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21 August 2023

Hon Tom Koutsantonis MP
Minister for Energy and Mining

By email: DEMenergytransition@sa.gov.au

Energy Consumers Australia submission to South Australia's Green Paper on the energy transition.

Dear Minister,

Energy Consumers Australia appreciates the opportunity to comment on the Department for Energy and Mining's Green Paper on the energy transition in South Australia.

Energy Consumers Australia is the national voice for household and small business energy consumers.

Households and small businesses rooftops in South Australia are now the largest generator of clean, low-cost electricity. Consumers are driving and investing in their energy future. Harnessing the opportunity these resources present to consumers and the broader South Australian energy transition will require understanding what their owners value and expect from their investments.

Our research tells us that consumers expect an affordable, simple, easy to manage, clean and inclusive energy future[1]. These expectations must form the foundations of our energy transition. The energy system needs to work for the people who use and pay for it.

We need to bring all consumers on the journey to net-zero. Designing a system that enables consumers who face barriers or challenges to participate or engage, means everyone benefits. This is particularly so for consumers living on low incomes, in apartments or renting.

We are pleased to see the South Australian Government embarking on a public co-design consultation process for the energy transition. Transparency and clear communication of the plans for the transition will be essential in establishing consumer confidence and trust. We would strongly encourage the government to continue this dialogue directly with consumers so that all South Australians are aware of the transition, what it means for them, and how they can benefit from it.

We look forward to engaging further with the government as the South Australian energy transition progresses. Should you have any questions about our comments in this submission, or require further detail, please contact Marie Harrowell by email at marie.harrowell@energyconsumersaustralia.com.au.

Yours sincerely,

Jacqueline Crawshaw
Interim Chief Executive Officer

[1] https://energyconsumersaustralia.com.au/wp-content/uploads/Future-Energy-Vision-Forethought-Household-Full-Report.pdf

Submission to South Australia's Green Paper on the energy transition

August 2023

ENERGY CONSUMERS AUSTRALIA

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Introduction

Australian households and small businesses—and all their energy resources—play a fundamental role in the energy system and will be vital to achieving a least-cost decarbonised future. Our research shows that consumers are uncertain and worried about how the energy transition will impact them[1], but they want to be part of the solution. Consumers want to be and feel heard, and to know that their concerns are being addressed by decision makers. It's critical that we work with consumers on the transition of the energy system - without understanding their values, we can't build a system that meets their expectations.

The following submission highlights some of the opportunities and challenges we see in South Australia for achieving an energy transition that delivers the affordable, simple, easy to manage, clean and inclusive energy future that households and small businesses want.

1. Harnessing the opportunity which rooftop solar presents to the South Australian energy transition will require consumer buy-in and trust.

South Australian consumers are driving the energy transition through the uptake of rooftop solar. As the Green Paper points out, rooftop solar is now the largest generator of electricity in South Australia, producing enough energy at times to be able to power the entire state. Despite this, South Australian consumers are still paying some of the highest prices for electricity in the National Energy Market (NEM)[2].

Harnessing the low cost, clean energy opportunity which rooftop solar presents to the South Australian energy transition will require working with the owners and operators of these resources, consumers, to understand their values and expectations of their investments. Only by understanding consumer values will we can build a system that meets the needs and expectation of those who use and pay for it.

Our research finds that values differ greatly amongst consumer[3]. Saving money (75%), becoming less dependent on mains electricity (52%), and helping the environment (45%) were among the top reasons why South Australian households were considering purchasing rooftop solar. This diversity means there isn't a one size fits all when it comes to consumer energy resources (CER) services or products, and engaging and consulting communities will be essential to achieving the greatest individual and system value.

For system operators, the high uptake of rooftop solar poses a challenge to the safety and reliability of the system. We have seen this in South Australia through the introduction of various system management tools, such as an emergency backstop mechanism or flexible export limits. While we appreciate the short term need to address system security risks, consumers don't see their rooftop solar investment as a problem or challenge to be managed[4].

