetration of rooftop solar in AusNet's network is high at 29% (the highest in Victoria and third highest in Australia), with a relatively modest penetration of other CER. We anticipate the demand for rooftop solar to continue at a steady pace to 2031 driven by sustained government subsidies, reaching 39% of AusNet's customers by the end of the regulatory period. We also expect to see a surge in demand for all other CER, through a combination of government policy, technological developments and market forces making CER more accessible and affordable for many customers.

The fastest growth in CER during 2026-31 will be from EVs, anticipated to grow by more than 500% during the period. EVs are more than electric appliances—people and households have a specific relationship with their vehicles which hasn't yet been well examined or understood by the electricity sector. Due to the significant change, we have developed a separate EV Strategy, which is aligned to our CER Integration Strategy but considers a wider range of challenges and opportunities specific to the EV transition. Please refer to EV Strategy for details.

2. Government policy landscape

The Australian energy sector is in the midst of a one-in-century energy transition, necessary for Australia to reach 'Net Zero by 2050'. To support the transition, in 2022 the Australian Government committed to a 43% reduction in emissions compared to 2005 by 2030, and a target of 85% renewable electricity generation by 2030.

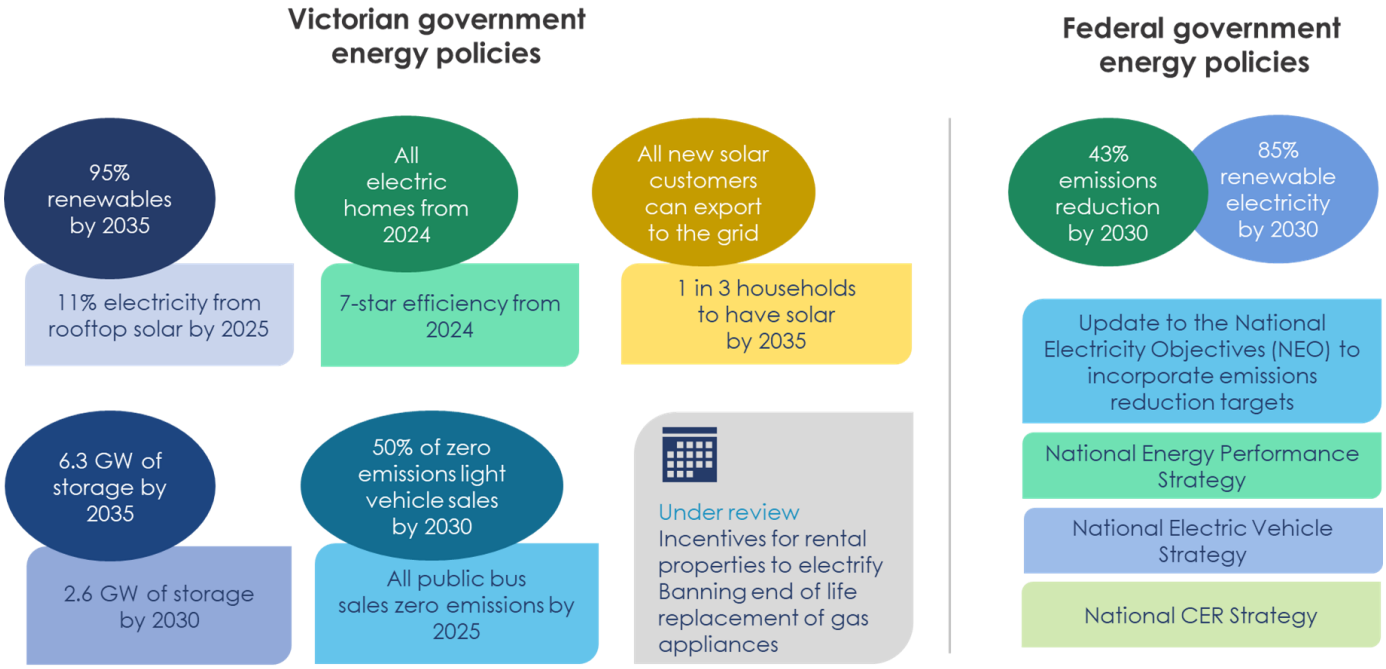
In 2023, the National Electricity Objectives (NEO)—an overarching set of objectives that guide energy sector investment—were updated to include the objective of meeting emissions reduction targets. This is a significant positive step towards unlocking more investment in renewable generation and grid capacity to ensure Australia's emissions targets are achieved.

The Australian government has also introduced several energy strategies since 2022, which are driving key practical reforms in the energy sector. These strategies are targeted at increasing the penetration of EVs, improving energy efficiency and demand management in the sector, and enabling an efficient and effective integration of CER into the grid and the wholesale market.

In Victoria, the energy landscape is different to most other Australian jurisdictions with more ambitious emissions reductions targets and electrification policies. The Victorian government is committed to achieving Net Zero by 2045, with a target of 95% renewable electricity generation by 2035. The government also has a clear mandate towards household electrification, including a ban on new gas connections in the residential sector from 1 January 2024. At the time of writing, the Victorian Government was considering bans of new gas appliances.

Figure 2 summarises key Victorian Government policies related to the energy transition at the time of writing.

Figure 2: Federal and Victorian government energy policies and targets



Source: AusNet

Supporting the implementation of these state and national government targets and strategies, there are a number or regulatory and policy reforms that have either been completed over the past few years or are currently underway.

Table 1 summarises the reforms, including what that means for AusNet and other distributors. The table also includes industry trials that are completed or underway, which are designed to inform policy and regulatory reforms. Regulatory reforms put new obligations on distributors to enable CER integration in a more prescribed manner and where this is anticipated we have included those requirements in our strategy. We have indicated in the table where we anticipate the current trials or policy reforms to result in new regulatory changes and obligations on distributors.

Importantly, our CER Strategy is closely aligned with the National Consumer Energy Resources Roadmap, which includes the following key reform priorities for distribution networks (amongst others):[1]

- M.1 Enable new market offers and tariff structures to support CER uptake

[1] Energy and Climate Change Ministerial Council, National Consumer Energy Resources Roadmap, Powering Decarbonised Homes and Communities, 2024.

- M.2 Data sharing arrangements to inform planning and enable future markets
- P.1 Enable consumers to export and import more power to and from the grid
- P.2 Faster, harmonised CER connection processes, including EV chargers
- P.3 Improve voltage management across distribution networks
- P.4 Incentivising distribution network investment in CER
- P.5 Redefine roles for power system operations.

Table 1: Summary of key regulatory and policy reforms related to CER integration

Key reforms	Status	Implications for distributors
Completed		
Victorian Emergency Backstop Mechanism	Two new license conditions, with staged implementation from 25 November to 1 October 2024	**New license condition** requiring distributors to remotely curtail or interrupt solar generation, including through the CSIP-Aus inverter standard. Includes changes to connection processes.
CER National Roadmap	Completed in 2024	**Informing policy design** for a range of services distributors provider related to CER, which are often considered to be part of a transition to a 'Distribution System Operator' (DSO)
AEMC Access, Pricing and Incentive Arrangements for CER	Final decision in 2021, applies to AusNet from 1 July 2026	**Requirement** to provide 'export services' as a standard service and unlocking efficient levels of export capacity.
Standalone power system (SAPS) regulatory framework	National regulatory framework legislated in 2023; Victorian regulatory framework legislated in 2024.	**Allows** networks to treat SAPS as regulated network assets.
EDGE trial	Completed trial with AEMO on CER aggregation for wholesale and network services, through a common data platform.	**Informing policy design** around the use of dynamic operating envelopes (DOE), non-network services and open data exchange (see in table below).
Flexible Exports trial	Completed trial with SAPN on use of DOEs for solar exports.	**Informing policy design** around the use of dynamic operating envelopes for export management.
AER review of regulatory framework for flexible export limit implementation	AER final guidance note on export limits published in October 2024.	**Guidance framework** on setting and communicate network limits to customers' inverters, supporting efficient uptake and operation of flexible export limits in a manner that promotes market development and maintains system security.
Underway		
Unlocking CER benefits through flexible trading	Rule change finalised in August 2024, new obligation to start in November 2026	**Requirement** to implement necessary system changes for NMI creation and potential billing requirements for multiple NMIs at a site.
AEMO's open data exchange	Design phase, likely to be initiated as a rule change in 2025.	**Requirement** to implement systems to connect to AEMO's open data exchange and be able to share data and services through the platform.
Network data sharing	Network visibility data trial to be finalised in early 2025 with recommendations to improve systems for data sharing	**AER recommendations and requirement on networks** to provide enhanced visibility of network data to assist decision making on CER connections and investments.
CER and EV smart charger standard development	Review underway by Federal Government, part of CER Strategy. Likely to include vehicle to grid and vehicle to home standards.	**Requirement** on networks to ensure compliance of CER and EV chargers with new standards, and to enable products from those standards, e.g., vehicle to grid exports and remote management of smart chargers.

