

SA Power Networks Regulatory Proposal Engagement 2025-30

Focussed conversation – Tariff Design and Cost Allocation

Workshop 1 – 11 August 2022



Empowering South Australia

Overview – Focussed Conversation

11am – 11.25am	Welcome and introduction • Welcome • Reset: Overview • Background – Tariffs in Reset
11.25 – 12.55pm	INFORM – Tariff Design • Default Network Tariffs • Residential Time of Use • Time of Use Controlled Load • Small Business Time of Use • Small Business Time of Use Demand • Large Low Voltage Business Annual Demand / High Voltage Business Annual Demand • Major Customers – Substation & Sub Transmission
12.55 – 1.10pm	Break – lunch
1.10 – 2pm	INFORM – Tariff Design • Residential Time of Use Windows • Small Business Time of Use Windows • Demand Windows
2-2.30pm	CONSULT – Cost Allocation • Residential vs Business • Fixed vs Variable
2.30-2.40pm	• Wrap up & Close

Key Stakeholder and Customer Workshop Invitees

- Tariff Working Group:
 - Central Irrigation Trust
 - Energy & Water Ombudsman SA
 - SA Wine Industry Association
 - Uniting Care Wesley Bowden
 - SA Small Business Commissioner
 - Dept. Energy & Mining
 - Yates Electrical
 - Electric Vehicle Council
 - Business SA
 - Pangolin Associates
 - The Energy Project

Additional invitees (Reset)

- SA Power Networks Community Advisory Board + Reset Sub-Committee
- Australian Energy Regulator
- Essential Services Commission of SA
- Energyplex
- Smart Energy
- Sun Energy
- CCP30 representatives

Key SA Power Networks participants

- Jessica Vonthethoff – Executive General Manager Customer & Community
- Helen White – Revenue & Pricing Manager
- James Bennett – Manager Regulation
- Dan Popping – Head of Stakeholder Engagement
- Amanda Hudson – Customer Consultation Lead
- Sophie McRae – Head of Customer Operations
- Martin Coelho – Billing & Credit Manager
- David Woods – Industry & Retailer Relationship Manager
- Adam Neill – Billing Compliance Lead

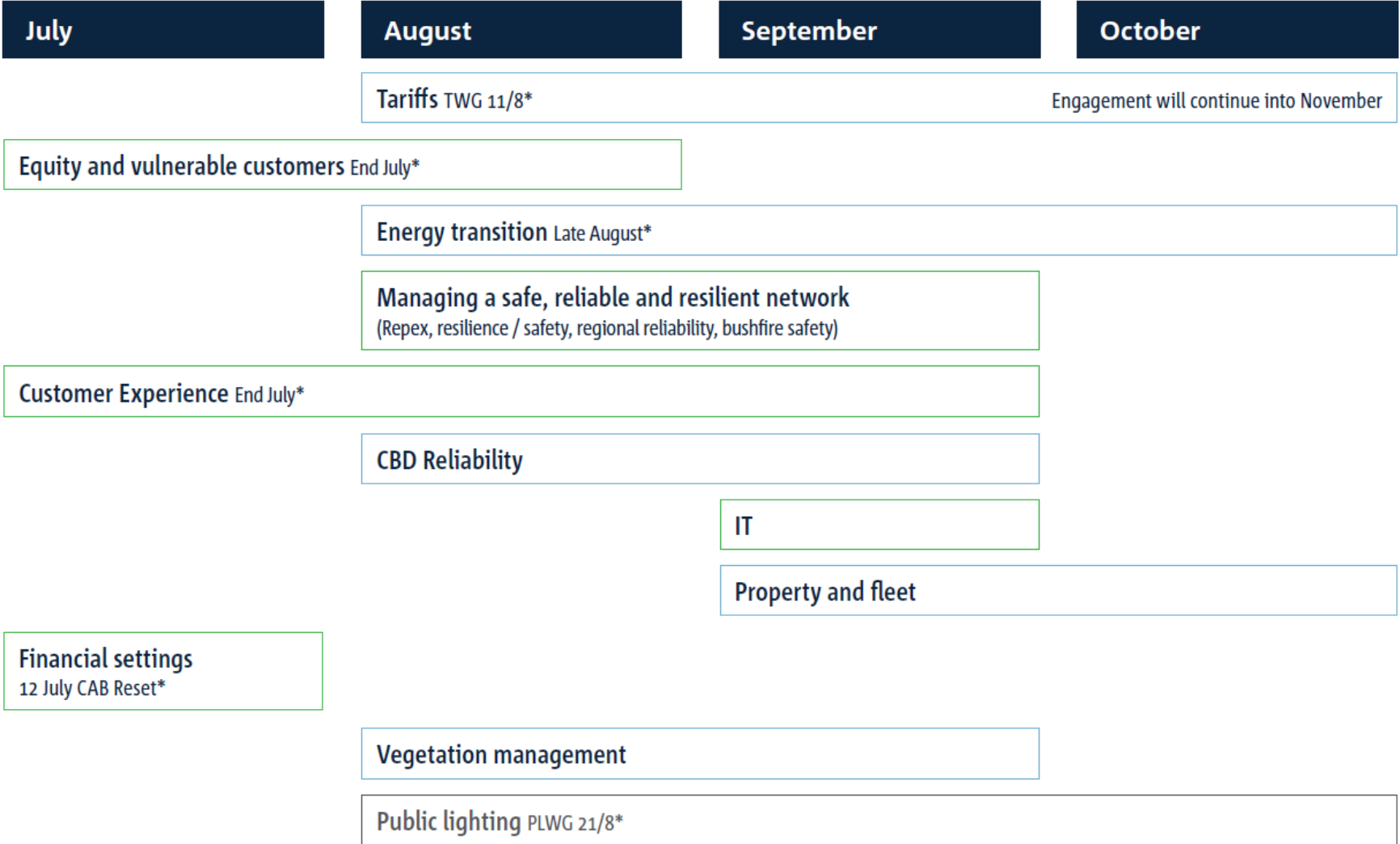
The Price Reset process

As a monopoly service provider, our prices are approved by an independent regulator

In building our **Regulatory Proposal** we engage deeply with customers and the community



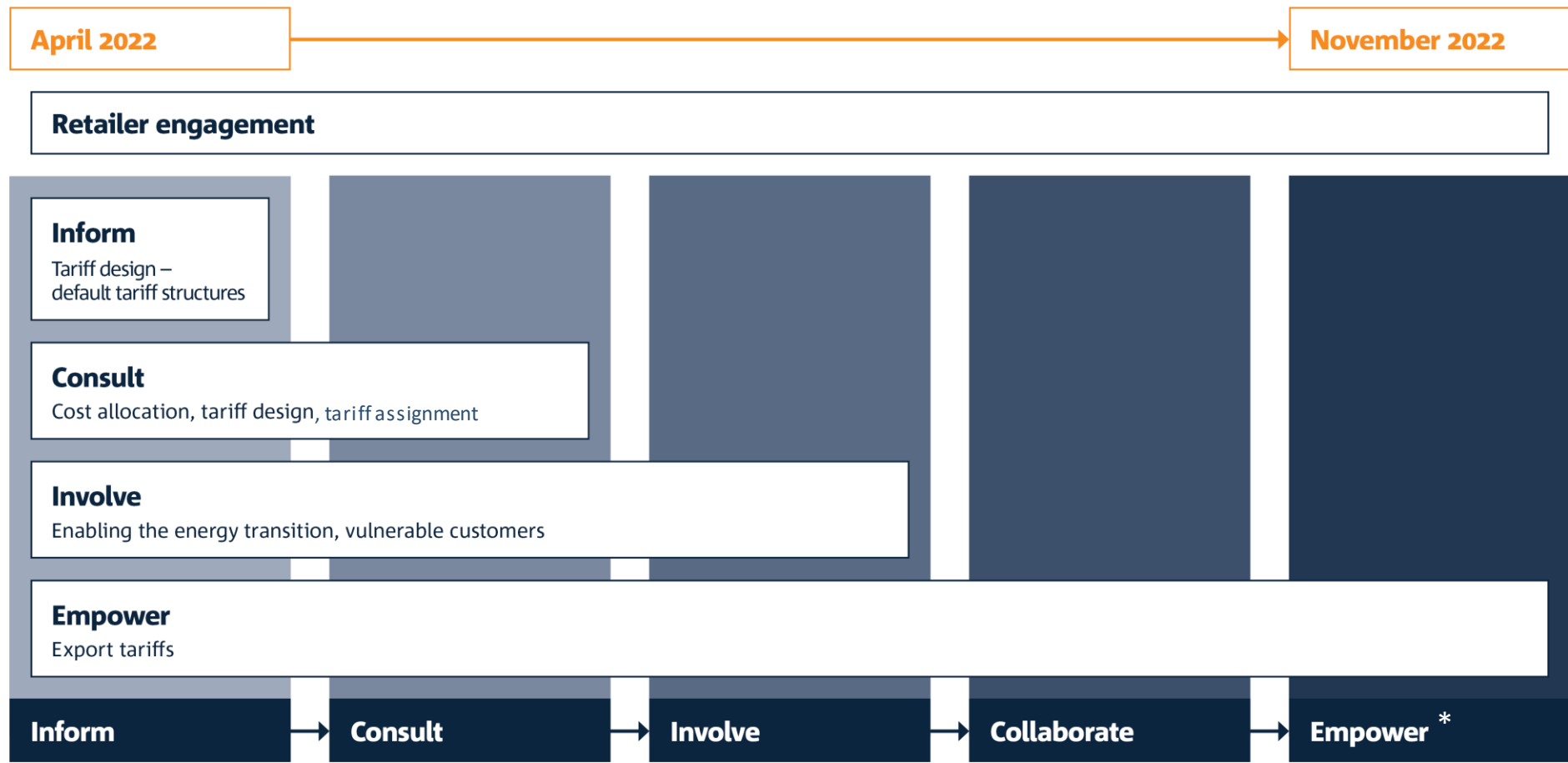
Focussed Conversations timeframe



* Engagement start date

Levels of Reset Engagement

- 2025-2030 represents SA Power Networks' third TSS iteration
- Strong baseline to work from with our customers and stakeholders



* Deliberative process (People’s Panel) to take place in 2023

Purpose: Today's Focussed Conversation

- Today's Focussed Conversation (workshop) is one of a series of Tariffs-related Reset discussions:

	Tariff Design: Default Tariff Structures (Inform)	Cost Allocation / Tariff Design (Consult)	Enabling the Energy Transition – Residential (Involve)	Enabling the Energy Transition – Business (Involve)	Export Tariffs (Empower)
Scene Setting (Background, current state analysis & discussion)	Workshop 1 Thursday 11 August, 11am – 2.30pm (following TWG)		Workshop 3 Wednesday 14 September, 9.30am – 1pm 9.30–11.15am: Enabling the Energy Transition – Residential 11.15am – 1pm: Enabling the Energy Transition – Business		Workshops 5-8 October – November Dates TBA
Options Analysis (Discussion, revised analysis & narrowing options)					
Clarifying (Clarifying & refining options)		Workshop 2 Wednesday 24 August, 10.30am – 12pm (online)	Workshop 4 Wednesday 28 September, 9.30am – 1pm 9.30–11.15am: Enabling the Energy Transition – Residential 11.15am–1pm: Enabling the Energy Transition - Business		
Present/Finalise Outcomes (Final discussion on recommendations to People’s Panel)					

Outcomes of today's workshop (Tariff Design – Default Network Tariff Structures, Cost Allocation / Tariff Design):

- Endorsing SA Power Networks' preference to retain current default tariff structures across all tariff classes
- Understand the current usage patterns of the distribution network and how it relates to the current time of use and demand windows in the default network tariff structures
- Understand the current distribution revenue recovery allocation.