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[1] Our Energy Consumer Sentiment Survey (ECSS - June 2023) found that 60% of Australians worry that electricity will become more expensive and a third of Australians are concerned that electricity supply will become less reliable as a result of the energy transition.
[2] https://www.accc.gov.au/system/files/Inquiry%20into%20the%20National%20Electricity%20Market%20-%20June%202023%20Report.pdf
[3] https://ecss.energyconsumersaustralia.com.au/behaviour-survey-oct-2022/purchase-intentions-2022/
[4] https://energyconsumersaustralia.com.au/wp-content/uploads/Report-on-Community-Attitudes-to-Rooftop-Solar-and-the-AEMC-Proposed-Reforms..pdf

Consumers invest in solar to benefit themselves and their community. We need to listen to consumer and community values to build an energy system that centres consumers and works for them instead of imposing a system-focused solution. Right now, only 34% of South Australian households feel positive that the market is working in the long term interests of consumers[5] and their trust and confidence will only be further eroded if they see an energy transition that works solely in the interests of the system

South Australia's leading solar uptake has also meant that it is the first Australian jurisdiction to implement a mandate[6] that new rooftop solar installations must be capable of remotely updating and responding to dynamic export limits. While we appreciate that South Australian Power Networks (SAPN) have significantly advanced their roll out of dynamic export limits, we are concerned that the mandate as it is currently applied may have some unintended negative outcomes for consumers with CER.

Without ensuring that at a minimum the CSIP-AUS client is located at the native inverter, consumers may face "lock-in" to service or technology providers. In other words, if we don't mandate open non-proprietary communications channels as a minimum requirement for dynamic export capable installations, consumers may be limited in choice and benefit from their CER. Limiting consumer choice and their ability to coordinate their CER at a household or business level may have consequences for consumer savings or confidence in the energy industry. This is especially critical given the advanced nature of SAPN's flexible export trial – if consumers cannot coordinate their devices to respond in the most efficient way to a flexible export limit, the benefits they receive from a flexible export limit may be reduced.

2. Demand side solutions and investments are an opportunity to ensure energy prices are affordable for South Australians in the transition to net-zero by 2050.

Our June 2023 Energy Consumer Sentiment Survey (ECSS) found that 65% of South Australians want a transition to 100% renewable energy resources by 2050 or sooner[7]. It also found that they think affordable energy prices for all Australians is the most important challenge ahead for the Australian energy system. Achieving a transition to clean energy whilst keeping prices affordable will require balancing supply and demand-side investment.

Where possible, system operators and planners should look to maximise existing asset utilisation to limit any unnecessary supply side investment. At the same time, investments should be made into providing consumers with the tools, services, and information they need to manage their energy bills and usage.

Consumers need the right information, at the right time, from the right place to help manage their energy bills and usage.

The results from our June ECSS found that only 54% of South Australian participants felt confident about the information available to them in making decisions about energy products and services. Other national research we commissioned[8] found that the issue is not a lack of information available to consumers but that there is an overwhelming amount of information from a wide variety of different sources demanding consumers' attention. We are concerned

[5] https://ecss.energyconsumersaustralia.com.au/sentiment-survey-june-2023/confidence-household-sentiment-june-2023/
[6] https://www.energymining.sa.gov.au/__data/assets/pdf_file/0007/808225/Technical-Regulator-Guidelines-Distributed-Energy-Resources-Version-1.4.pdf
[7] https://ecss.energyconsumersaustralia.com.au/sentiment-survey-june-2023/featured-content-household-sentiment-june-2023/
[8] https://energyconsumersaustralia.com.au/wp-content/uploads/Energy-Information-Campaign.pdf

that the traditional default response of "educating" consumers – providing more factsheets, websites, or leaflets - will just add to the information already available, making it even more difficult for consumers to navigate.

The right information means information that is accurate and is tailored to people's needs – it is likely that every household and small business retrofit will be different, depending on people's appliances, capital, and lifestyle. People need help to identify the most impactful and cost-effective steps they can take to minimise their bills and/or manage their energy usage. The right time means the time when they are making that decision – when they are considering renovations, buying a new appliance, or purchasing a house. 'Right place' means that information needs to be readily available in the channels, sources, and networks that consumers trust. This was also a finding of the Brotherhood of St Laurence's recent report on the barriers low-income consumers face to electrification[9].

We need to design for diversity in order to ensure all South Australians can benefit from the transition.