EV data framework	Review underway by Federal Government.	**Requirement** on networks to collect more data around EV chargers and share with AEMO.
Community / neighbourhood battery Federal and Victorian government programs	Funding for 400 community batteries by Federal government and 100 by Victorian government. AER class ring-fencing waiver for leasing of network owned community batteries under the federal government program.	**Allows** networks to own and lease community batteries under the national program. **Informing policy reform** on the value of community batteries, including network components such as battery connections and tariffs.

2.1. Victorian Emergency Backstop Mechanism

Minimum operational demand is reducing in Victoria, with new record lows occurring on 1 January 2025 at approximately 1,400 MW. Declining minimum system load in Victoria increases the risk that AEMO cannot securely manage the electricity system. AEMO has indicated Victoria's secure minimum system load threshold is 1,600 MW and when system load drops below 1,600 MW, AEMO must take measures to ensure system security, such as exporting to other states, or increasing load using industry or battery loads.

However, there is a risk that AEMO will exhaust all available options to prevent a minimum system load emergency and introduction of the VEBM will provide AEMO with a new last resort measure to manage this risk. The risk of a minimum system emergency has grown as rooftop solar continues to be connected to the Victorian network.

To manage minimum operational demand risk the Victorian Government introduced the Victorian Emergency Backstop Mechanism (**VEBM**) to ensure all new and replacement solar systems connected to distribution networks can be remotely curtailed in a minimum system load emergency to maintain system security. This placed new obligations on DNSPs through new conditions in distribution licences.

The VEBM has been implemented in two stages:

- Stage 1: New and replacement distributed solar systems greater than 200 kW, from 25 October 2023.
- Stage 2: New and replacement distributed solar systems 200 kW and below, from 1 October 2024.

As at 17 January 2025, AusNet had around 12 MW of backstop enabled solar connected under the emergency backstop.

Foundational investment for CER integration

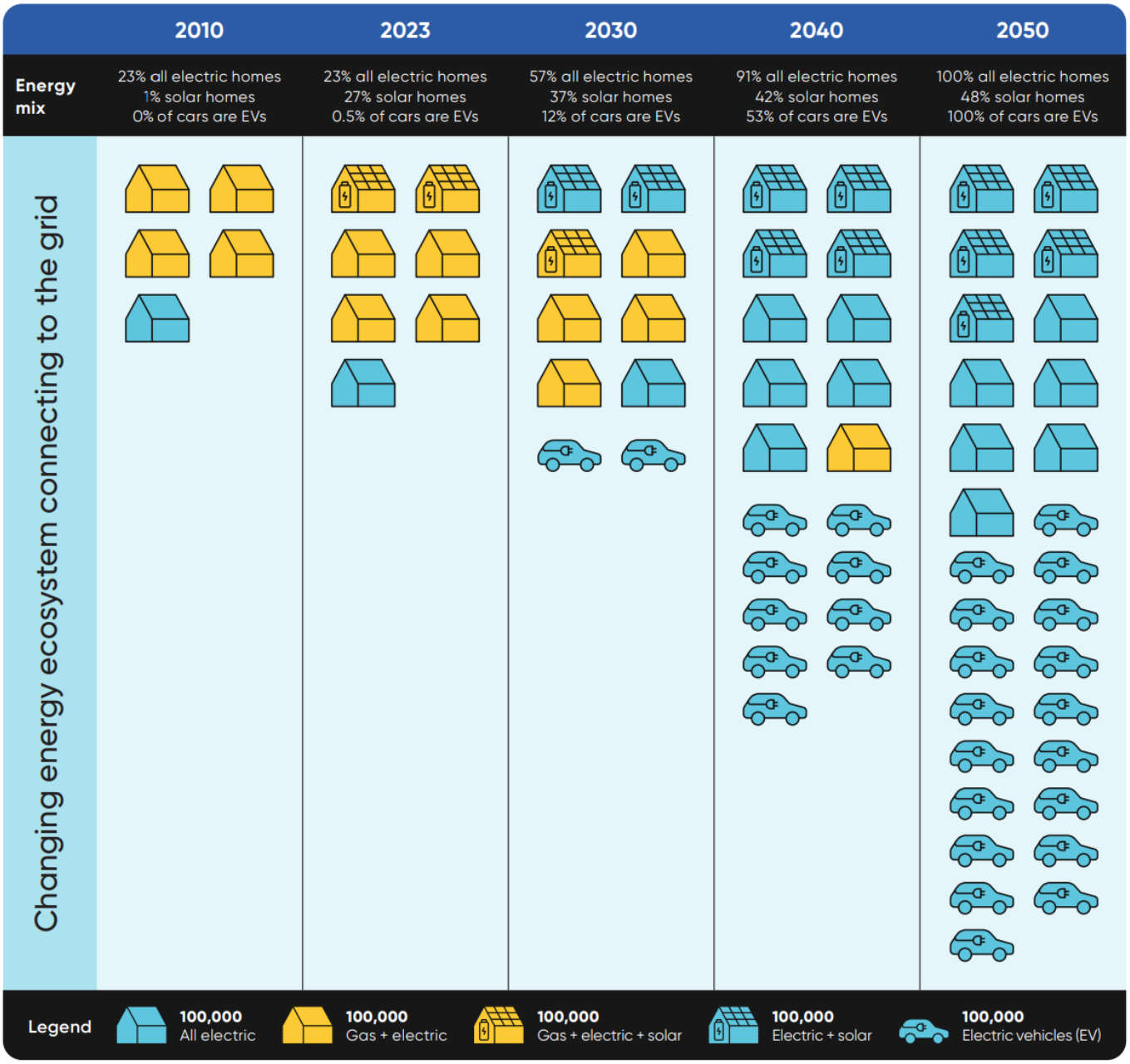
Due to the licence amendment, we have invested in ICT capabilities, people and process to ensure all new solar units are connected to a network utility server and capable of remote interruption or curtailment. While this will provide a minimum demand backstop measures, importantly, this investment will deliver foundational capabilities for smart inverter management, allowing us to roll-out Flexible Export services at scale. The investment in the VEBM unlock opportunities for customers to benefit from a wider roll-out of Flexible Exports sooner than they otherwise would have been able to.

3. Evolving customer needs

The growing penetration of CER is increasing the complexity of customer needs and the types of customers interacting with AusNet. The number of CER owned and used by AusNet customers is expected to grow from ~220,000 in 2023 (mostly rooftop solar) to ~630,000 by 2031, with a mix of rooftop solar, batteries and EVs. This is a material change in the number of factors and type of technologies distributors will need to plan for and integrated into the grid, which necessitates a foundational shift in how distributors operate and manage their customers' needs.

Figure 3 summarises historical and forecast customer trends in AusNet's network, from 2010 to 2050

Figure 3: Historical and forecast customer trends in AusNet's network, 2010 to 2050



Source: AusNet.