2025-2030 Reset Engagement: Background

Five year regulatory period

Customer and Stakeholder Engagement

Revenue Determination (RD)

Approved by the Australian Energy Regulator (AER)
Adjusted annually for CPI, Incentive Schemes and Cost of Debt
Overall amount of revenue SAPN can recover from customers

Tariff Structure Statement (TSS)

Describes the tariff classes and structures, policies and procedures for assigning customers to tariffs, tariff charging parameters, and how the revenue will be recovered

Annual Pricing Proposal (APP)

Details the proposed prices for the agreed tariff structures to take effect at the commencement of each regulatory year - 1 July

Year 1

Year 2

Year 3

Year 4

Year 5

2025-2030 Reset Engagement: Background

What is a TSS?

- A TSS describes the tariff classes and structures, policies and procedures for assigning customers to tariffs and tariff charging parameters.
 - Residential | Small Business | LV Large Business | HV Large Business | Major Customers
 - Meter Type
 - Supply Charge | Usage kW | Demand kVA
 - Consumption | Export
 - Location does not restrict tariff choice
- The AERs decision to approve or not approve a TSS is binding.
- The TSS covers a 5 year period. The AER considered the benefits of customer certainty outweighed the benefits of flexibility.
- Departures from the TSS can not occur unless the TSS process is recommenced which is not considered favourably by the AER due to the lengthy administrative process. New tariffs can be trialled within the 5 year period through trial tariffs.

2025-2030 Reset Engagement: Background

What is an Annual Pricing Proposal?

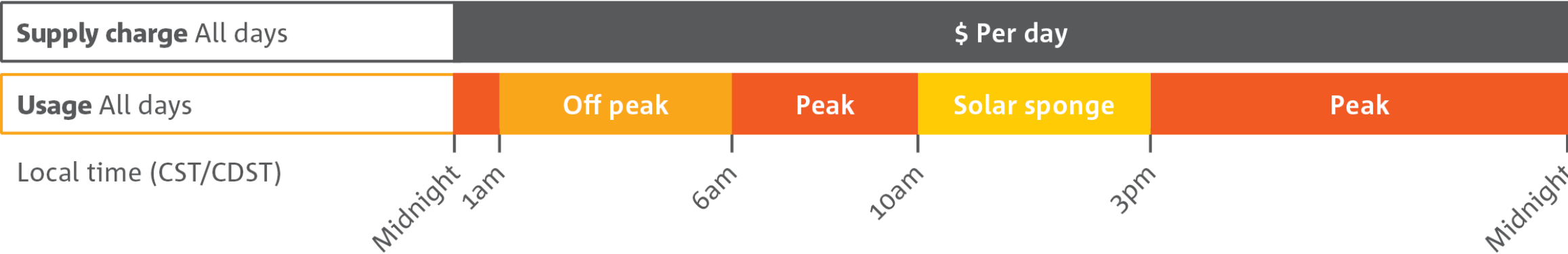
- An Annual Pricing Proposal (APP) outlines the proposed prices to take effect at the commencement of each regulatory year.
- The structure of the tariffs set out in the APP must match those approved by the AER in the TSS.
- The APP is the annual implementation of the TSS, and accounts for annual changes e.g. CPI and incentives.
- The AER will approve the APP if it complies with the National Electricity Rules and TSS.
- Public lighting, legacy metering and ancillary network services pricing forms part of Alternative Control Services pricing.

Tariff Design – Default Network Tariffs

- The focus of the following discussions is to inform stakeholders and customers on the default network tariffs for interval meters and seek endorsement to retain these structures for 2025-30.
- SA Power Networks has five tariff classes:
 - Residential
 - Small Business
 - Large Business Low Voltage (LV)
 - Large Business High Voltage (HV)
 - Major Customers – Substation and Sub Transmission
- Within each tariff class there are default and opt in network tariffs which apply to a customer based on their volume of energy or demand used and their meter type.
- Current projections are that 50% of customers will have an interval meter by 2025. In this focussed conversation, SA Power Networks will not be engaging with stakeholders on default network tariffs for Type 6 meters because there is minimal scope for changes to the tariff design and they are considered legacy tariffs with diminishing customer numbers over 2025-30. The current offering is simple and easy to understand for the customer.

	Type 6		Interval Meter		Total
Residential	547,981	68.1%	257,098	31.95%	805,079
Small Business	66,934	70.8%	27,568	29.2%	94,502
Large Business LV	Customers must connect to the distribution network with an interval meter		4,510	100%	4,510
Large Business HV			202	100%	202
Major Customers – Substation and Sub Transmission			30	100%	30
	614,915	68.0%	289,408	32.0%	904,323

RTOU | Residential Time of Use

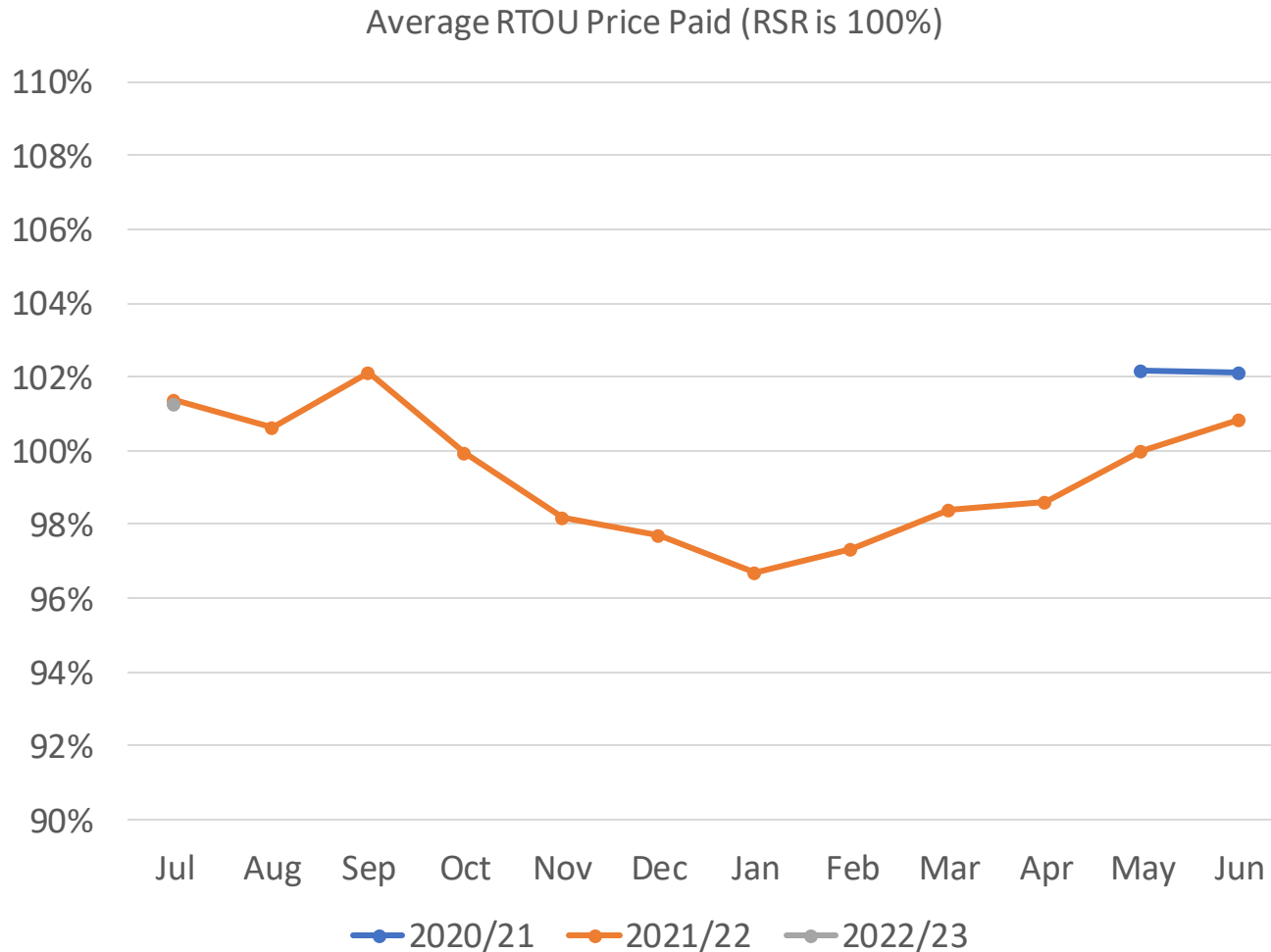


Pricing relative to Residential Single Rate (RSR):

- Peak | 125%
- Off peak | 50%
- Solar Sponge | 25%
- 259,499 | 31.6% Residential customers are assigned to RTOU