The tools, services, and information consumers need to harness the benefits of the transition will need to recognise the diverse range of motivations, abilities and opportunities consumers have when it comes to their energy choices. For example, renters are limited in their ability to increase the thermal efficiency of their homes or businesses, people living in multi-occupancy dwellings may be limited by strata and those on a lower income may not have the finances accessible to be able to pay for costly upgrades.

If we don't design for diversity there is a risk that the already widening energy divide will continue to increase. Our research shows, Australian households on the lowest incomes are paying over 12% of their income on energy compared to only 1.5% for households on the highest incomes[10]. Those with efficient homes, solar on their roof and a battery and an electric vehicle in the garage have more choices in how they meet their energy needs and interact with the system. Those who rent – around one third of all Australian households and most small businesses – and those who live and work in shared buildings have fewer options and are likely to continue to experience the highest electricity costs.

We must improve the energy performance of homes.

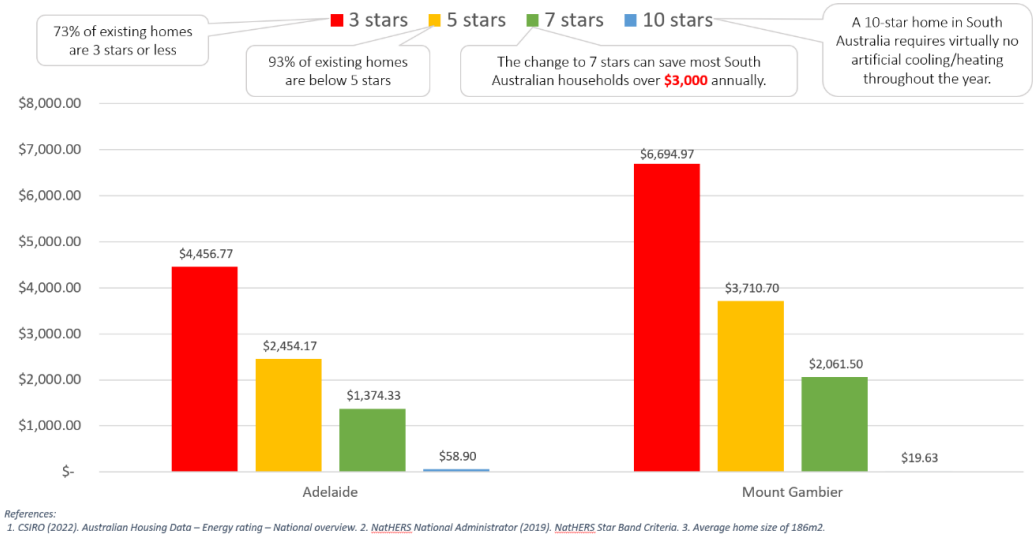
Energy efficient homes and small businesses are not only essential in helping consumers to keep energy prices affordable, but directly impact on health. As extreme weather events continue to increase in frequency and severity households who are able to use less energy to stay comfortable and healthy will see direct savings. In Figure 1 below an older house in Adelaide with a 3-star efficiency rating (noting that the current average star rating for existing South Australian homes is even lower at 2.15[11]) will pay nearly double in energy costs per year in comparison to a 5-star home and over triple relative to a new home that is 7-star energy efficient.

While under the National Construction Code (NCC), all new homes in South Australia will be required to achieve a seven-star energy efficiency rating by 1 October 2024 we strongly advise the government take action to improve the energy efficiency of existing housing stock. In our submission to the National Energy Performance Strategy[12] we called for all existing homes below 3 stars in the NatHERS rating to be upgraded to at least 5 stars by

[9] https://www.bsl.org.au/research/publications/enabling-electrification/
[10] https://ecss.energyconsumersaustralia.com.au/sentiment-survey-june-2023/
[11] https://racefor2030.com.au/wp-content/uploads/2023/05/H2-OA-0199-Final-Report_.pdf
[12] https://energyconsumersaustralia.com.au/wp-content/uploads/20230210_Submission-to-the-National-Energy-Performance-Strategy-Consultation-Paper.pdf

2035, and then to at least 7 stars by 2040. The costs of not upgrading the existing housing stock in South Australia could be much more than just high energy bills, we strongly encourage the government to address this public health risk.