The trends shown in Figure 3 are derived from independent sources including:

- Household number forecasts are based on the 2023 Victorian Government's Victoria in Future (VIF) five-yearly forecasts of population, using the 'Victoria in Future Small Areas' data set.
- All other forecasts are based on AEMO's 2024 ISP inputs for Victoria, extrapolated for AusNet's network.

For further details on our customer and demand forecasting approach, please refer to our Demand Forecasting Methodology.

While not included in Figure 3, we also anticipate the number of SAPS and microgrids on our network to grow over the coming years, as part of the need and drive to improve community and network resilience to extreme weather events from climate change. For our 2026-31 regulatory period, we forecast about 42 SAPS by 2031, up from 17 in 2024.

3.1. Customer feedback and evolution of needs

We have done extensive research with our customers on their needs and preferences related to rooftop solar, batteries and EVs, whether they have the technologies or not. We have also engaged extensively with our 2026-31 Electricity Distribution Price Review (**EDPR**) stakeholders on their views and preferences related to CER integration.

We have summarised the key themes from our customers and stakeholders related to CER integration below. At times, our customers' and stakeholders' views have differed. We indicate throughout this document where our approach was informed by customer or stakeholder feedback, and where we have relied on direction from our EDPR stakeholders even if their feedback may have differed to those of our customers. We have only done this in instances where we believe our stakeholders were able to weigh up the trade-offs between service levels, affordability and efficiently at a more holistic level compared to feedback received from customers.

On the following pages we summarise three key themes coming out of our research and feedback, while Figure 6 provides a holistic view of how our customers' needs are changing, and the emergence of new customer types through the energy transition.

Customers value solar exports and do not want them to go waste

Through our customer research, surveying and workshops, we have received consistent feedback that solar energy should not be wasted and that solar exports should be celebrated, both as renewable energy resources but also to allow neighbours to share in that energy. Our customers see beneficiaries of solar to be both those sharing excess solar, and those using clean energy generated by their neighbours. Customers also don't like the idea of 'wasting solar' and see better-utilising solar as a good way to bring down overall energy costs.

In our Quantified Customer Values research[2], customers put a high value on solar exports to be enabled through a customer willingness to pay (WTP).

Figure 4: Customer preferences around investment in solar exports

Both households ($52.26pa) and businesses ($197.74pa) customers attach a positive value to investing to enable more solar exports.

WTP to avoid 'spilling solar' is higher than avoiding managed charging, with customers keen to minimise electricity wasted.

Willingness to pay	**$52.26** $4.38 per month	**$197.74** $16.48 per month
Rebased willingness to pay	**$28.32** 20.95% of total	**$120.48** 19.46% of total
Willingness to accept	**$286.12**	**$651.91**

Notes: WTP = Maximum amount a customer is willing to pay for a service. This can vary based on factors such as income, preferences, perceived benefits, and market conditions; rebased WTP = the maximum amount a customer is willing to pay for a service determined by their willingness to pay for the entire bundle of services; willingness to accept (WTA) = Minimum compensation a customer would accept to lose a service. It depends on various factors such as the individual's valuation of the item, opportunity costs, and personal circumstances.

Source: AusNet.

Overall, surveyed customers expressed the following perceptions:

- Customers view curtailed solar is wasteful and believe using electricity generated by rooftop solar offers overall benefits.
- Many customers see the ability to export solar energy as a right and a key part of the "solar value proposition" promoted by the government and solar installers.
- Some customers perceive AusNet curtailing solar as a failure of both AusNet and the government to work effectively behind the scenes.

[2] Please refer to the Quantified Customer Values - Willingness to Pay report.

This was broadly consistent with customer workshop findings[3], where customers expressed willingness to pay extra for the network to enable solar exports, where approximately $40 per year was seen as a reasonable extra cost.

We understand the customer sentiment on solar exports; however, we also need to consider whether there are unintended cross subsidies through enablement of exports at any cost. For that reason, we have engaged extensively on our export enablement proposal with our Future Expert Panel and our Tariffs and Pricing Panel. Our panel members are highly supportive of a move to Flexible Exports as a more efficient and more equitable way of managing exports in the future. They are also supportive of investment that unlocks efficient levels of expenditure based on the AER's CECV and emissions reduction value. We agree with this approach, and while customers typically would like to see all solar exports utilised, we consider it is important to maintain efficiency of our investment in the long-term interest of all consumers.

There is lack of understanding of the highest value proposition of CER

Through engagement with our EDPR panels and our customers in workshops, we have heard that many customers find the different aspects of the energy transition complex and unclear, and that there are mixed messages about the value of renewable energy and CER—many customers are confused by the strong push for investment in renewable energy and falling feed in tariffs (also in comparison to the premium feed in tariff that was introduced in 2009, which has not declined). While we are seeing an increase in customers seeing more value in self-consumption over solar exports, the overall level of understanding of the benefits of the different type of CER is still low.

In the box below we've summarised some research results from our Energy Sentiment survey.

71% believe installing batteries will save their household money by reducing reliance on grid energy.

73% think solar panels will significantly reduce their reliance on the grid.

50% believe feeding energy into the grid is always beneficial for the grid.

24% believe an electric vehicle (EV) can power their home when not in use.

22% think they can only use solar energy when the sun is shining.

30% believe an EV consumes significantly more electricity than other household appliances.

21% think it is cheaper to charge an EV at home than on the street.

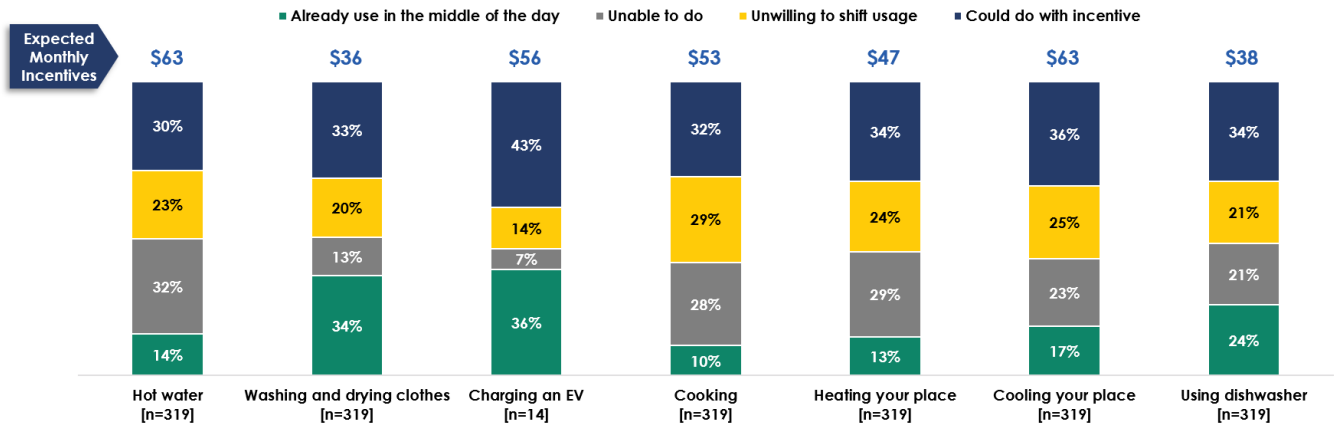
Coming out of the research and engagement with the panels it has become clear that customers need more information and communication around the energy transition, the benefits of CER for all customers and how they can get the most value from their investments in CER.

There is some interest in load shifting but rewards need to be high

As part of our bi-annual Energy Sentiment survey, we test customer willingness to shift usage to a different time of day for a financial reward. The results from the Autumn 2024 survey show that one-third of customers are open to shifting their usage during the day for an incentive, but the incentives would need to be high (see Figure 5). Clothes and dishwashing tasks show greater flexibility with lower incentives, while heating, cooling, and hot water require higher incentives. This is likely because washing machines and dishwashers offer more flexibility in usage timing, whereas heating, cooling, and hot water are essential for maintaining comfort and are typically used on demand.

[3] Please refer to the Customer Workshops - Round 2 Report.