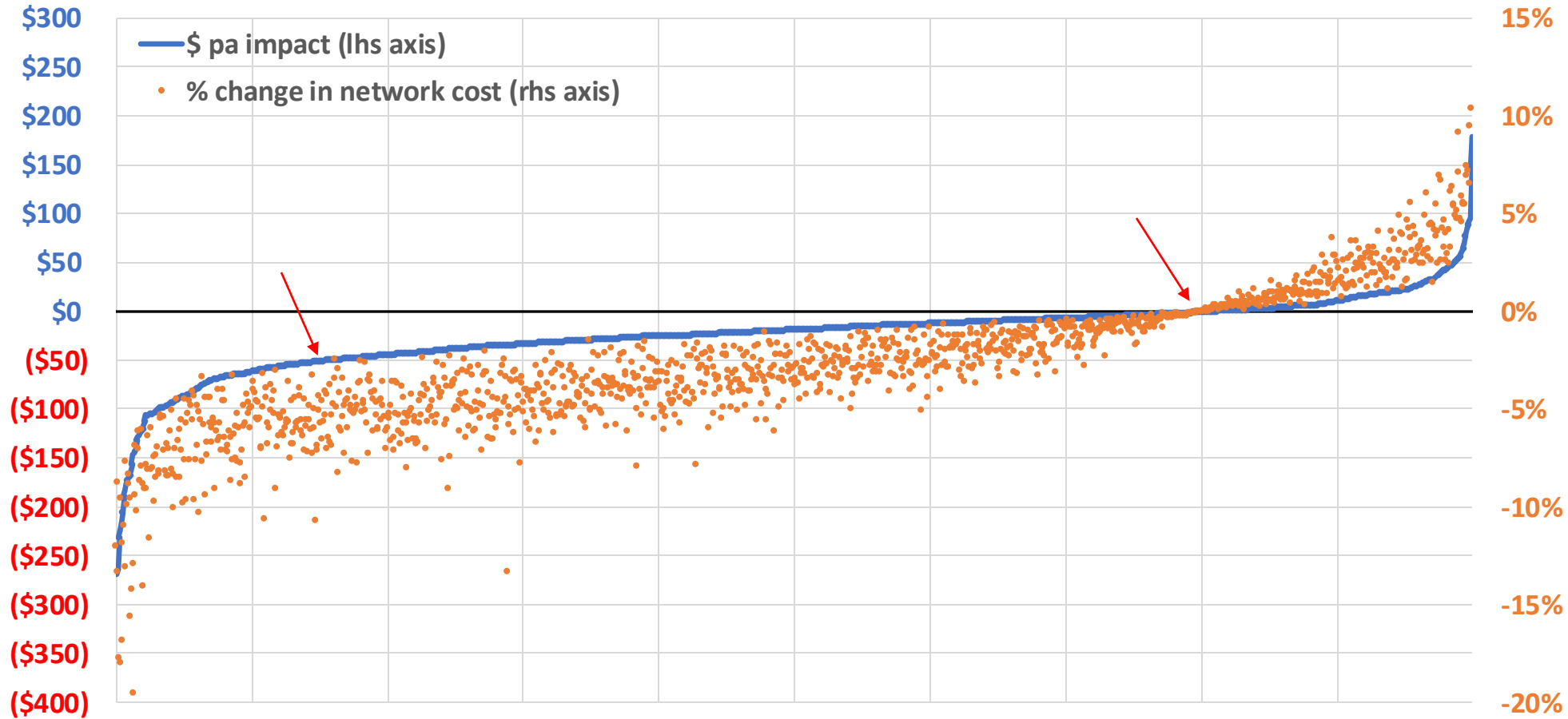
2021-22	MWh	%
Peak	435,198	70.2%
Off peak	97,282	15.7%
Solar Sponge	87,673	14.1%
Total	620,153	100%

Residential Time of Use – RTOU



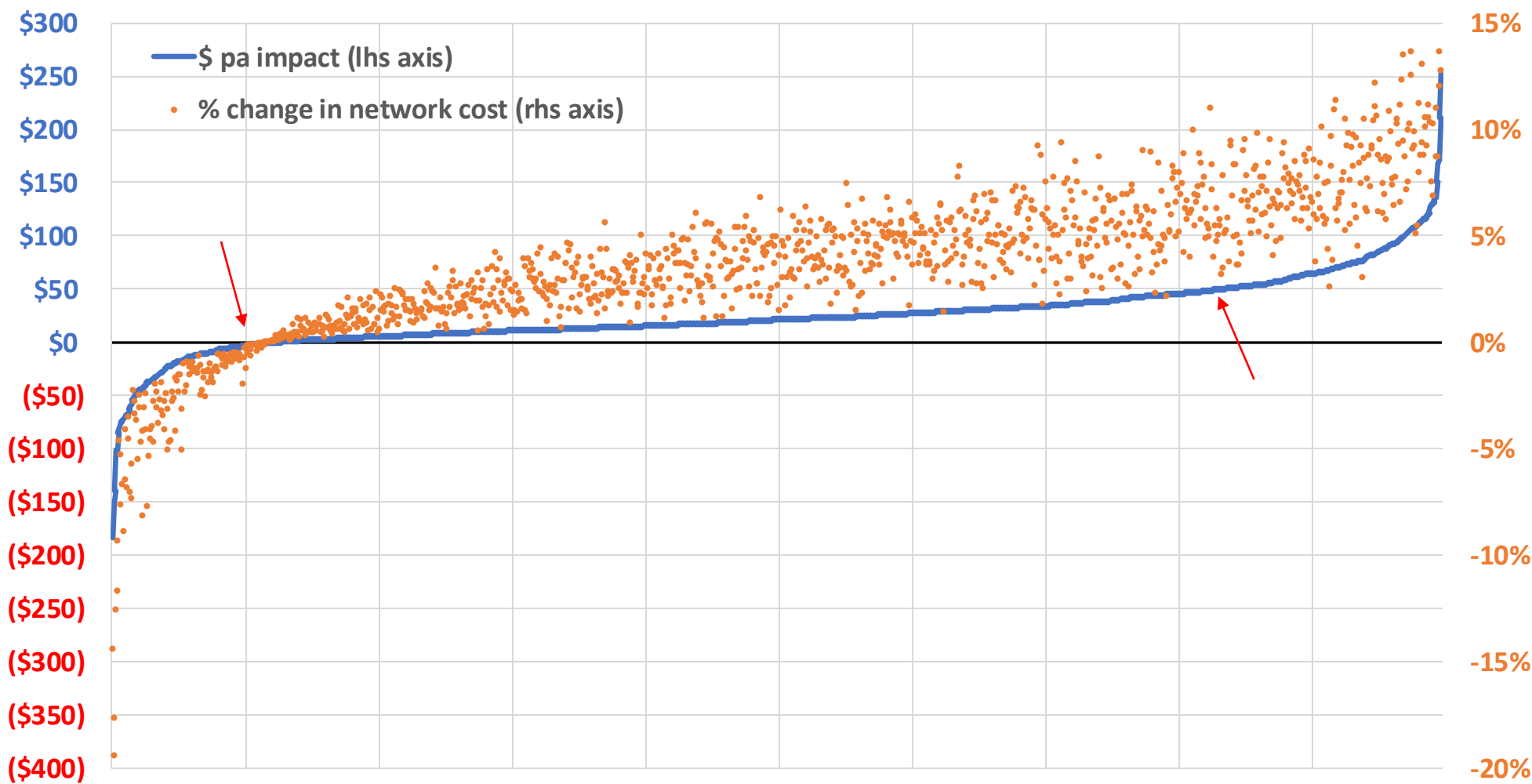
- In the development of this default network tariff structure, SA Power Networks did not want to create inequity between residential customers based on their meter type – Type 6 vs. Interval meters
- The tariff was designed to encourage loads to be shifted:
 - Solar Sponge (10:00am – 3:00pm) or
 - Off Peak (1:00am – 6:00am)
- The tariff was not designed to penalise those customers who could not respond to the pricing signals.

RTOU Customers without PV compared to RSR



- Sample of ~1,200 residential customers.
- 80% of customers make savings from RTOU.
- 15% of customers save >\$50 NUoS.

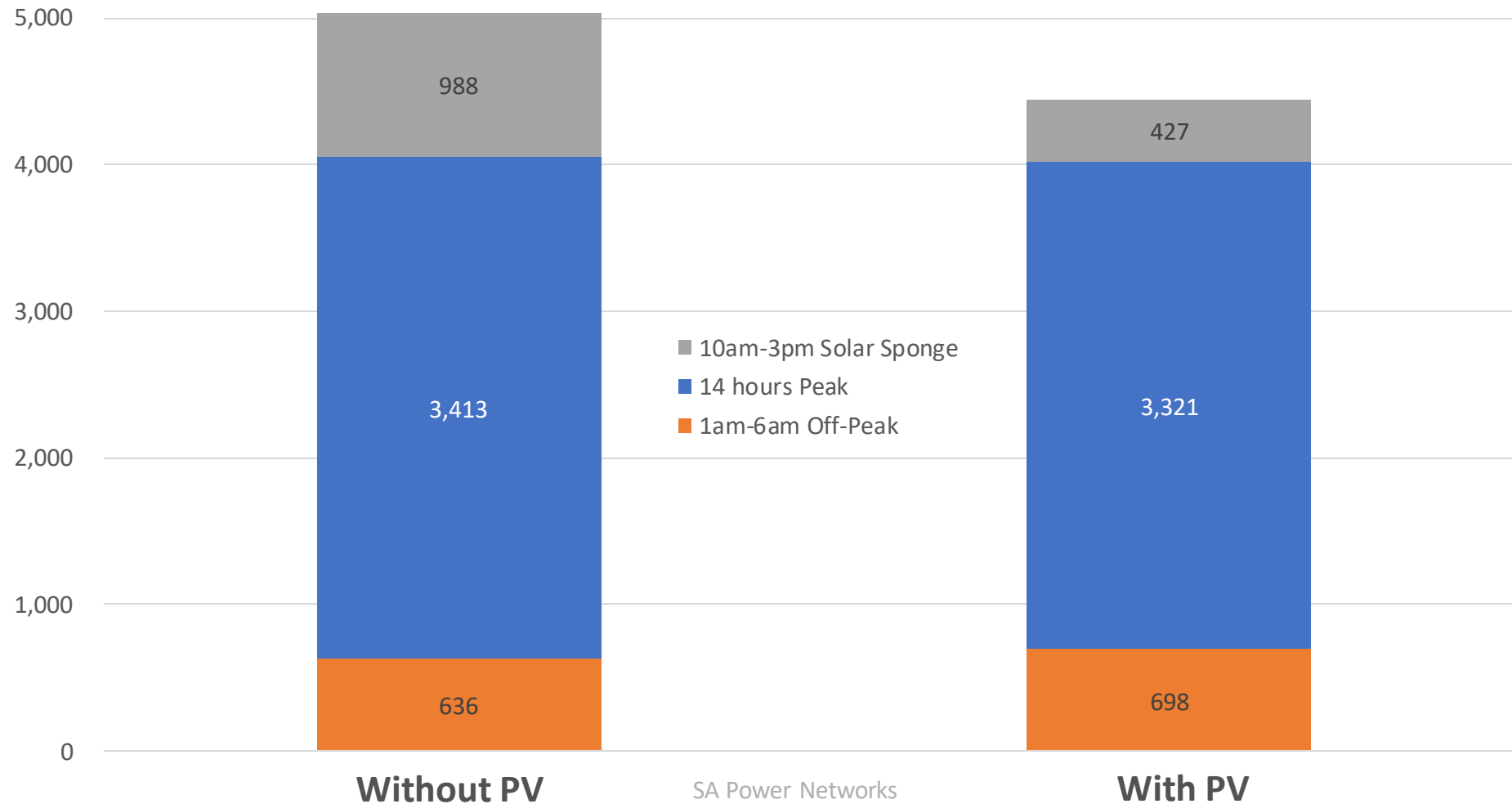
RTOU Customers with PV compared to RSR



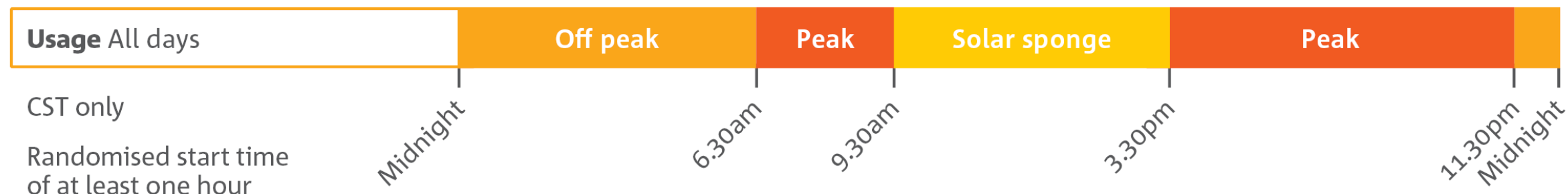
- Sample of ~1,200 residential customers.
- 12% of customers make savings from RTOU.
- 17% of customers pay >\$50 NUoS more.