Figure 1. Average home annual electricity costs (heating and cooling only) per star rating in the two most populated South Australian cities.



References:
1. CSIRO (2022). Australian Housing Data – Energy rating – National overview. 2. NatHERS National Administrator (2019). NatHERS Star Band Criteria. 3. Average home size of 186m2.

All South Australian consumers should be able to benefit from electrification.

To achieve South Australia's net-zero emission goal by 2050, 450,000[13] households and businesses will need to stop using fossil fuel gas in their homes and workplaces. According to the figures in the 2023 Grattan Institute's report 'Getting off gas: why, how, and who should pay?'[14]57% of South Australian households use gas to heat water, and the proportion is much lower for space heating – at 19%. Compared to Victoria and the Australian Capital Territory (ACT), which are much more heavily reliant on gas domestic heating and have already committed to no new gas connections in homes, South Australia is in a much better position to enable all homes to benefit from electrification.

Electrification is an alternative to fossil fuel gas heating and cooking proven to provide consumers with significant cost savings and reduce emissions over time. Modelling we commissioned from CSIRO found that by 2050 the average difference in total energy costs for an Australian household, including transport, between a fossil-fuelled home and all-electric home (without solar and a battery) would be $2,850 per year[15]. This modelling was based on AEMO's Step Change scenario which has emerged as the most likely path to decarbonising the electricity sector. We would encourage the South Australian Government to consider, in the context of their Green Paper, how they can support households and small businesses to electrify. This is especially important for those households who may face additional barriers to electrification such as renters, those living in multi-occupancy dwellings or consumers who are on lower incomes. Without support households who cannot stop go all-electric will face higher costs, worsening the energy divide.

[13] https://www.infrastructure.sa.gov.au/__data/assets/pdf_file/0019/111286/Australian-Gas-Infrastructure-Group.pdf
[14] https://grattan.edu.au/report/getting-off-gas/
[15] https://energyconsumersaustralia.com.au/publications/stepping-up

Smart meters must be rolled out across South Australia in an efficient and effective manner at no direct cost to consumers.

Smart meters are part of the essential infrastructure required for an affordable, reliable, and clean energy transition. Given that the majority of the benefits of smart meters accrue to the system, not to consumers, we would strongly encourage the Government to ensure that consumers do not bear the burden of direct costs due to the roll out. Doing so will help build the social licence necessary for a smooth roll out. In the past we have advocated for the South Australian Government to take a more active role in the roll out of smart meters[16]. There is an important role here for Governments to play not only in cost mitigation but creating broader awareness for the need and purpose of the roll out in the context of the energy transition. Working with industry and consumer representatives this messaging will be important in contributing to the social licence that will be required for a successful roll out of smart meters in South Australia.

3. To realise consumers expectations, needs and preferences for a future South Australian energy system the Energy Transition Taskforce and Roadmap need to be driven by energy consumer values and outcomes.

The Paper notes the possibilities of the South Australian Government establishing an Energy Transition Taskforce and developing an Energy Transition Roadmap. This is a commendable step towards addressing the challenges and complexities of the energy transition ahead but we recommend that both be driven by energy consumer values and outcomes. One way to ensure this would be to include in the Terms of Reference for the Taskforce that consumer representatives must sit on the Taskforce. This also means adopting robust, meaningful, and genuine consumer engagement practices to understand South Australians' concerns and expectations, and guaranteeing their feedback is transparently reflected in government plans and ambitions for the energy transition.

Additionally, the Paper notes the ongoing connection Native Title groups and Traditional Owners have to the lands of South Australia. In addition to this recognition, the South Australian Government should engage and work with these groups on all stages of the energy transition, including through the Taskforce. When considering the impact the transition will have on First Nations communities, we recommend directly engaging with the First Nations Clean Energy Network (FNCEN) and utilising their resources to guide best practice. For example, the Aboriginal and Torres Strait Islander Best Practice Principles for Clean Energy Projects, Clean Energy Agreement Making on First Nations Land, and First Nations Better Practice Community Engagement Toolkit. These resources provide invaluable knowledge when land and consent is involved in project proposals, to ensure communities benefit from the energy transition whilst protecting their cultural heritage. They also provide guidance on how to develop and maintain ongoing, productive and authentic partnerships with communities to ensure that they drive energy projects that affect them.