Figure 5: Willingness to shift energy usage for an incentive

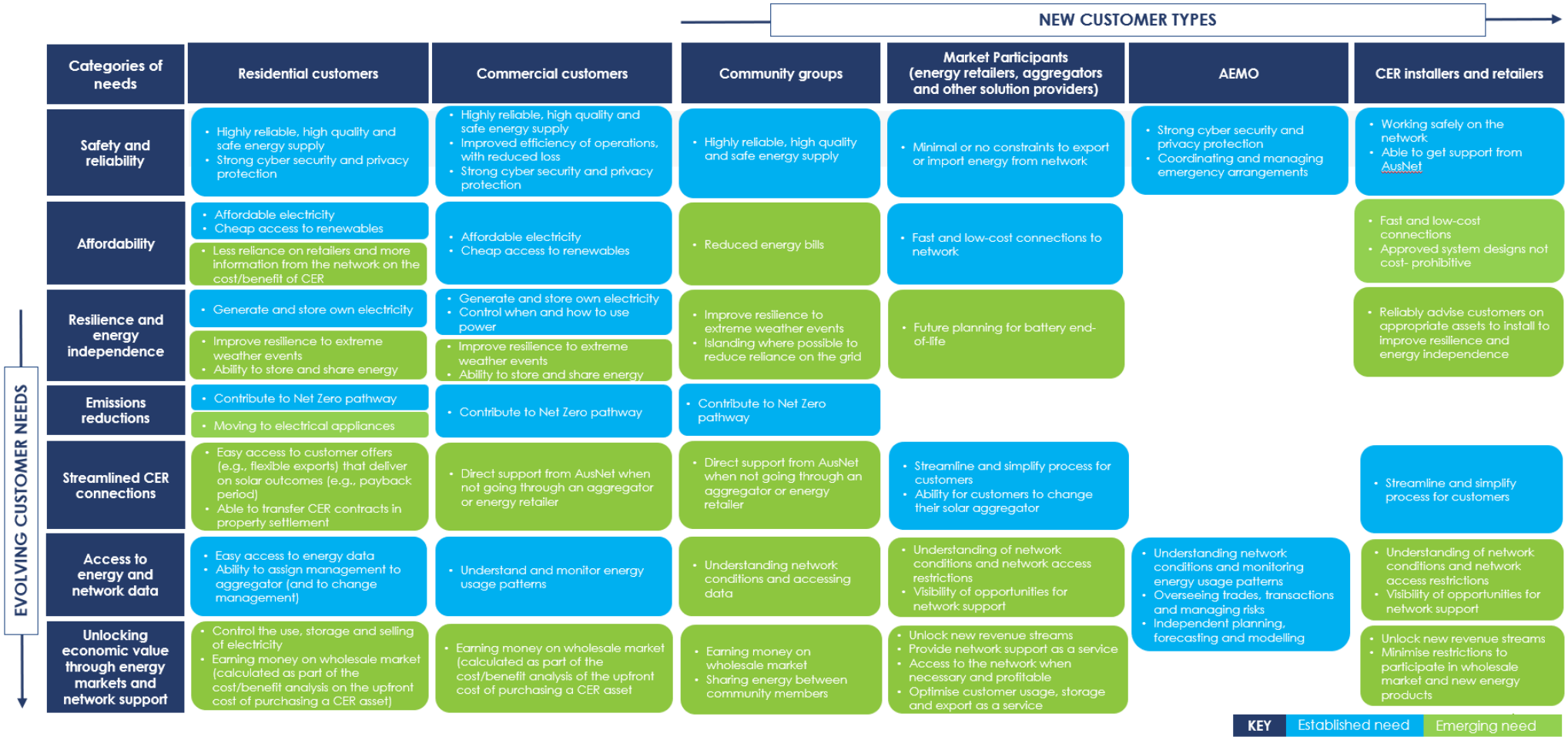


Source: AusNet.

Another way customers can benefit from change in their behaviour is in response to time of use tariffs. Approximately 40% of AusNet customers are currently on time of use tariffs, however, our smart meter data shows there is almost no difference in evening peaks between customers on time of use and single rate tariffs. This could be because of lack of customer understanding of the tariff they are on, and what opportunities are available for them to optimise their energy use and save on energy bills. However, many times, as Figure 5 shows, customers simply prefer convenience or are unable to change their behaviour.

We engaged on the potential to rely on customer response to incentives or tariffs in our demand forecasts and investment plans with our Future Network and Tariffs and Pricing panels, and we received feedback that having a high assumption on demand response is likely to be incorrect, as there is insufficient evidence at present that customers can or are willing to respond.

Figure 6: Evolving customer need and customer types through the energy transition



4. AusNet CER vision and objective

AusNet's CER vision and objective is informed by customer and stakeholder feedback, and the changing policy and regulatory landscape.

Figure 7: AusNet's CER vision and objective

5. CER integration philosophy

Integrating and managing the anticipated volumes of CER on our network will becoming increasingly needed and challenging, as more customers and technologies become both importers and exporters of energy. This will require us to transform our operations into the role of a DSO, operating the network more akin to a complex energy system, with two-way flows and various technologies interacting with each other. However, we will still need to ensure we build sufficient network capacity to meet changing customer energy needs.

Our strategy takes a holistic approach and looks for the most efficient ways to integrate CER into the grid and the energy system, with a mix of smart grid technology and new network capacity. This section covers our investment philosophy in detail, including what new services and tariffs will be available to customers during 2026-31.

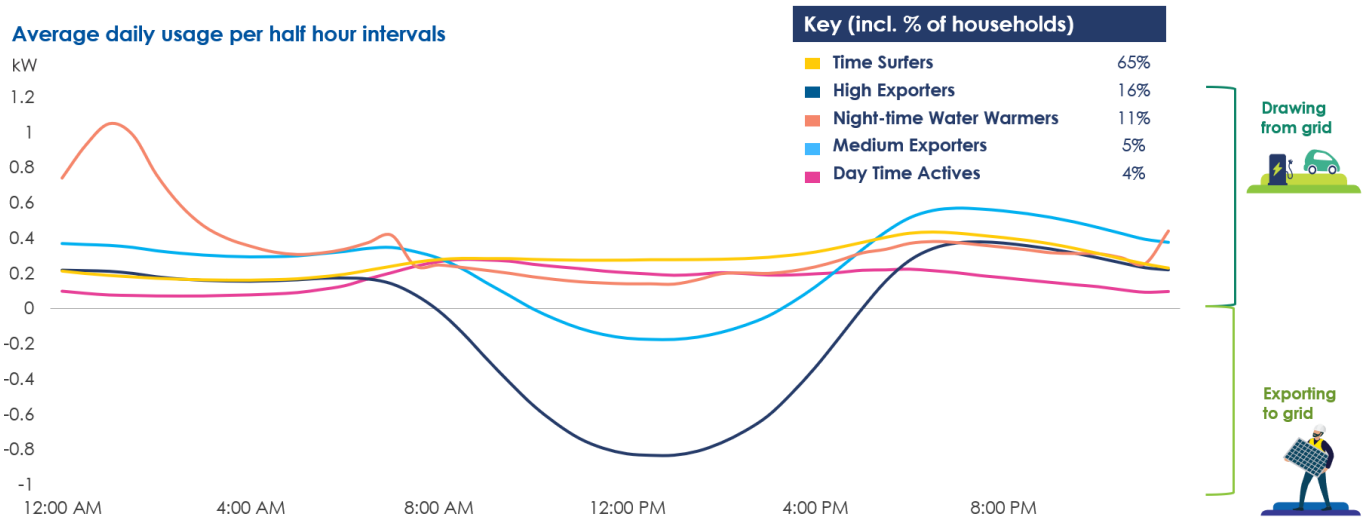
5.1. Growing network challenges

Managing maximum and minimum demand challenges

The way our customers use electricity and interact with the electricity network has changed rapidly over the past 5-10 years, with the rapid uptake of rooftop solar.