Average Annual kWh use per Sample Customer

Samples represent different customers so averages are not directly comparable.



CL | Time of Use Controlled Load



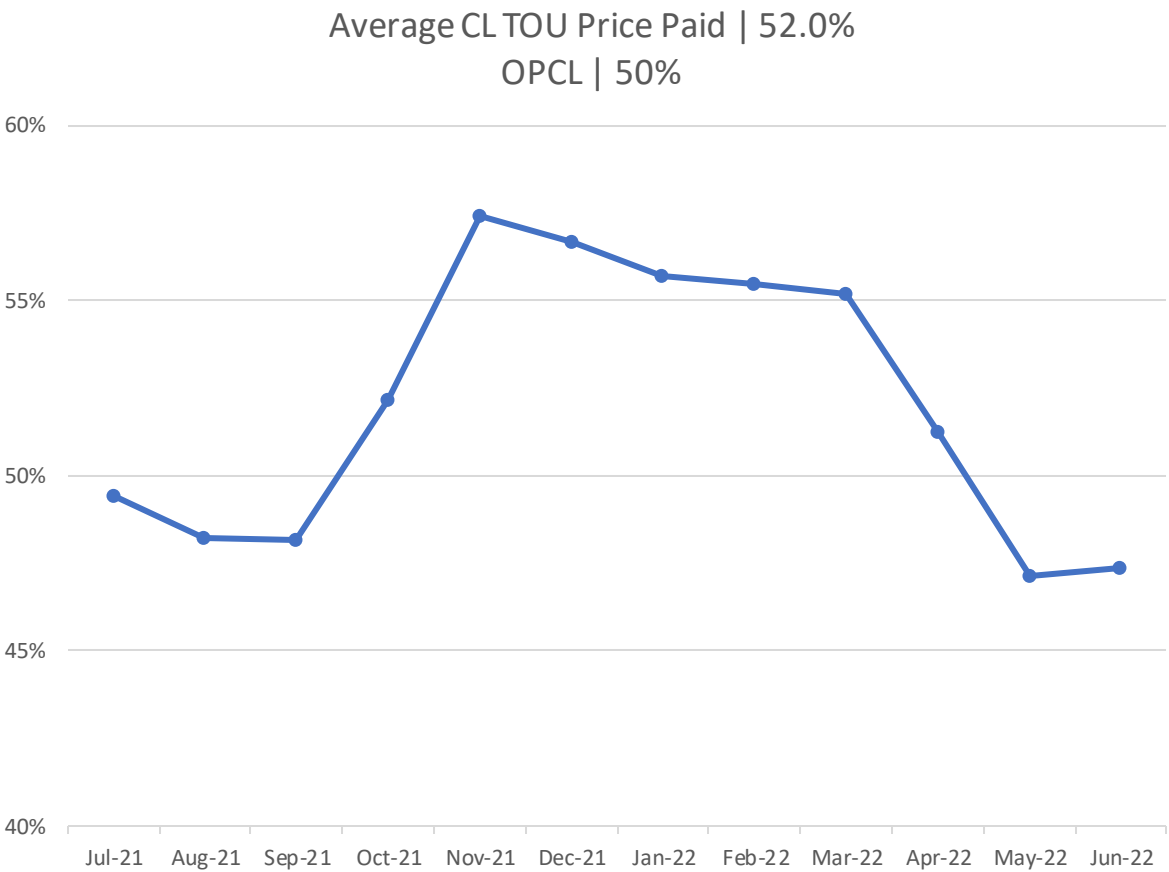
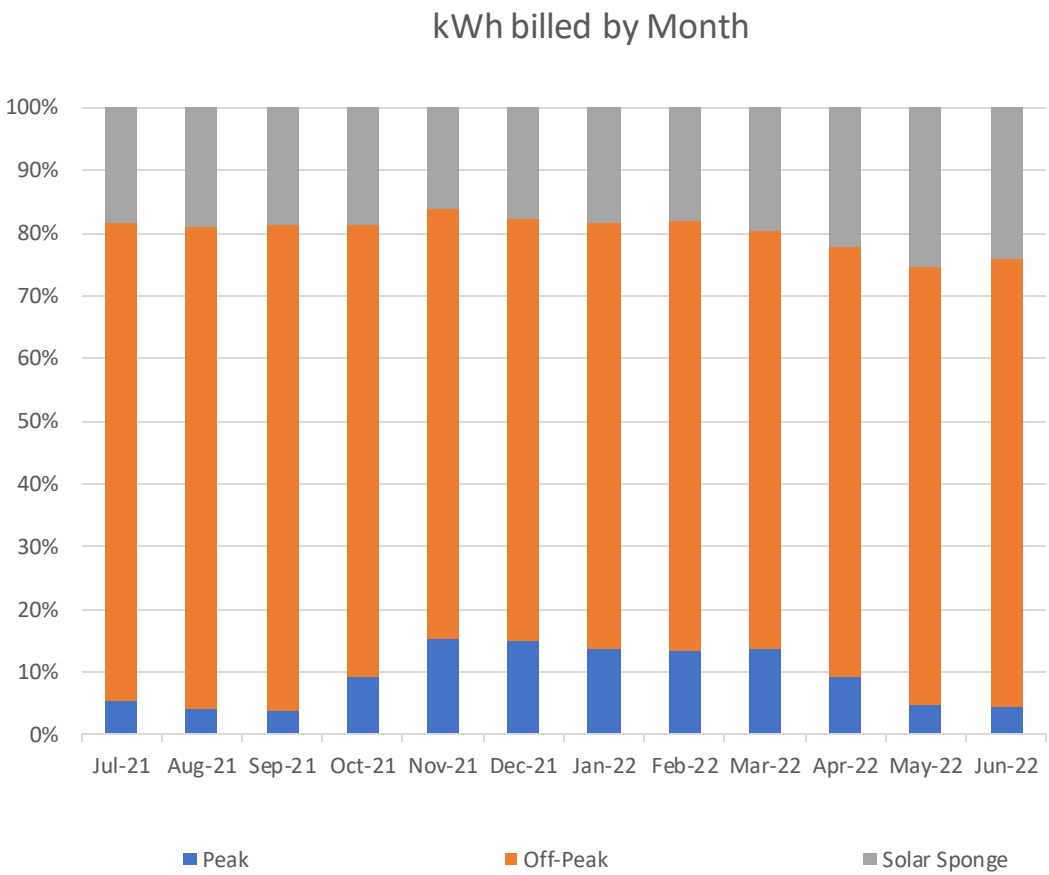
Pricing relativity to Residential Single Rate Controlled Load:

- Peak | 250%
- Off peak | 100%
- Solar Sponge | 50%
- 96,229 | 31.3% Controlled Load customers are assigned to TOU CL*

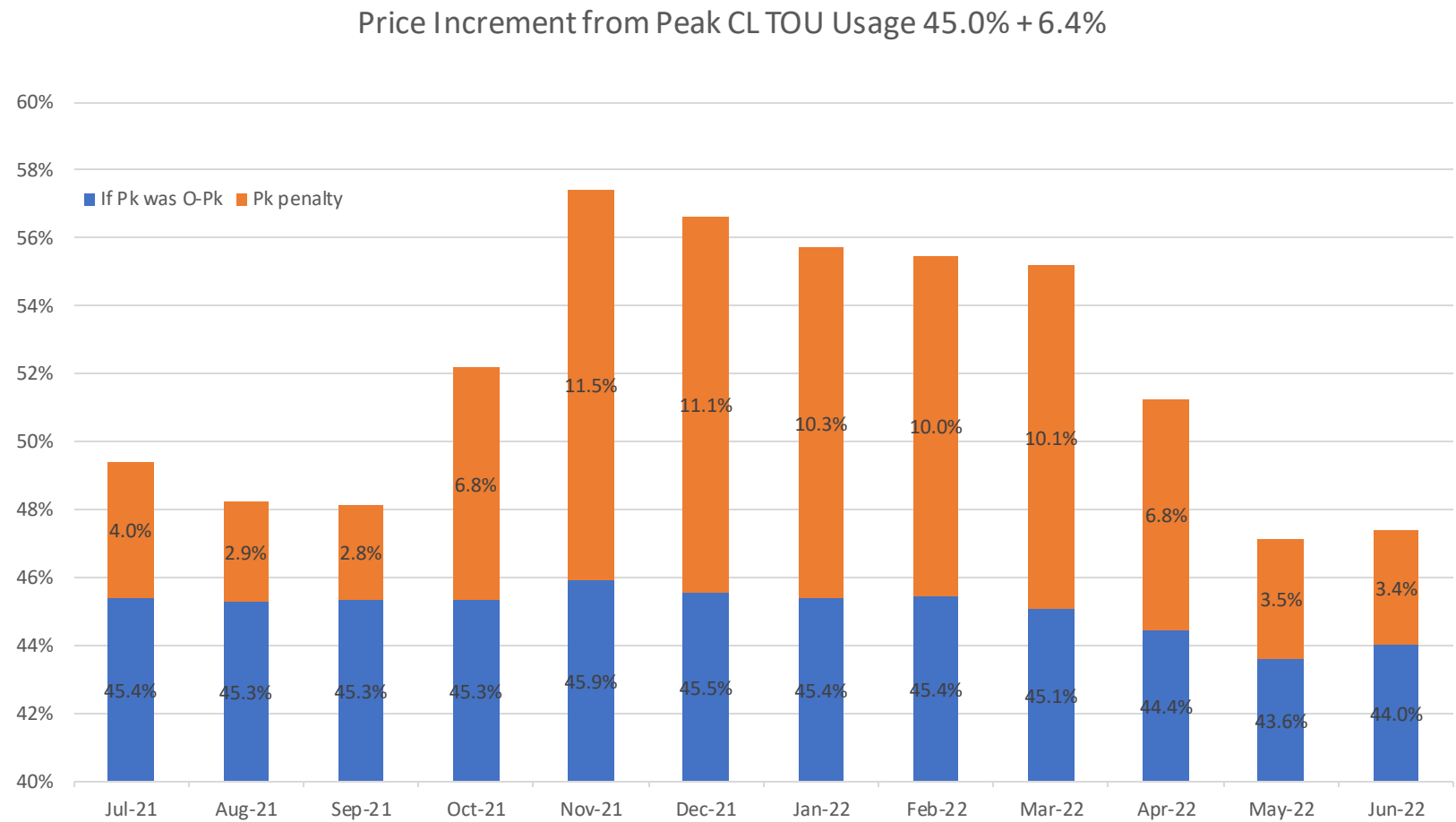
2021-22	MWh	%
Peak	10,297	8.5%
Off peak	86,753	71.5%
Solar Sponge	24,308	20.0%
Total	121,358	100%