[16] https://energyconsumersaustralia.com.au/wp-content/uploads/SUBMISSION-TO-THE-SA-GOV-ON-ACCELERATING-THE-ROLL-OUT-OF-SMART-METERS-IN-SOUTH-AUSTRALIA.pdf

The Taskforce should carefully examine the potential pathways to a net-zero emissions future, to ensure the most cost-effective solutions for South Australian energy consumers.

It is important that the Taskforce consider how existing energy future scenarios may (or may not) be suitable for State-specific planning and the best approaches for decarbonising all South Australian homes and small businesses, which should include an honest and realistic discussion about the role of hydrogen as an energy source for households and small businesses.

The Paper indicates that the Australian Energy Market Operator's (AEMO's) Hydrogen Superpower scenario more closely aligns with the South Australian Government's aspirations for South Australia to be a world leader in global hydrogen exports (as opposed to the Step Change scenario that they also examine in detail). This scenario has vastly more investment in utility-scale storage capacity, wind capacity, and utility-scale solar capacity. All this investment at the supply side will result in higher transmission costs, which will be passed through to consumers, who may not directly benefit from it.

While hydrogen remains a promising application for green metals, heavy transport and chemical applications, strong research has demonstrated that hydrogen is not the best option for decarbonising residential heating and cooking.[17] It is less efficient and less cost effective to use hydrogen than to use renewable electricity directly for our homes and small businesses. In fact, the International Renewable Energy Agency (IRENA) has identified that residential heating is the lowest clean hydrogen priority in its World Energy Transitions Outlook 2022: 1.5°C Pathway report. To this end, supporting building electrification and energy efficiency remains the most cost-effective decarbonisation pathway for residential buildings and the most affordable option for consumers in the long run.

The latest 2023 Inputs Assumptions and Scenarios Report (IASR) refines the Hydrogen Superpower scenario (from the 2021 IASR), into the 2023 Green Energy Exports scenario. It notes this is because of a strong shift towards electrification, energy efficiency investments in residential and commercial buildings, and "the scale of hydrogen production expected to connect to the NEM is lower than in the 2021 IASR Hydrogen Superpower scenario".[18]

The South Australian Government can leverage the ISP process and develop its own jurisdictional energy system plan, focusing on local issues, challenges, and opportunities, to better inform policy settings and targets in the Roadmap to meet the energy future South Australians want. This requires an evolving and comprehensive understanding of the costs, benefits, barriers and impacts to consumers of the many decarbonisation solutions.

The Roadmap should also establish a clear timeline that outlines short-term (2025-2030), medium-term (2031-2040), and long-term milestones (2041-2050) and priority actions in a manageable and staged approach, to avoid disruption and adverse consumer outcomes.

Near-term milestones may focus on immediate actions and changes to the policy and regulatory environment to support a successful energy transition in the long-term interest of energy consumers. For example, the ACT Integrated Energy Plan which will be delivered by next year, adopts this staged approach to transition management, where the first part of the plan aims to "set the foundations for success". We recommend that the Roadmap milestones should be set every five years from 2025 to 2050, with the first Roadmap being delivered by no later than 2025.

[17] http://www.janrosenow.com/uploads/4/7/1/2/4712328/is_heating_homes_with_hydrogen_all_but_a_pipe_dream_final.pdf

[18] https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-inputs-assumptions-and-scenarios-report.pdf?la=en

4. Energy storage can play a key role in enabling South Australia to achieve an affordable and reliable future that empowers consumers and communities to take the lead on the energy transition.

South Australia leads the world in penetration of wind and solar, and it is facing, years ahead of all other Australian jurisdictions, the challenges of renewable variable output[19]. These include growing concerns to manage energy storage in the coming decades, which can play a fundamental role in the solution by firming renewable generation, balancing supply and demand, and integrating CER to the grid for a least-cost future energy system.