To help us better understand how our customer usage patterns our changing, in 2022 we undertook a comprehensive analysis of smart meter data and developed five distinctive customer segments based on their average usage patterns. Figure 8 demonstrates the average usage patterns of the five segments, and the full details of the study can be found here: AusNet's Customer Segmentation.

Figure 8: AusNet's five customer segments, based on average daily usage



Notes: customer segment names (e.g., Time Surfers) are purely descriptive, based on exhibited usage pattern during the day. Nigh-time Water Warmers have peaks in the early morning hours which are controlled by AusNet, through a hot water control scheme.
Source: AusNet.

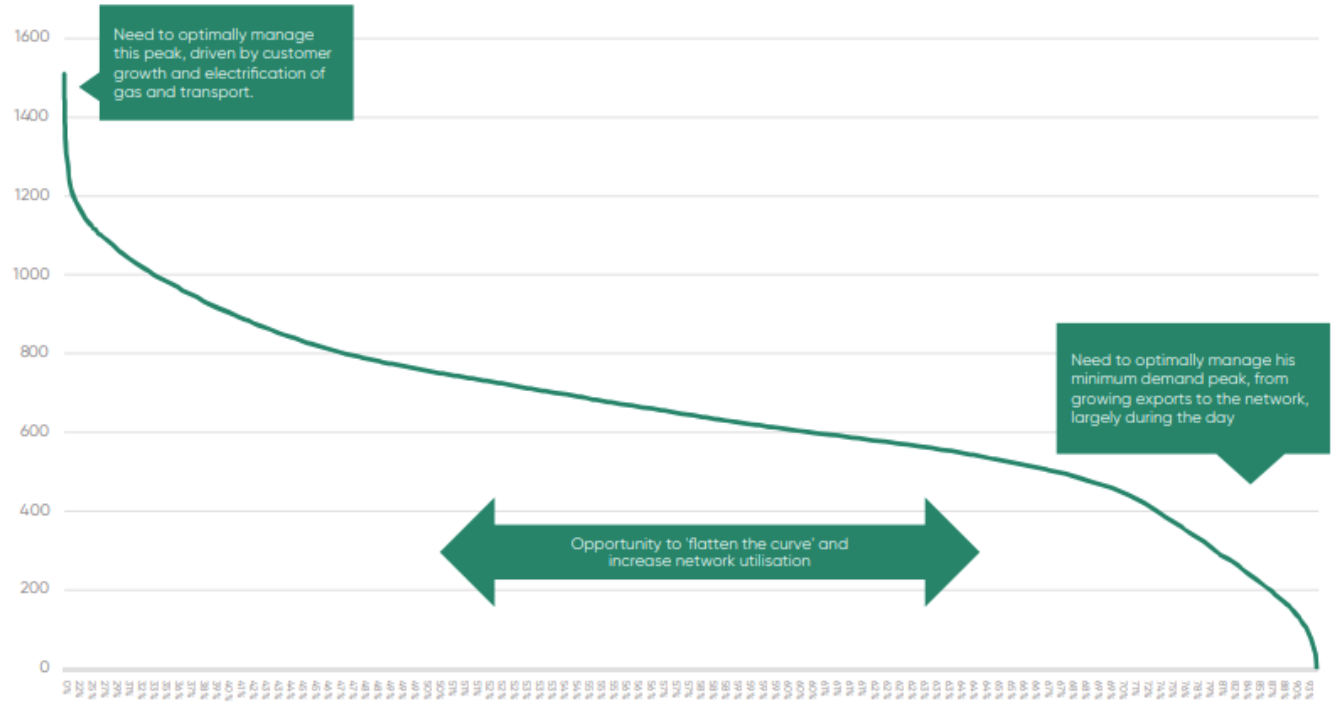
As the figure demonstrates, more than 20% of our customers are net exports in the middle of the day, with the majority (High Exporters) exporting to a mid-day peak that is significantly higher than any evening peak by any customer segment. Medium Exporters (which typically have smaller systems compared to High Exporters) are also high evening users, much higher than other customer segments.

With the increasing penetration of rooftop solar, there is an increasing challenge for networks to manage both maximum demand but also declining minimum demand. As the data demonstrates, while customers with solar are creating new exporting peaks during the middle of the day, they are also continuing to use electricity to the same level, if not more, compared to customers without rooftop solar.

As a result, distributors are increasingly playing a role of managing two extreme ends of the spectrum of demand, needing to maintain the network for two-way flows across the different parts of the network. Two-sided network management requires more dynamic management of the network voltage profile, especially at the low voltage level and therefore more sophisticated strategies to manage power quality for customers.

Figure 9 demonstrates the demand duration curve and the need to manage both ends of the spectrum.

Figure 9: Demand duration curve and need to manage both ends of the spectrum (illustrative)



Source: AusNet.

As discussed in section 2.1, increasing exports are also creating wholesale market operational risks. Victorian distributors will play a bigger role in providing minimum demand services to AEMO, through the VEBM.

Cross-subsidies between customers with and without rooftop solar

Because exporting customers do not pay the variable network tariff component when exporting, customer who have high exports typically pay a lot less in network charges. In AusNet's network, High Exporters pay about half network chargers compared to Time Surfers. This creates unintended cross-subsidies where customers without rooftop solar pay a higher network charge, despite all customers contributing to the key cost drivers for the network—evening peak—and despite customers with rooftop solar putting additional cost on the network to manage export services. With a growing penetration of rooftop solar, and with increasing system size, more and more customers will be in the High Exporters segment, which means they may contribute to network costs without a proportional change in network charges and with higher cross-subsidies being borne by customers without rooftop solar.

Using the Customer segmentation study, we conducted a high-level analysis of the difference in cost recovery from exporting and non-exporting customers based on estimated time of use tariffs in 2030-31, without a solar soak period. The table below shows non-exporting customers (Time Surfers) pay significantly more than High Exporters, despite using higher network 'bandwidth', noting that this measure is a crude proxy for network costs.

Figure 10: Difference between exporting and non-exporting customers regarding network usage and contribution to network charges, by 2031, excluding solar soak period

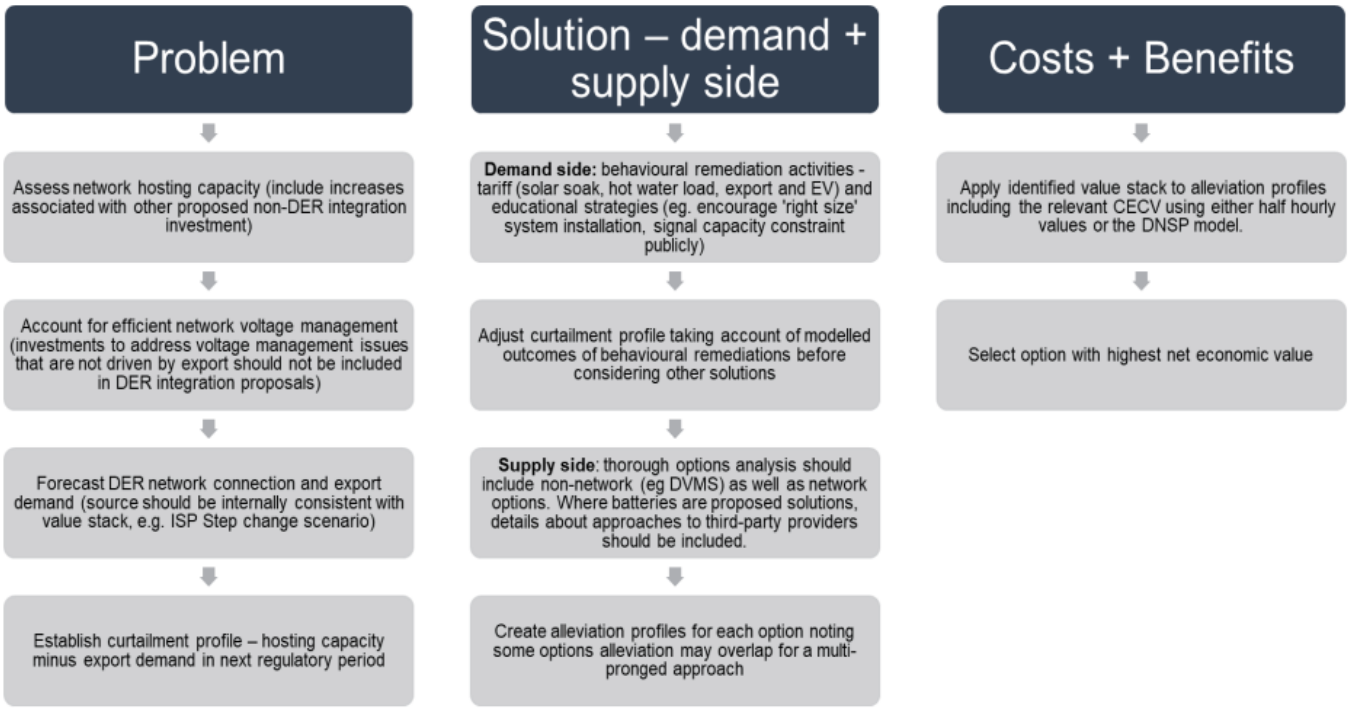
Segment	Maximum demand	Minimum demand	Capacity used (max-min demand)	Network charge
High Exporters	0.4 KW	-0.8 kW	1.6 kW	$351
Time Surfers	0.4 KW	0	0.4 kW	$670