*This is identified from the meter setup and so customers may not be utilising CL, but still have the capability

Controlled Load Time of Use – CL TOU

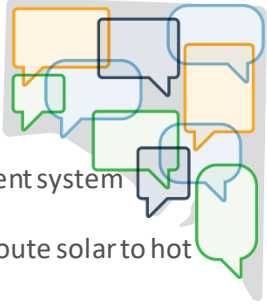


Controlled Load Time of Use – CL TOU



- Lower bar assumes any Peak use could have been at Off Peak.
- Higher bar is the Peak price increment to the average price billed v Single Rate OPCL

Discussion | Questions | Comments | Observations



Default Network Tariffs

- What percentage of interval (also known as 'smart') meters expected by 2030? Is there a deliberate process for converting from Type 6 (old) to interval meters?^
- Many vulnerable customers are not supportive of interval meters
- Is it the end goal that customers on the '2028 solar scheme' be on interval meters?^
- Nearly all small businesses are tenants who don't own premises and therefore can't choose which meters are installed or if solar is installed on the property, but they are responsible for outgoings including electricity*
- Tenants can request to changeover from Type 6 to interval meter (because meters are owned by the retailer, not the landlord)
- ESOSA receives lots of complaints about the default nature of Time of Use (ToU) tariffs. AEMC national review of smart meters shows that there is support to have ToU as opt-in tariffs. Most customers aren't accessing benefit from these types of tariffs*

Residential Time of Use (RTOU) tariff

- Do we know what % of customers are on a retail ToU product- what % of customers are actually seeing it?^
- Has people working from home during COVID skewed the RTOU data from the last couple of years?*
- Are you assuming that retailers mirror SAPN tariffs? ESCOSA finds that generally this is not happening*
- Observation—from the sample of ~1200 residential customers, 17% of customers pay more than \$50 NUoS
- Discussion around size of solar systems used for data on slide

56, and use between day/night

Time of Use Controlled Load

- Retailers aren't mirroring SAPN controlled load usage windows, so customers can't control when their controlled load goes on and off (and it's not necessarily within advantageous times)^
- It would be more realistic to present figures of what the actual retailer figures/data is because that's what customers actually experience
- Example of a customer who had an interval meter and hot water system set to Eastern Standard Time, which meant she was being charged peak usage at incorrect times
- Does daylight savings impact ToU controlled load?^
- What is 'controlled load'?^
- If they can be shifted into the solar sponge period, storage hot water systems represent an opportunity to store electrical energy as heat that's been made very cheaply (but a lot of hot water systems are still on old meters)
- Consumers need to see the pricing signals in order to respond – there's an opportunity for SAPN to engage with retailers to understand what % of consumers are seeing these offers in their product^
- Randomisation start periods for hot water services
- How accurate is the timing in interval meters?^
- Impact of daylight savings on timing for controlled load timing
- Can anything else aside from hot water systems be put on controlled load?^
- Have the rules around controlled load changed – thought it was limited to 5kW/21A and you could only have one device on at one time (in previous Service Rules)?^

- How would a computerised home management system interact with controlled load?^
- There are lots of solar (PV) devices that will route solar to hot water devices
- Is the alternative not to go to interval meters but for homeowners to use home management systems which gives them flexibility, potentially responds to what power is in the system and maximises the number of devices which come on in their home when power is in surplus?^
- RTOU structure is excellent for EVs
- It's very easy to program new EVs to charge at a preferred time of day (e.g. middle of day to align with solar sponge or middle of night to align with cheap prices)

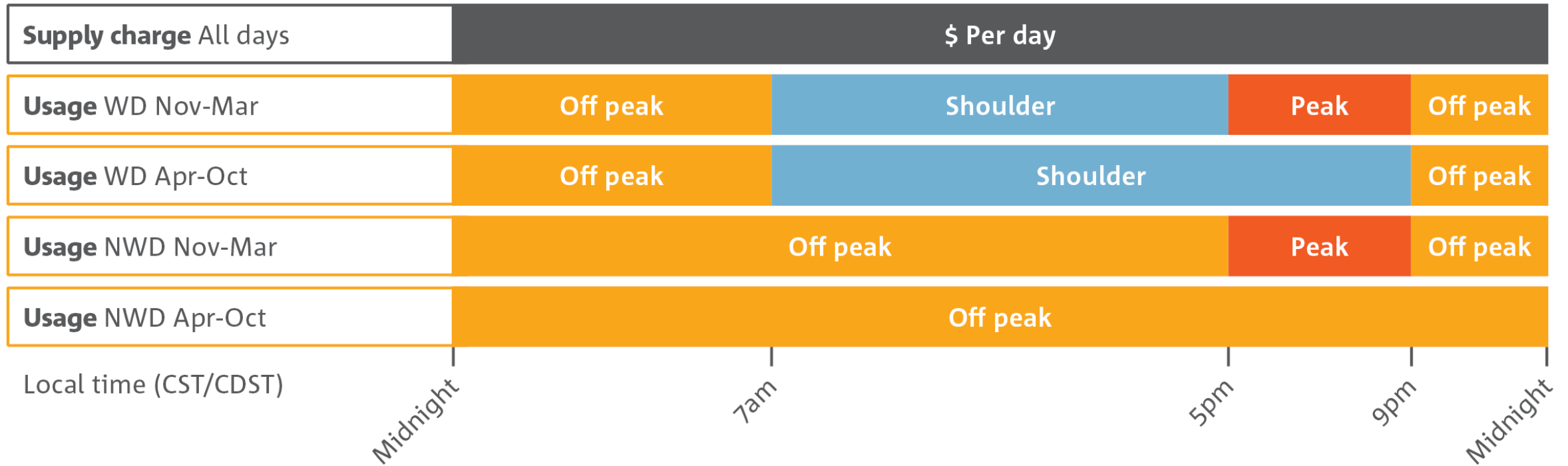
RESET ACTIONS – SAPN

- Consider alternate RTOU default network tariff structure and the default nature of the structure
- Develop analysis of a sample of RTOU/CL retail offers which show the extent of pricing signals being passed on by retailers

*Reset matter for consideration/discussion in future workshop

^BAU matter for response by SAPN

SBTOU | Small Business Time of Use

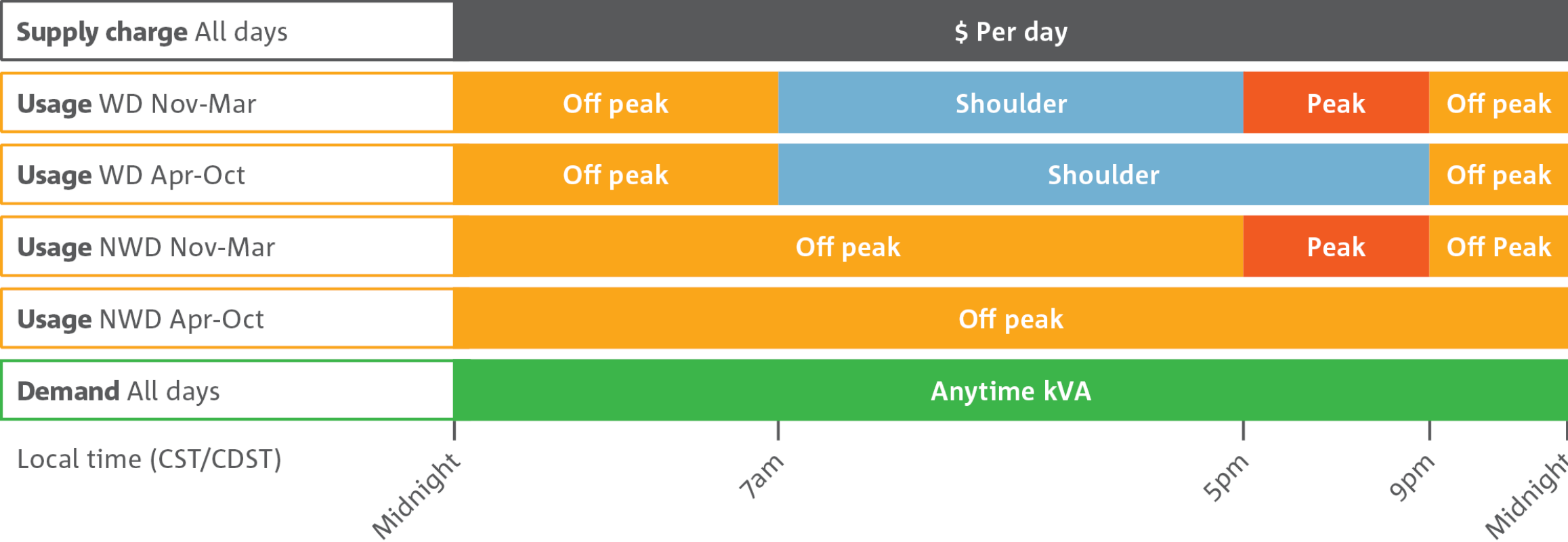


Pricing relativity to Business Single Rate:

- Peak | 150%
- Shoulder | 104%
- Off peak | 56%
- 22,677 | 21.1% Business customers are assigned to SBTOU

2021-22	MWh	%
Peak	28,396	7.6%
Off peak	172,427	45.9%
Shoulder	174,709	46.5%
Total	375,532	100%

SBTOUD | Small Business Time of Use Demand



- 4,697 | 4.4% Business customers are assigned to SBTOUD
- Majority of customers have opted into this tariff rather than meeting the default threshold of >120kVA

2021-22	MWh	%
Peak	18,455	9.1%
Off peak	99,397	48.9%
Shoulder	85,512	42.0%
Total	203,363	100%

Discussion | Questions | Comments | Observations



Small Business Time of Use

- What is the definition of 'small business' (for example – in a large retail shopping centre, would it be the smaller shops within like food providers in a food court?)*
- For small businesses, usually the electricity is in the outgoings which tenants contribute to (ie. are responsible for paying their share to the landlord)*
- Sometimes small businesses aren't SA Power Networks' customers, it is the landlords who are the customer*

Small Business Time of Use Demand

- Is the 160MWh small customer/business threshold up for grabs?*
- Discussion around the 160MWh threshold (would a small business with EVs go over it? What type of businesses would get to it? What is it based on?)
- Reflecting on issues of retailers not passing tariffs through to customers – to get transparency, small business threshold could be lowered*
- Due to the segmentation of the nature of the customers eligible for the SBTOUD tariff, some of the larger customers may be better on a different tariff they could respond to
- High power EV fast chargers (which will use around 200-500kVA) will be compelled to be on SBTOUD, but will have very low energy throughput in the early days.