The Energy Transition Roadmap should be able to analyse and identify the most cost-effective combination of energy storage technologies, including—but not limited to—hot water, batteries, hydrogen, and scales (from grid-scale to household level solutions) for different flexibility and grid support services.

Domestic water heating is often an overlooked option for storage, but is a low-cost and fairly easy-to-manage flexibility solution.

Domestic hot water use is responsible for around a fifth of Australian residential greenhouse gas emissions and a quarter of household energy use. According to the 2023 report from the UTS Institute for Sustainable Futures (ISF) on Domestic Hot Water and Flexibility, electric water heating provides major opportunities to "reduce energy use and carbon emissions, protect against future energy price rises, and tap into a major source of energy storage to support integration of renewable energy in the grid". The study indicates that domestic water heaters can be a significant source of flexible demand, potentially providing up to 24 GW/50 GWh/day of flexible demand capacity by 2040 — equivalent of 70%-61% of AEMO's modelling for behind-the-meter, coordinated CER storage capacity.

Associated with off-peak/solar-sponge tariffs and the proper 'smart-load' controls, there's significant potential for electric water heaters to provide a storage solution in South Australia which has lower upfront costs compared to batteries, for instance. As explained in the study, a heater with a 300-litre tank can store about as much energy as a second-generation Tesla Powerwall – at a fraction of the cost.[20]

In South Australia, 57% of households use gas to heat water. The ISF study concludes that the gap between gas and electric domestic water heating costs will further increase by 2040, with "gas households then paying $660–960 per year more than those with a heat pump water heater". Thus, electrifying all water heaters in South Australia and putting in place the right incentives and mechanisms for these to provide flexibility as storage is a relatively low-cost measure that can lower South Australians' energy bills, help balance electricity supply and demand and contribute to halving emissions by 2030 and reaching net zero by 2050.

[19] In late June 2023, South Australia experienced a 'renewable drought' – a sustained period of low renewable generation (mostly wind) due to weather conditions. Before that, in November 2022, when South Australia was separated from the NEM, the curtailment of commercial, industrial and residential solar generation during minimum demand periods was required to maintain grid stability.

[20] https://theconversation.com/using-electric-water-heaters-to-store-renewable-energy-could-do-the-work-of-2-million-home-batteries-and-save-us-billions-204281

Community-scale battery storage is an in-between battery solution with a nascent market and significant potential for better consumer outcomes.

To date, nearly all of the battery storage in Australia is large-scale transmission connected, with South Australia being home to the world's first big battery – the Hornsdale Power Reserve. There are also growing numbers of household batteries, and again South Australians lead the way – their residential batteries account for 42% of all residential batteries connected in the NEM[21]. But there's an in-between storage solution that needs further investigation – community-scale batteries. Community-scale batteries have the potential to combine the scale advantages of large storage projects with network, resilience and direct customer benefits that can only be achieved from distributed projects, lowering costs for all consumers[22].

Community-scale batteries, as defined by the Neighbourhood Battery Knowledge Hub, are mid-sized batteries (bigger than a household battery but smaller than a big grid-scale battery). We use the term community-scale batteries to refer primarily to the size of the storage system, noting there are a variety of ownership and business models through which a community-scale battery can be managed and operated. This includes, for example, projects led by community energy groups and not-for-profit organisations, such as the Fitzroy North Community Battery by the Yarra Energy Foundation, and also community-scale batteries owned and operated by distribution network service providers and electricity retailers.

These community-scale batteries can level out the variable nature of renewable energy and demand fluctuations at the local community level, enhancing grid reliability, and reducing the need for more costly network investment. Moreover, community-scale batteries can empower consumers and communities, giving them greater control over their energy consumption and costs, enabling local energy trading, and fostering a sense of shared responsibility in the energy transition.

Forthcoming research by the Brattle Group, commissioned by Energy Consumers Australia, explores the benefits of, and barriers to, the deployment of community-scale batteries in Australia. We will provide the South Australian Government a copy of the Brattle Group's report when it is published in the coming weeks.