* Indicative network charges based on time of use (TOU) tariffs.
Source: AusNet.

5.2. Prudent and efficient CER integration investment

Our approach to CER integration investment is aligned with the AER's distributed energy resources (DER) integration expenditure guidance note. The AER's proposed process for the development of CER/DER integration expenditure shown in Figure 11**Error! Reference source not found.**. We cover our alignment to this process in more detail in this section.

Figure 11: AER's process for developing CER/DER integration investment proposals



Source: AER, DER integration expenditure guidance note, June 2022, p. 5.

Estimating intrinsic hosting capacity for CER

As per Figure 11, our process includes initially assessing network intrinsic low voltage (**LV**) hosting capacity at the end of the regulatory period. This intrinsic hosting capacity will represent the level of CER exports the network can accept without needing to make any investments in 2026.

To do this, we have developed an in-house model that captures actual network conditions and a range of scenarios for modelling of customer energy usage and demand over the modelling period, based on forecast maximum and minimum demand. The different scenarios relate to changes in customer behaviour, including load shifting and CER technology uptake. The key drivers of outputs in the model include:

- Forecast demand—maximum and minimum demand over the modelling period per asset in AusNet's network (forecasts are at feeder level, disaggregated to distribution substation level in the model). These are calculated by AusNet outside of model and fed into the model separately. Demand side factors, such as tariff response and limits on rooftop solar size, are incorporate into the model indirectly through forecast demand (demand side responses are intrinsically forecast in demand through historical trends).
- Customer segmentation—capturing different usage pattens by the different customers, and ability to change them to capture impacts of changes in behaviour from network tariffs, take up new technologies, etc.
- Export service offer—capturing the type of exports service each new solar customer will expect when connecting to the network. From 1 July 2026, our export service offer includes 70% take-up of flexible exports to maximum system size.

Our model uses actual measured voltages, thermal limitations, loads and other power system monitoring metrics (including from smart meters and SCADA) in preference to using power system simulation. This approach requires fewer assumptions regarding the performance of the network and its characteristics.

Beyond estimating available export capacity, the hosting capacity model is also used to:

- Inform the standard export service we offer, which will impact the need for investment for CER enablement.
- Plan for investment in the LV network for both exports and imports, including the impact of electrification of gas and transport.

This approach to calculating the intrinsic hosting capacity is supported by our EDPR Future Network panel.

Prudent and efficient investment planning

As per Figure 11, when estimating investment needed for CER integration, we first estimate efficient network voltage management investment. AusNet needs to operate within the defined voltage limits in the Electricity Distribution Code of Practice (EDCOP). Non-compliance is subject to high financial penalties.

We use the hosting capacity model to estimate where we might see voltage limitations on each AusNet asset over time (to distribution substation level), based on growth in CER, changes in customer load profiles, etc. The model then prioritises investment in voltage improvement to meet compliance over the given period, by applying an economic model that values avoided generation curtailment (that would otherwise happen from overvoltages) using the AER's Customer Export Curtailment Value (**CECV**) and the AER's Value of Emissions Reduction (**VER**), as well as increased consumption due to over-voltages. To estimate the least cost investment, the model assesses various operating and capital solutions and weighs up their costs and ability to deliver required improvements. We engaged on our approach to efficient investment in voltage improvement (i.e., power quality) with our EDPR Availability panel, and they supported efficient investment to improve performance to efficiency industry benchmarks, which is what our model does.

Once the efficient levels of voltage management investment are established, the model estimates efficient levels of network capacity required to enable growth in local demand in the LV network (including single wire earth return (**SWER**) lines). These are largely driven by growth in EVs and the electrification of gas, and efficiency is measured using AusNet's value of customer reliability (**VCR**), as measured in the QCV research.

Network capacity is estimated in each case using demand and curtailment profiles of customers and their CER, which are adjusted for forecast demand and usage profiles, consistent with Figure 11. This approach ensures our model is technology agnostic (i.e., trends come from demand forecast, which include a combined impact of various technologies on both maximum and minimum demand).

Only when all the assessment on network capacity has been done to manage increase in demand, the model estimates network capacity required to unlock any additional efficient levels of exports, using the AER's CECV and the AER's value of emissions reduction (**VER**). The model recognises export capacity that is unlocked through investment in both voltage management and LV demand growth management, before determining any additional efficiency export capacity that may be unlocked.

We tested this approach with our EDPR Future Network panel, and they were supportive of the approach that demonstrates efficiency of investment and reliance on AER values to measure efficiency in export-related CER investment (CECV and VER). We know our customers put a positive value on all exports; however, we have chosen to pursue only investment that delivers efficiency, in line with the Future Network panel's views, as we agree with the panel that not all exports have value and some may cause costs and much worse customer outcomes if unmanaged (like minimum system load risks potentially leading to wide power outages).

In the case of the VCR, the Future Network panel supported us using our AusNet specific VCR, derived through our QCV research, as AusNet specific value better reflects the value customers place on reliability, particularly in regional areas.

Our approach also aligns with the Future Network panel's preference that we consider demand and export drivers holistically, to 'marry up' the different drivers and consider where one investment can unlock value for both. Our model does that.

Finally, our approach takes into account strong customer feedback that flexibility to use their CER (including EVs) is important, and that they are not ready to accept a degradation in service, e.g., in the form of controlled or managed EV charging, to reduce network costs. For that reason, we have not assumed that residential customers will be subject to managed EV charging by networks during 2026-31, however, we know EV customers are already responding to retail price signals, and we expect that to continue. This assumption is captured in our demand forecasts through use of AEMO's EV charging profile assumptions. We also have an innovation project in the pipeline in 2026-31 on flexible demand from residential customers (see section 5.5).

Finding least cost solutions

As per Figure 11, our investment approach analyses various options to enable investment to meet compliance obligations and unlock efficient levels of network capacity, including consideration of options such as:

- dynamic voltage management system (DVMS)
- distribution substation and SWER line upgrades
- transformer tapping and phase rebalancing.

The model then estimates the most efficient investment requirement and timing of investment, as a total of operating and capital expenditure.

However, the model does not consider the benefits of transformational or foundational type of investment that can unlock a range of benefits for CER integration. For example, the model does not incorporate the benefits that can be achieved from exploring opportunities from our investment in ICT to meet new VEBM requirements. Rather, by following the AER's approach in Figure 11, we estimate the traditional network investment required to enable and efficient and prudent integration of CER. We then consider whether we can efficiently defer this network investment through other options, including through Flexible Exports, or other flexible services and non-network solutions that are included in our transition to the role of the DSO. We cover this in sections 5.3 and 5.4.