This will result in a very high kVa total charge – this structure is not in place in other jurisdictions. Can you make it possible for high power fast chargers to be on other tariffs?*

- Considering the issue of retailers not passing through network tariffs, would SA Power Networks consider a review of the rules and amendments to strengthen the obligations between retailers and networks? The future requires network tariffs to enable DER etc, and if there continues to be a mismatch between the retailer and network tariffs it's not ultimately to the customers' benefit*
- Doesn't seem to be any incentive for small businesses to change their energy use behaviour (when compared to residential)*

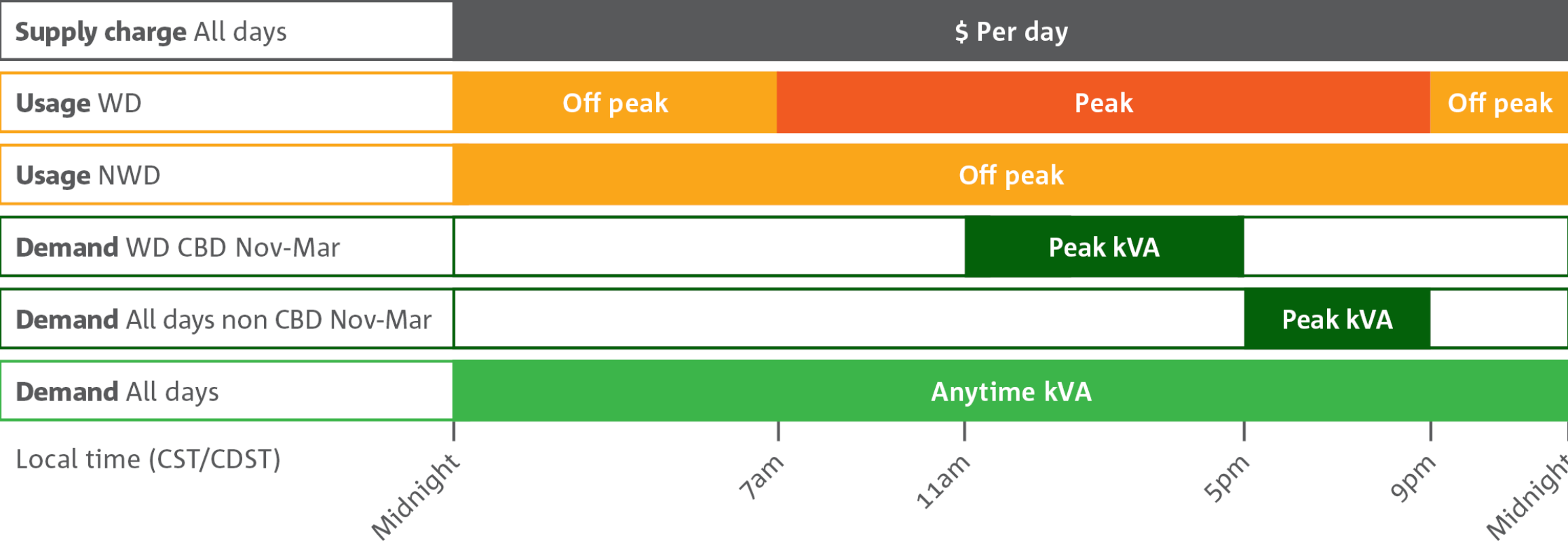
RESET ACTIONS – SAPN

- Consider alternate thresholds for small customers and understand any opportunities for further discussions with SA Government regarding amending Electricity Act
- Consider advocating for a review of the rules to strengthen obligations between retailers and networks (regarding passing on network tariffs by presenting the values as unbundled). Is it market/retailer convention OR is it a rule?
- Consider the introduction of a Solar Sponge window in all business tariff structures
- Consider the need for an embedded network tariff

*Reset matter for consideration/discussion in future workshop
^BAU matter for response by SAPN

LBAD | Large Low Voltage Business Annual Demand

HVAD | High Voltage Business Annual Demand



- 4,334 | 4.0% Business customers are assigned to LBAD/HVAD

2021-22	MWh	%
Peak	1,584,264	49.6%
Off peak	1,611,530	50.4%
Shoulder	-	0%
Total	3,195,794	100%

Discussion | Questions | Comments | Observations



Small Large Low Voltage Business Annual Demand / High Voltage Business Annual Demand

- Why not a Solar Sponge component for this tariff?*
- Could there be a community battery tariff?*
- Should CBD EV charging tariffs be considered?*

ACTIONS – SAPN

- Consider the introduction of a Solar Sponge window in all business tariff structures
- Consider what SA Power Networks is doing in the community battery space and whether a tariff should be considered.
- Consider the development of a CBD EV charging tariff.

*Reset matter for consideration/discussion in future workshop

^BAU matter for response by SAPN

Major Customers – Substation + Sub Transmission

- Site specific tariffs are developed for customers who connect at the Substation or Sub Transmission points of the distribution network.
- The customer may have unique connection arrangements or they could be large enough to require a locational transmission signal.
- The structure of the tariff for distribution is based on the same principles as LBAD and HVAD
- In 2022/23 Annual Pricing Proposal there are 28 site specific tariffs.
- A small number of LBAD and HVAD also have site specific tariffs for the reasons outlined.

Discussion | Questions | Comments | Observations



Major Customers – Substation + Sub Transmission

- Who are these major customers?^
- Could we see all of the tariffs in a table format together?*
- Business consumers seem to be a lot more exposed with peak windows (when compared to residential)

RESET ACTIONS – SAPN

- Develop an infographic showing all of the tariffs in a table together

*Reset matter for consideration/discussion in future workshop

^BAU matter for response by SAPN

Lunch Break

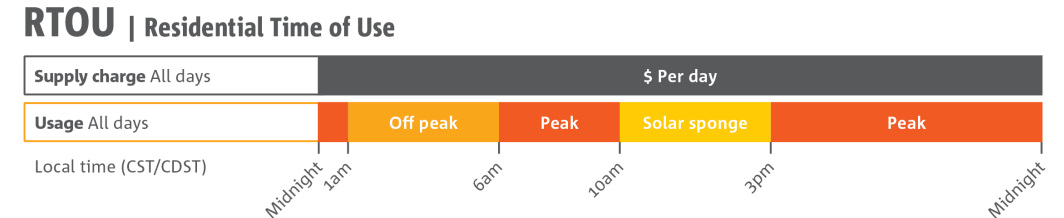


Tariff Design – Time of Use and Demand Windows

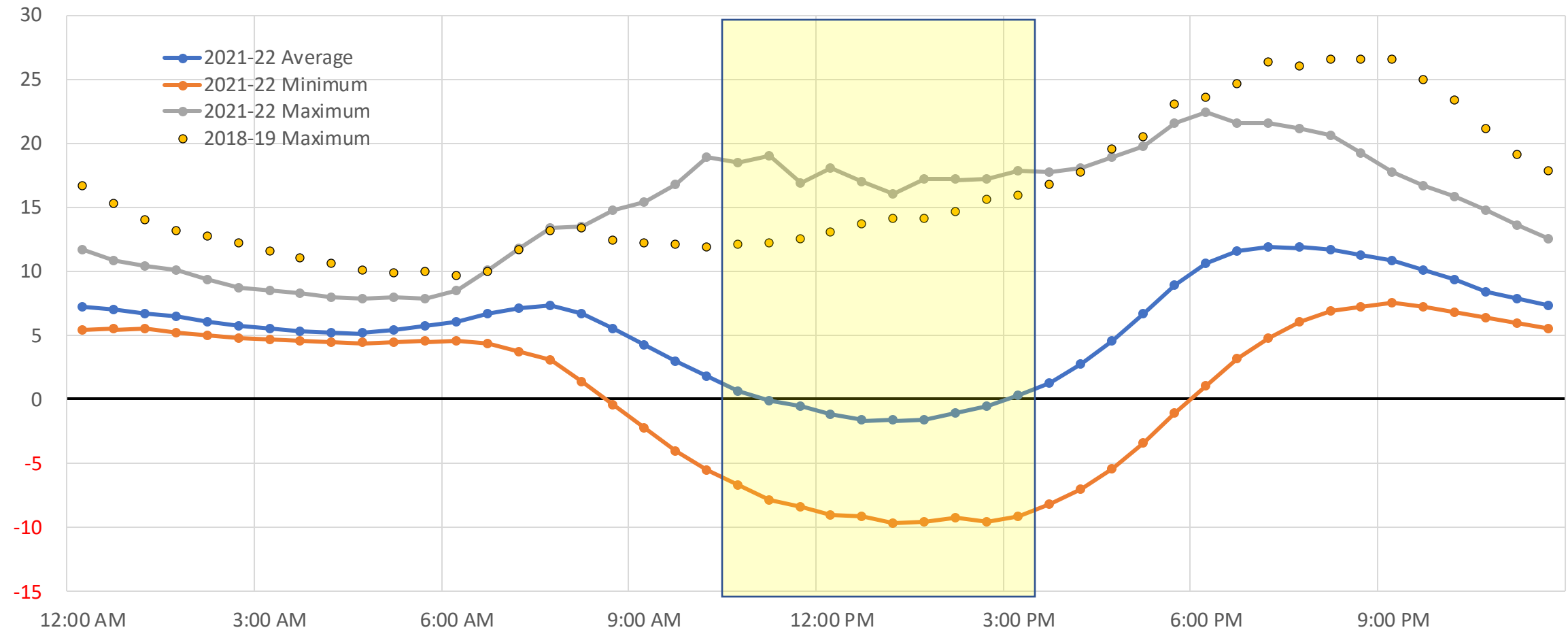
- The focus of the following discussions is to consult with stakeholders and customers on the tariff design of Time of Use and Demand windows.
- The presentation centres on the position in the current regulatory control period (RCP) 2020-2025 with the view of developing the groups understanding to then allow us to consider options in Workshop 2.