Communities across Australia want to be part of the energy transition, and our research indicates that 57% of Australian households have interest in shared batteries[23]. A significant proportion (40%) of South Australians have further indicated that the costs of installing these shared batteries in the communities should be subsidised by governments, with only some of the costs borne by energy suppliers (distribution networks and retailers) or the community itself[24]. Hence, the South Australian Government can ensure energy storage delivers the greatest value to consumers and their communities by:

- working with community groups to understand their expectations and goals when it comes to community-scale storage, reiterating that storage solutions must benefit both localised and broader energy system operation. If over half of Australia's energy storage (as per AEMO's modelling) is to sit in our homes, streets, and suburbs, then we need to ensure communities are on board and see benefits from proposed projects.

[21] As indicated in AEMO's DER data dashboard (accessed on 16 August 2023).
[22] It has been demonstrated that the battery location can have a significant impact on its value proposition and the services it can provide. Previous research conducted by RMI in 2015 on The Economics of Battery Energy Storage has already identified that the further downstream the storage system is located on the electricity grid, the more services it can offer to the system at large.
[23] Based on a sample of 2,376 Australians – ECA's Energy Consumer Sentiment Survey (December 2021).
[24] Based on a sample of 330 South Australians - ECA's Energy Consumer Sentiment Survey (December 2021).

- working with South Australia Power Network (SAPN) to improve existing distributed storage visibility and develop and provide better information about where to locate community-scale batteries and how to signal network-related revenue opportunities through bespoke tariffs that reflect local network constraints and needs.
- adopting a strategic niche management approach to community-scale batteries by supporting community energy project initiatives through grants, trials, and demonstrations that aim to experiment with the emerging technology for research and development purposes. Such trials can stimulate the further development of the sector, test the feasibility of different ownership and business models, and provide insights into the changes needed in technology, market and regulation to enable community-scale batteries to deliver better outcomes for consumers and become cost competitive.

  Lastly, the South Australian Government can ensure storage has both sufficient capacity and depth to meet the requirements of South Australia's future grid by effectively identifying capacity shortfalls through the Roadmap, aligned with the Commonwealth's approach via the Capacity Incentive Scheme (CIS). Identifying system flexibility and capacity needs is evolving, and it's most beneficial to consumers if jurisdictions in Australia align on how to identify these needs. Doing so will reduce procurement costs and, over time, should send the best investment and operational signals. In addition, at a later stage, the CIS can potentially help unlock more value and additional revenue streams from distributed resources, such as community-scale and household batteries.

  In the long term, the capacity auction mechanism shall be designed to account for the growing number of CER and the importance of coordinating them in Australia's energy mix. By securing capacity from a mix of storage types in the NEM, consumers will benefit from greater reliability, security, and cost savings.

5. As an integral part of the community and economy, a successful co-design and engagement process with small businesses is an opportunity for the South Australian energy transition.

We are concerned that the Green Paper on the South Australian energy transition does not account for the important role which small businesses are playing in the energy transition. The 153,810 small businesses in South Australia play a critical role in both the community and economy. Policy decisions should include small businesses at the co-design phase, to avoid leaving small businesses behind, and to deliver a more affordable and inclusive transition.

Small businesses often have very little control over where their power is sourced or when it is consumed. Businesses who rent their space in an embedded network or have non-flexible operating times may be particularly vulnerable to rising energy bills. Energy Consumers Australia's June 2023 Small and Medium Enterprise (SME) Tariff Tracker results found South Australian small businesses are paying the highest electricity bills across the country. Electricity bills for small businesses grew by 24% in South Australia compared to an Australian average of 18%[25]. Government needs to engage with these businesses to understand what tools, services or information may help empower them to take back some control over their bills. Small businesses often use more energy and at different times to households so engaging with them creates an opportunity to not only help them manage their energy bills, but to lower overall system costs.

[25] https://energyconsumersaustralia.com.au/projects/retail-tariff-tracker

The timelines and decision-making processes of small businesses vary greatly from households and big business. This is important to understand in the context of electrification and energy efficiency upgrades.

Different small businesses have different energy requirements. For example, transitioning off gas may be more difficult for a Vietnamese restaurant than for the newsagency next door. Similarly, the location of a business can also impact its ability to electrify. Those in remote locations may not have access to electricity and may be reliant on diesel. Working with industry associations, would provide insights into the different needs of small businesses across South Australia.