Our EDPR Future Network panel are supportive of networks finding the right balance between traditional network investments and smarter solutions to better integrate CER. They prefer us to continue to explore more efficient ways to manage network challenges and improve network utilisation, reducing the need for network augmentation. They are particularly supportive of a move away from static export limits towards the use of Flexible Exports, which increased network utilisation and defers augmentation related to unlocking more exports capacity. They are also supportive of use of non-network solutions, or 'flexible services' provided by customers or third parties, to reduce network augmentation.

The panel have also asked AusNet to consider managed EV charging connection options for customers, to reduce the network cost related to electrification, particularly in the LV network. However, as described above, we have not assumed a wide scale use of managed EV charging in the residential sector, however, we have assumed a level of 'flexible demand' for large customers, including new customer types like EV charging stations and grid-scale battery. We also have an innovation project in the pipeline in 2026-31 on flexible demand from residential customers.

5.3. Transition to DSO

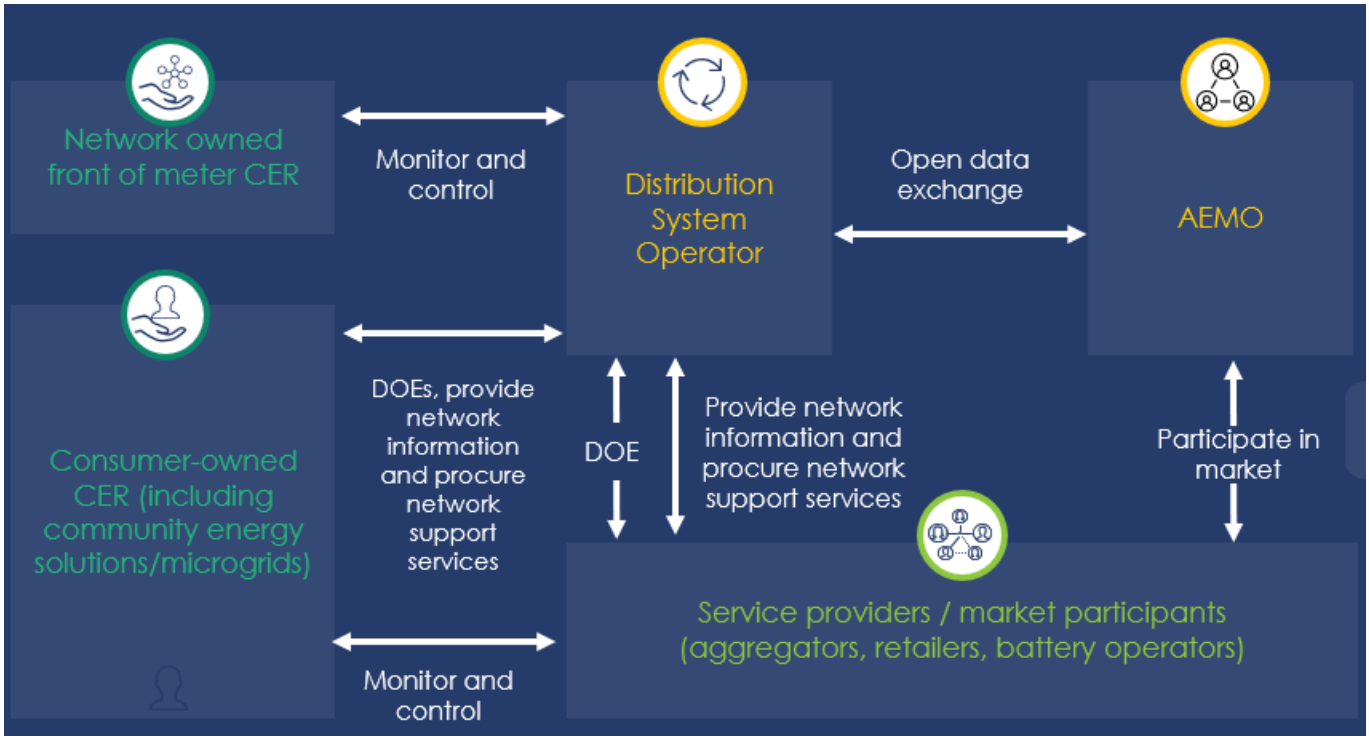
As the distributed energy system becomes more challenging to manage, including through an increase in two-way flows and the need to manage more interactive and flexible CER, we need to find smarter solutions to manage the challenge, to meet new customer expectations and to defer need for network augmentation.

Our transition to the role of the DSO is also part of the whole energy system evolution and the changing roles and responsibilities across the whole energy ecosystem. As more and more customers invest in CER, and with the emergence of new service providers such as CER aggregators and community energy solution providers, the interactions between the network, our customers and AEMO are all set to change. This has already been trialled through various initiatives in the NEM, including our AEMO/AusNet EDGE trial.

Figure 12 summarises the likely relationships between AusNet as the DSO, our customers, future service providers and AEMO. Our strategy assumes a gradual transition towards this new ecosystem based on expected policy and regulatory reform in Victoria and efficiency of investment related to the transition. The future state presented in Figure 3 is also supported by the Victorian Government.

As part of this transition, we will provide new services to customers, which we discuss in the next section.

Figure 12: Proposed DSO initiatives and how they will benefit AusNet customers and other energy users



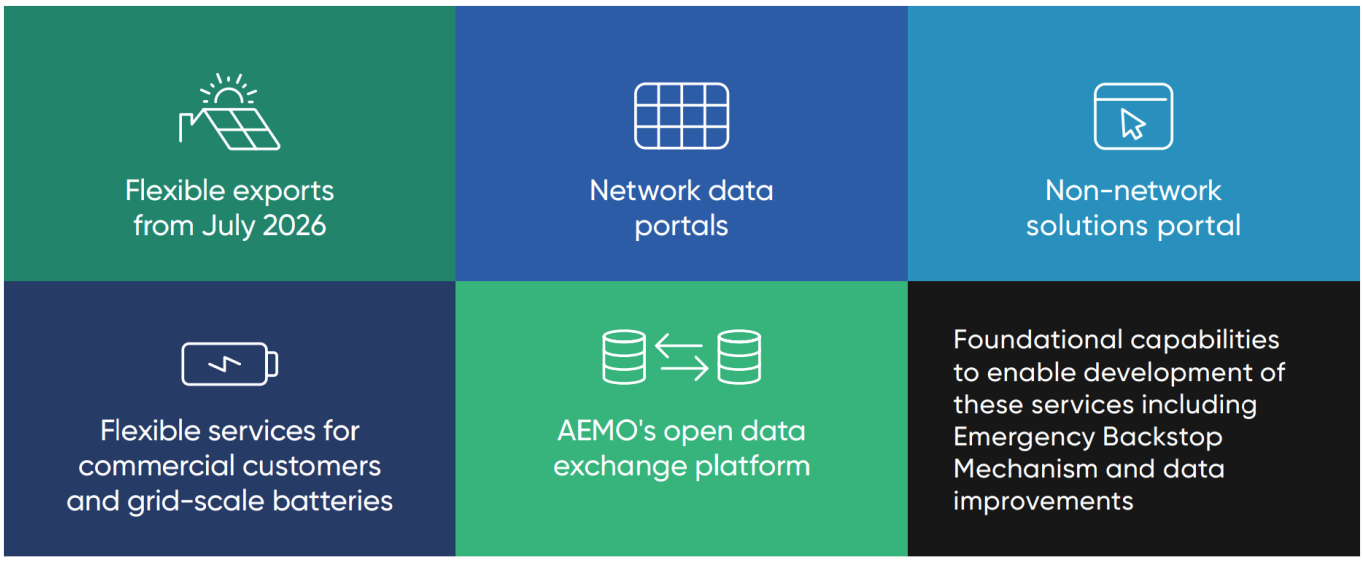
5.4. New CER services and tariffs

Our prudent investment approach and transition to DSO enable us to introduce a set of new CER services and tariffs, that will allow customers to get the most of out their CER investments but will also benefits all AusNet customers and other energy consumers.