Tariff Design – Residential Time of Use Windows

- RTOU is comprised of 3 time windows:
 - Solar Sponge: 5 hours
 - Off Peak: 5 hours
 - Peak: 14 hours
- These time windows are part of a default network tariff structure which currently provides good incentive to shift loads to the Solar Sponge window without increasing the Peak price to a signal which is too sharp for a default network tariff.
- This tariff was designed so that customers would not be disadvantaged based on their meter type given the current transition pathway to interval meters.
- For one additional hour of Solar Sponge which is priced at 25% of the residential single rate price, the remaining 100% (as the hour would have previously been charged at a peak price of 125%) still needs to be recovered by the tariff structure. Options to recover this include:
 - Increase Peak pricing signal
 - Increase Off Peak pricing signal
 - Increase Solar Sponge pricing signal



Sheidow Park Substation – Demand MW



Discussion | Questions | Comments | Observations



Are the current Residential time windows appropriate?

- Do we have the flexibility to look at different periods within seasons for solar sponge, or is it a uniform period during the year?*
- Retailers have the power to simplify (e.g. two tiered rather than three tiered)
- Can we explore solar sponge being greater on the weekends? (If negative demand happen on the weekends?)*
- Weekends for daytime at-home EV charging are worth thinking about too - if it's maximally cheap at home on the weekend, reasonable chance that a lot of charging will happen then, instead of during the week. Cars more likely to be at home on a Saturday/Sunday than a weekday. Energy QLD have done some interesting work on this
- Where are the incentives for the non-residential sector to change their behaviour?*

community who rent and do not have access to smart/automated homes ... so how can they respond to get a better result of their action (using energy in a different way to get a better outcome in their bill)*

- Reflecting on the 'simplicity' principle - what is the real value in having an off-peak and solar sponge? In the long run, is it still an appropriate concept? The challenge is getting people to shift, but in the long-run is it better to just have peak and off-peak (three different levels spread over four windows is fairly complex)*
- Is there any capacity to have a vulnerable customer solar sponge tariff start at a different time?*

RESET ACTIONS – SAPN

- Consider alternate RTOU default network tariff structure
- Consider the introduction of a Solar Sponge window in all business tariff structures

What options analysis should be presented in

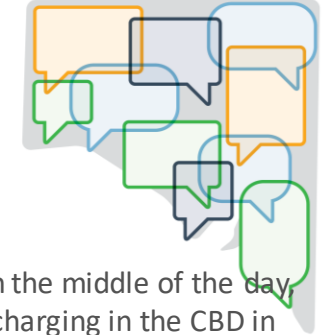
Workshop 2 to enable consideration of alternate time windows? (for example - Solar Sponge 9pm – 4pm)

- I think 15 hours a day of peak isn't really peak, it's just 15 hours a day of 'normal'. The solar sponge is quite attractive but it is relatively out of reach to a lot of people when they are at work or school*
- Peak finishing at 1am in the morning limits vulnerable people's ability to participate as may not have 'smart' appliances*
- Vulnerable customers are part of the 30% of

*Reset matter for consideration/discussion in future workshop

^BAU matter for response by SAPN

Discussion | Questions | Comments | Observations



General discussion

- (Relating to Sheidow Park example presented) What % of solar in the community?*
- I think we will see battery uptake – whether in vehicles or for households – accelerate during the 2025-30 period. The arbitrage for putting in a home battery is huge from an economics perspective, and when you put time shifting on top of that, interesting to see the impact on loads on things like substations
- Capacity to time shift will have a huge impact
- Solar is the cheapest electricity we're ever going to have so we have to find ways of maximising and sharing it, rather than designing structures that disincentivize it (or dump/waste it). There is also a climate change overlay – we should get some perspective on what the world will look like with increased solar or battery uptake (eg 70 or 80%) as it could have a huge impact*
- Last Reset we discussed residential demand tariffs and saying they were too hard to understand and respond at residential level. We could look at it a different way from retailers' perspective, which would enable us to look at risks and how customers' behaviour might change to respond to it
- In 2016 when developing SAPN's Tariff Structure Statement for 2017-20, we undertook a deliberative

process and developed customer impact principles which centred around customer empowerment, fairness and equity, and simplicity, with compliance as an underlying principle

- Bi-directional EVs will probably be the biggest game-changer
- EVs have significant potential to help, but requires numbers of cars
- Batteries are an obvious way for people to load shift but vulnerable people need access to these
- Low income, people with disabilities, the working poor people will be the very last people to drive EVs – we have to make sure that the people on the lowest incomes are paying the 'poor tax' and pay for everyone else through the energy transition*
- Reflecting on the 'simplicity' principle - what is the real value in having an off-peak and solar sponge? In the long run, is it still an appropriate concept? The challenge is getting people to shift, but in the long-run is it better to just have peak and off-peak (three different levels spread over four windows is fairly complex)*
- Tariffs will always be a compromise between price signals and cost recovery

- If peak demand in the CBD is in the middle of the day, should we be discouraging EV charging in the CBD in the middle of the day? Opposite the desired behaviour from the suburbs
- Could this group look at community batteries beyond the solar sponge (for PV owners prepared to sell energy to a retailer for a community battery)? This would solve some of the time-shift issue ahead of the substation and could also help vulnerable people. Not aware of any tariff in South Australia that would facilitate that*

RESET ACTIONS – SAPN

- Revisit customer impact principles developed in 2016 as potential guidance for Tariff discussions in Reset 2025-30
- Time of Use and Demand windows to be considered and presented in revised default tariffs

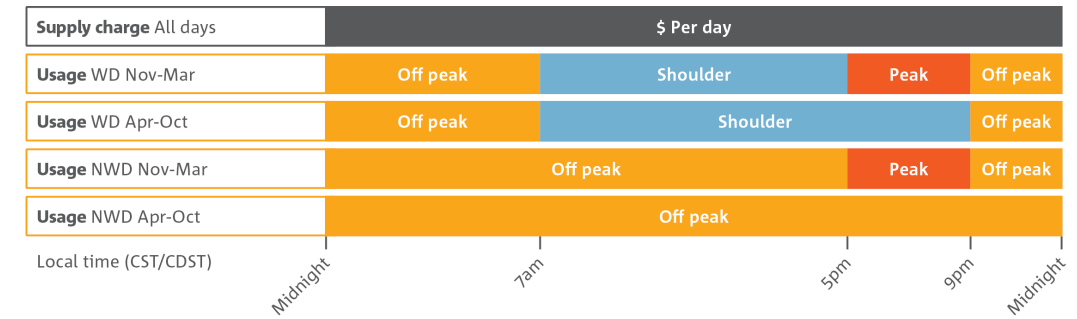
*Reset matter for consideration/discussion in future workshop

^BAU matter for response by SAPN

Tariff Design – Small Business Time of Use Windows

- SBTOU is comprised of 3 time windows differentiated by Summer | Winter and Work Day | Non Work Day.
- Consideration was given to the development of a Solar Sponge window for SBTOU as a trial tariff in 2022-23. This was shared with TWG in November 2021.
- The creation of such a window with a low pricing signal would not change consumption behaviour but rather customers would receive a cheaper price at a time of the day which they are already operating regardless of the price signal. This is considered to be an unintended consequence.
- By lowering one price signal, the consequence is that an increase must occur in price or number of hours within a higher priced time window to offset the lower price.

SBTOU | Small Business Time of Use



Discussion | Questions | Comments | Observations

Are the current Small Business time windows appropriate?

- Price signaling is probably not going to be very persuasive for small businesses particularly in the retail space, because there isn't much they can do to change their behavior (e.g. the lights need to come on at 9am when the customers come in)

What options analysis should be presented in Workshop 2 to enable consideration of alternate time windows?

- The group agreed that ample feedback had been provided on small business tariffs throughout the workshop, and further discussion was not required here

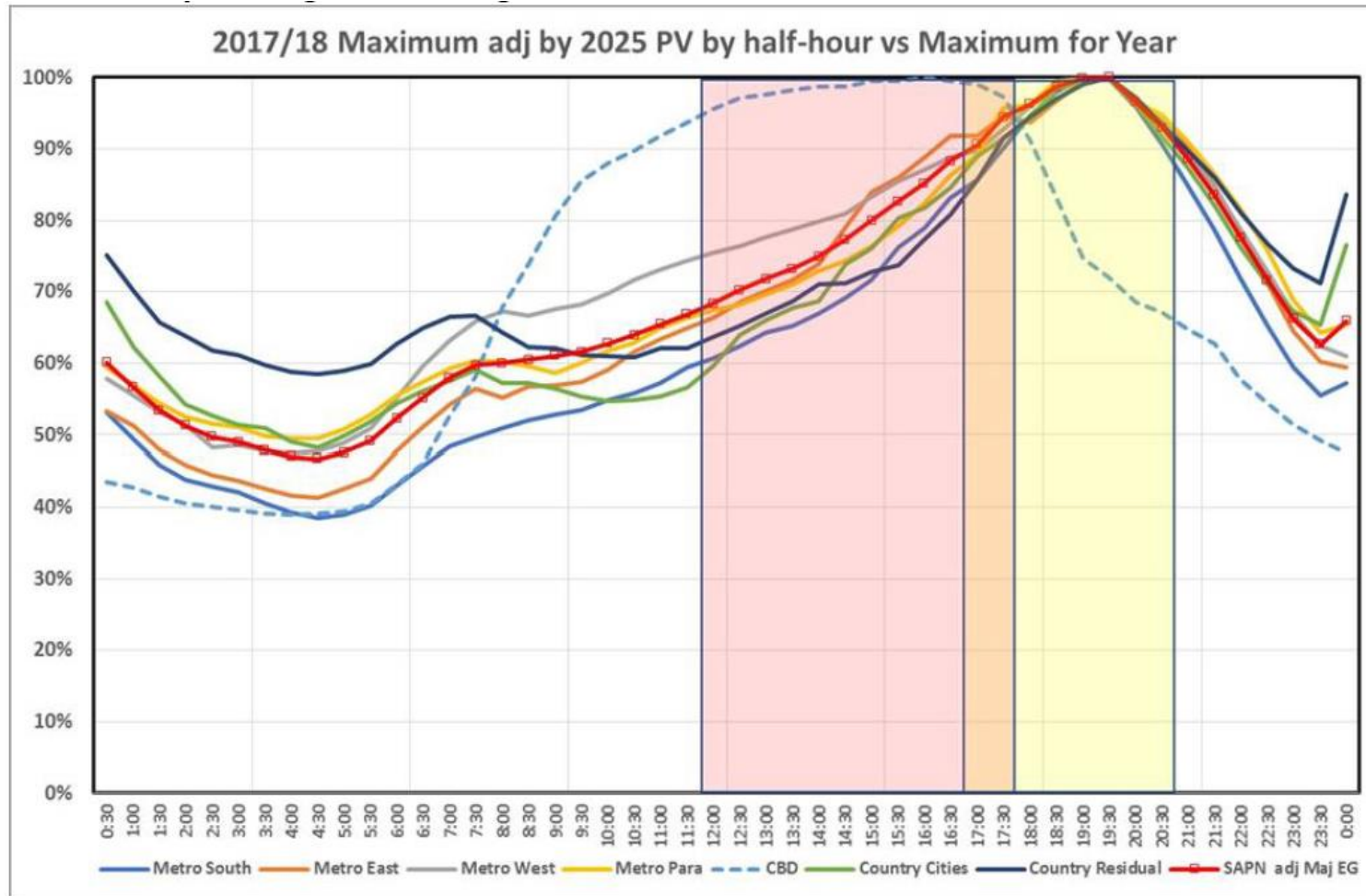
RESET ACTIONS – SAPN

- Actions noted in other sections of the presentation.