6. Electric Vehicles (EVs) present an opportunity for both individual and whole of system savings on electricity bills. The South Australian government has an important role in enabling all South Australians to access these benefits of EVs.

We commend the South Australian Government's support of initiatives to facilitate the uptake of EVs. Our new Stepping Up report[26] finds the uptake of EVs can provide flow-on benefits to both individual EV users and energy consumers more broadly (in addition to the mobility and decarbonisation benefits), if consumers are supported to make decisions that maximises benefits for themselves and the energy system. For individual users, EVs present opportunities to optimise their energy arrangements, and our modelling suggests that widespread uptake will lower electricity bills for all consumers through better network utilisation.[27] As the Green Paper notes, supporting efficient use of existing electricity infrastructure is expected to reduce electricity costs for all consumers.

We also note that the Green Paper characterises EVs as both an opportunity and a challenge to the power system "that must be managed accordingly". While increased uptake of EVs will have impacts for the energy system that should be planned for, as discussed in our response to the National Energy Performance Strategy Consultation, we emphasise that the focus should be on incorporating demand side flexibility into our future energy system, such that only some people, some of the time, will be required to shift their consumption.[28] Trials in Australia (including in South Australia) demonstrate that EV charging load is flexible and responsive to incentives, and that consumers are already typically avoiding charging when it negatively impacts the grid.[29]

Further, the Green Paper discusses the value that EVs can provide for Distributed Network Service Providers (DNSPs), namely the wide range of grid services when coupled with innovative tariffs. We note that the success of such services will be predicated on the tariffs ability to both provide and communicate value to consumers, not simply DNSP benefit. Successful policy settings that unlock greater value for consumers will require trust that such EV charging services are in consumers' best interests, including providing them control and agency, privacy and cyber security, and value sharing.

[26] https://energyconsumersaustralia.com.au/wp-content/uploads/Stepping-Up-Report-Final.pdf
[27] https://energyconsumersaustralia.com.au/publications/stepping-up
[28] Our energy system needs to be designed to reflect the diversity of when people will charge their EVs, by offering a range of services, tools, and rewards that suit different motivations, abilities, and opportunities. https://energyconsumersaustralia.com.au/wp-content/uploads/20230210_Submission-to-the-National-Energy-Performance-Strategy-Consultation-Paper.pdf
[29] https://arena.gov.au/assets/2023/08/20230805-Insights-from-Smart-Charging-Trials-Data-update-230804-EXT.pdf

It is also important to be mindful that South Australian consumers are not yet convinced of the electric mobility future. Our October 2022 Energy Consumer Behaviour Survey found that only 1 in 3 household consumers in South Australia think they will buy an EV in the future.[30] Further, our June 2022 ECSS revealed that three main reasons why households have not yet bought an EV are the cost of models available in Australia, the perceived lack of public charging stations, or that they don't have anywhere to charge an EV at home.[31] As we highlight above, as the number of choices in how consumers use and manage their energy technologies and services grow, they will need targeted, tailored advice to support their energy decisions from a trusted source. They will also need adequate infrastructure and a fit-for-purpose consumer agency and protections framework to give consumers confidence when using EVs. We further discuss these issues in our submission to the National Electric Vehicle Strategy consultation.[32]

Finally, we note South Australia's Office of the Technical Regulator incoming requirements for EV charging equipment.[33] These are unique to South Australia, which may reduce consumer choice or add cost to supplying EV chargers to the South Australian market, hindering the transition to EVs. Considering the objective in the National Electric Vehicle Strategy for national harmonisation of systems and standards, we recommend jurisdictions work together to ensure alignment of nationally consistent approaches where possible.

End of submission

[30] https://ecss.energyconsumersaustralia.com.au/behaviour-survey-oct-2022/purchase-intentions-2022/
[31] https://ecss.energyconsumersaustralia.com.au/sentiment-survey-june-2022/featured-content-household-sentiment-june-2022/
[32] https://energyconsumersaustralia.com.au/wp-content/uploads/20221104_Submission-to-DCCEEW_National-Electric-Vehicle-Strategy-Consultation-paper.pdf
[33] https://www.energymining.sa.gov.au/industry/modern-energy/electric-vehicles/electric-vehicle-supply-equipment-evse-standards

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