New services

Figure 13 summarises the new offers during 2026-31.

Figure 13: New CER services AusNet will offer during 2026-31



We are prioritising Flexible Exports to increase network utilisation

As mentioned above, unmanaged solar exports can have negative impacts on grid stability, however they can also have a negative impact on wholesale market stability, which AEMO needs to manage. To provide AEMO the tools to manage minimum operational demand, the Victorian Government has mandated Victorian distributors to introduce the Emergency Backstop Mechanism. This mechanism requires all new household solar installations from 1 October

2024 to have live communications with network systems, for remote solar generation interruption or curtailment if called upon by AEMO.

With the mechanism installed in Victoria, there is an opportunity to use those communications capabilities to manage solar exports more efficiently and reduce risk of grid or market instability. We propose to do this by sending daily export limits to solar systems based on network conditions at the time—this is called Flexible Exports. By taking this approach, we are only constraining solar exports at the time when they are likely to either cause network constraints or create minimum demand risk. This is a more efficient and more equitable way of managing exports than applying conservative static constraints that are on a 'first come first serve' basis.

Therefore, Flexible Exports will enable more efficient export capacity than use of static limits, and this can be achieved at a low incremental cost given the given the bulk of the necessary communications infrastructure has already been installed through the Emergency Backstop Mechanism. Flexible Exports also increase the utilisation of the existing network and defer network augmentation, estimated at approximately $30m over 2026-31.

As we've already invested in capabilities to meet the new VEBM requirements, our transition to Flexible Exports for all customers from 1 July 2026 will come at a much lower cost than if we were starting from scratch. By moving to offer this to all customers, we are making the most of our foundational investment to date, as well as increasing network utilisation while unlocking more exports as we are only constraining solar exports at the time when they are likely to either cause network constraints or create minimum demand risk. This is a more efficient and fairer way of managing exports than applying conservative static constraints that are on a 'first come first serve' basis. A move to Flexible Exports is highly supported by our EDPR Future Network panel.

We are also proposing to improve our network data sharing through portals and platforms, as well as integrate into the planned AEMO CER data exchange / open data exchange platform. These are driven by customer need and anticipate regulatory reform that will determine the extent to which we will need to provide these services.

The extent of the provision of other flexible services is based on the efficiency assessment of whether the cost to enable the service and the benefit from the service are more efficient compared to network augmentation (e.g., a move to more non-network service procurement or demand management for large customers), or whether the new services are required to meet government policy objectives or new regulatory requirements. Where we have identified an opportunity to defer network investment through more efficient use of the network and non-network services, we have included that in our 2026-31 forecasts.

For more details on our DSO proposal, refer to the document ASD – DSO business case.

Our Flexible Exports proposal is consistent with the AER's Export limit guidance note

Our Flexible Exports proposal is an efficient alternative to the use of static limits for export enablement. The level of exports enabled through our Flexible Exports proposal is an efficient level of exports based on the AER's DER Integration guideline for modelling hosting capacity and alleviation profiles. Our modelling assumes that at times of inefficient export enablement, customer exports are curtailed to an efficient level using Flexible Exports, which is not possible with the use of static limits. Therefore, Flexible Exports will enable only export capacity than use of static limits, increasing the utilisation of the existing network and deferring network augmentation, estimated at approximately $30m over 2026-31.

Our approach to capacity allocation for the Flexible Exports product is largely consistent with the capacity allocation principles in the AER's Export limit guidance note, subject to limitations of government policy in Victoria:

1. AusNet is responsible for setting export limits with the calculation methodology used to determine the limits being available on our website (https://www.ausnetservices.com.au/flexible-exports). We engaged on the methodology with our Future Networks panel as part of the development of the CER integration strategy and the 2026-31 regulatory proposal. The panel was largely satisfied with our approach of maximising efficiency in capacity allocation.
2. Our export limits are based on the outcome of network hosting capacity assessments, with the assumption 70% of customers will opt into Flexible Exports. For the remaining customers, we propose to apply a low static limit of 1kW per phase, which is aligned with the Victorian Government's objective of incentivising the take-up of Flexible Exports through use of low static limit alternatives (noting the low static limit is lower than the hosting capacity assessment). This approach is also supported by our Future Networks panel.
3. Our hosting capacity assessments and capacity allocation reflect the impact of voltage management and inverter compliance (assuming 100% of inverters being compliant). However, we cannot reliably assume response two-way pricing in Victoria—see next section.
4. Our proposed allocation methodology is based maximising efficiency, with a proposed progressive approach to improving the accuracy of the modelling. We anticipate that during 2026-31, the accuracy of the efficient capacity allocation will improve, starting off with a more basic calculation in 2026.
5. We propose to make the move to Flexible Exports for customers with legacy static limits optional.

New network tariffs

We are also introducing new optional CER tariffs during 2026-31, to promote more efficient use of the network by very flexible technologies and flexible EV customers. The tariffs are summarised in Figure 14.

Figure 14: New tariffs AusNet will offer or trial during 2026-31

Residential CER two-way tariff	Storage tariffs for community batteries and large bi-directional technolgoies	Residential dynamic EV tariff	Residential hot water control tariff
•Import charge complimented by export charge and reward component •For very flexible bi-directional customers (e.g., customers with solar and battery in a VPP)	•Volumetric two-way tariff without a capacity charge •For grid-connected batteries and other bi-directional customers (e.g., hybrid connections)	•Tariff with an import reward during the day and dynamic signals to charge / stop charging for reward •For residential customers with smart chargers	•24h window for turning hot water on and off as per network need •Charging patterns to be developed in accordance with hot water heat pump capacity

We are also updating our residential time of use tariff to introduce a very low cost 'solar soak' window of 11am to 4pm. This is designed to incentivise residential customers to shift usage more towards the middle of the day, away from the evening peak.

In Victoria, government policy dictates that network tariffs need to be optional to customers and that the opt-out time of use tariff cannot have an export tariff component. Therefore, we cannot rely on tariffs alone to manage customer exports, which is why our primary approach to export management is the roll-out of Flexible Exports as optional to all customers from 1 July 2026. While the AER's Export limit guidance note stipulates tariffs should be cost reflective and that Flexible Exports should complement the tariffs, in Victoria we cannot design tariffs with full cost reflectivity, therefore we are relying primarily on Flexible Export. However, the range of optional tariffs will complement this roll-out, and to the extent customers respond to the pricing signal, result in more efficient use of the network overall.

However, we do not have sufficient evidence at present around the level of customer response to these new tariffs. Our evidence since 2021 shows that residential customer response to time of use tariffs is minimal. Our Customer Segmentation data shows customers on current time of use and single rate tariffs behave almost identically regarding evening usage. As such, we have not made assumptions about changing customer behaviour in response to tariffs in our forecasts. We will monitor the roll-out of cost reflective tariffs in other jurisdictions to obtain learnings that we can further consider for our final proposal.

Finally, a key barrier to a higher take-up and response to cost reflective tariffs may be a lack of customer understanding of the tariffs they are on, and what opportunities are available for them to optimise their energy use and save on energy bills. Our customer research shows must customers are unaware of their tariff structure, or believe they are on a different structure from what they are on. We believe networks have a role to play in building customer agency on the role of network tariffs and opportunities for customers to save on their bills, which is why we have proposed a targeted communication and education campaign.

Customer communications will be necessary for CER integration

While we are planning to offer new services and tariffs to enable customers with CER to maximise on their investments, and unlock benefits for all other customers, we know many customers find navigating the energy transition daunting, including on how they can access the options that help them better manage their bills and save through the transition.

For that reason, as part out of strategy but also as a broader business approach, we will be increasing our customer communications to deliver information campaigns related to the energy transition, what options are available to customers, how they can benefit from these options but also how their options deliver benefits to the wider community and all energy consumers.

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