*Reset matter for consideration/discussion in future workshop
^BAU matter for response by SAPN

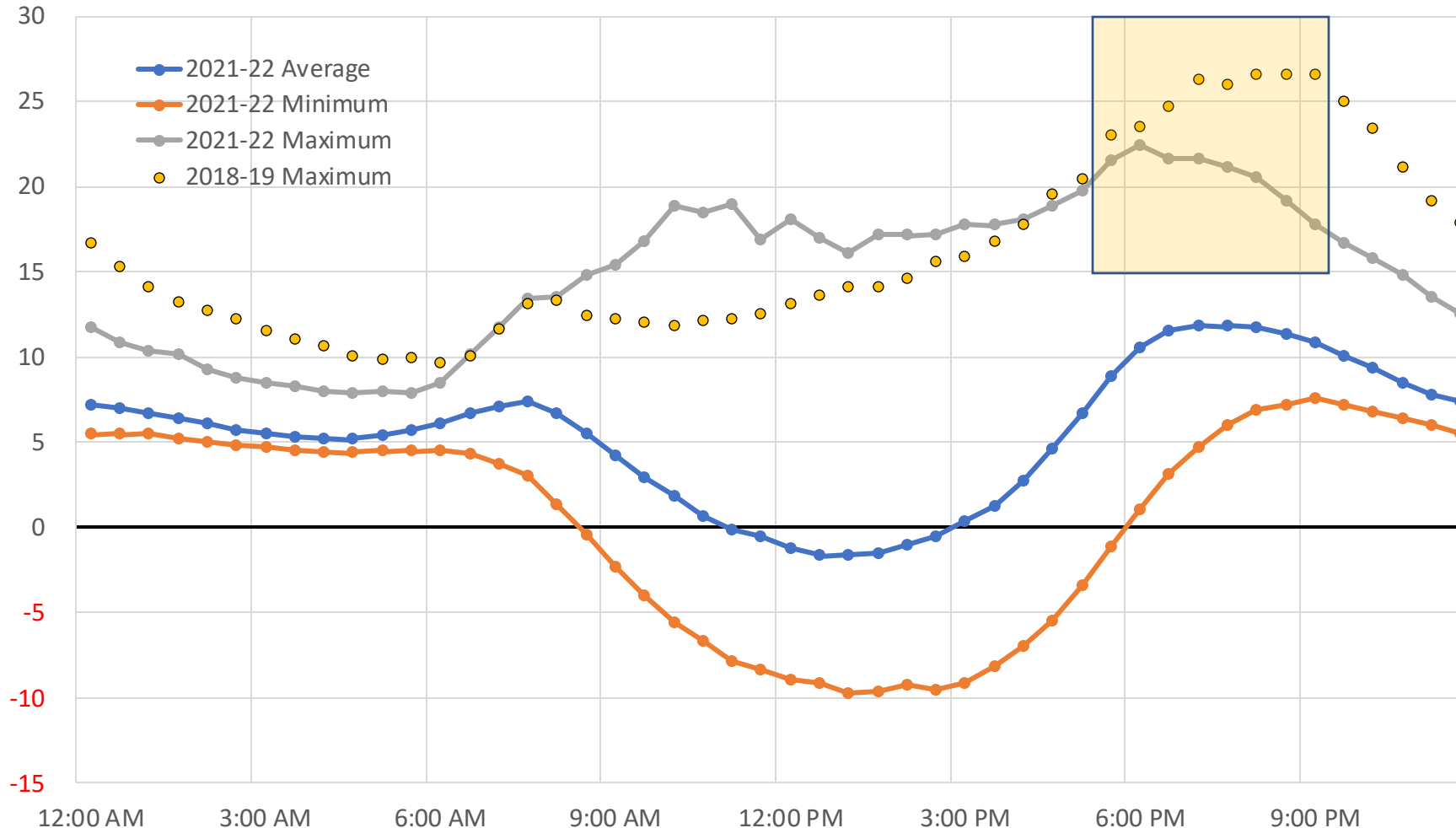


Tariff Design – Demand Windows



- Demand profile data was part of the 2020-25 TSS.
- In this current RCP we have not experienced significant hot temperatures, i.e. $>38^{\circ}\text{C}$. and so this demand profile remains valid.
- The Peak Demand window in Adelaide CBD is at a different time to the Statewide peak Demand Window.

Sheidow Park Substation – Demand MW



- In this current RCP we have not experienced significant hot temperatures, i.e. $>38^{\circ}\text{C}$.
- 2018-19 Data has been used to demonstrate maximum demand levels on the distribution network.
- Export in the Peak demand window is currently measured as zero load. By recognising the benefit of the negative value it would lower the measured demand during the Peak window.
- This methodology change is now being considered in conjunction with export pricing.

Discussion | Questions | Comments | Observations



Are the current Demand windows appropriate?

- If peak demand in the CBD is in the middle of the day, should we be discouraging EV charging in the CBD in the middle of the day? Opposite the desired behaviour from the suburbs (signals and communication)
- Is there also a seasonal element to these windows?*
- Could you look at gamification to get people on board to reduce demand at peak times? (like Power Shop/Energy Australia has done)*
- Business would generally like to have incentives rather than penalty to support behavioural change. Should see how far you can push up the incentive in the middle of the day, particularly for businesses?*

What options analysis should be presented in Workshop 2 to enable consideration of alternate Demand windows?

General discussion

- Behaviour is the other half of the equation (to pricing) in tariffs – if the peaks are always the problem in the summer period, and we know it's going to get worse ... what incentives, through the tariff structure or some other mechanism, can we put in place to change behaviour?
- Most large charging stations include a battery as well, so the existing infrastructure isn't going to support a whole street of EV chargers and will require a battery as well

RESET ACTIONS – SAPN

- Time of Use and Demand windows to be considered and presented in revised default tariffs

*Reset matter for consideration/discussion in future workshop

^BAU matter for response by SAPN

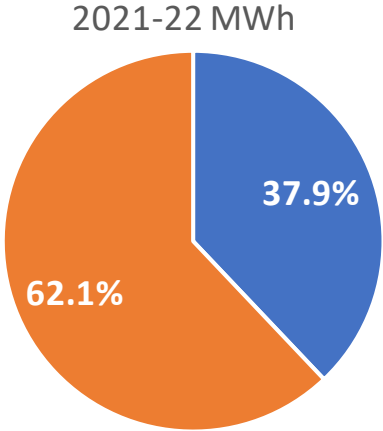
Cost Allocation – Residential vs Business

- In the current regulatory control period (RCP) 2020-25 revenue cost allocation has been derived on the following key metrics:

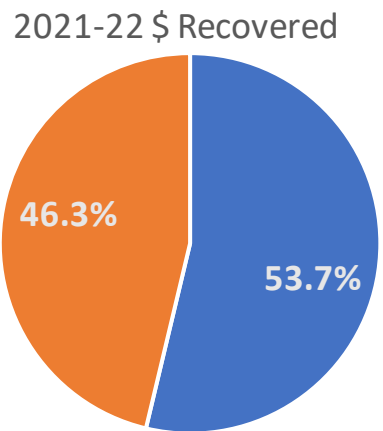
	Residential	Business
Number of Customers (NMIs)	88.8%	11.2%
Diversified Demand (MVA)	47.6%	52.4%
Usage GWh (at Pool Exit)	36.8%	63.2%

- The combination of these metrics leads to cost allocation of:
 - Residential 53%
 - Business 47%
- Residential customers use all voltage levels of the distribution network where as business does not.
- Cost allocation must consider how network assets are used based on Peak Demands. In this current RCP we have not experienced significant hot temperatures, i.e. >38°C.

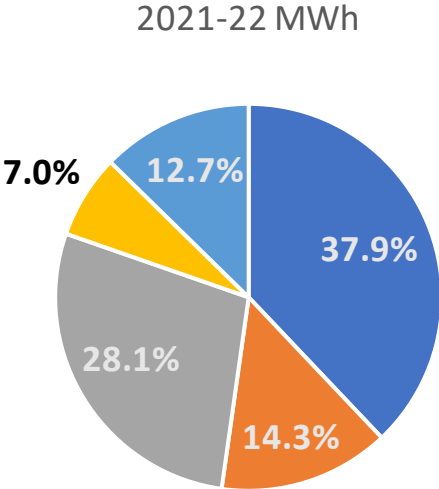
Cost Allocation – Residential vs Business



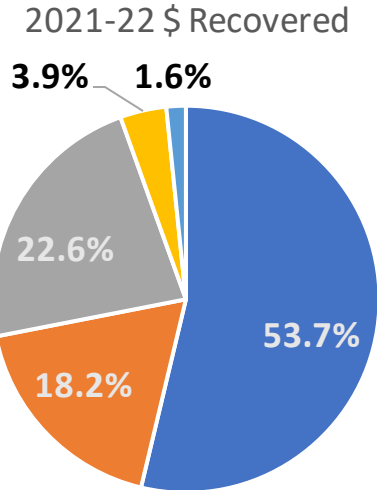
■ Residential ■ Business



■ Residential ■ Business



■ Residential ■ Small Business ■ Large HV Business ■ Major Business



■ Large LV Business

Revenue Recovered from Residential



- SA Power Networks recovery from residential above Distributor average but within typical range.
- SA Power Networks cost per customer the same as Distributor average if 51% used.
- 2022-23 affected by higher residential and lower business use due to Covid. May be reset back to 53% for 2025-30.
- Transmission pricing in Victoria appears unusual, as does Ausgrid (in the opposite direction).
- CitiPower is dominated by commercial business, hence low residential charge proportion.

Discussion | Questions | Comments | Observations



Would you seek to continue with the Residential and Business allocation of 53% and 47% respectively?

- Irrespective of this 53/47 split, most EV charging will happen at home - it'll be cheaper and more convenient for most drivers, most of the time. I don't have a particular point of view on the split
- The business community wouldn't want to see the percentages increase and is happy with the status quo

What options analysis should be presented in Workshop 2 to enable consideration of alternate cost recovery allocation between Residential and Business?

General discussion

- Do changing work habits (with more people working away from the CBD over the last couple of years), does this have any impact?
- Is there data available on how EV drivers use their cars? (Ross advised – there will be a report available in the next week or so)

RESET ACTIONS – SAPN

- No actions. Consensus to retain 53%/47% based on the metrics input to calculate the percentage split

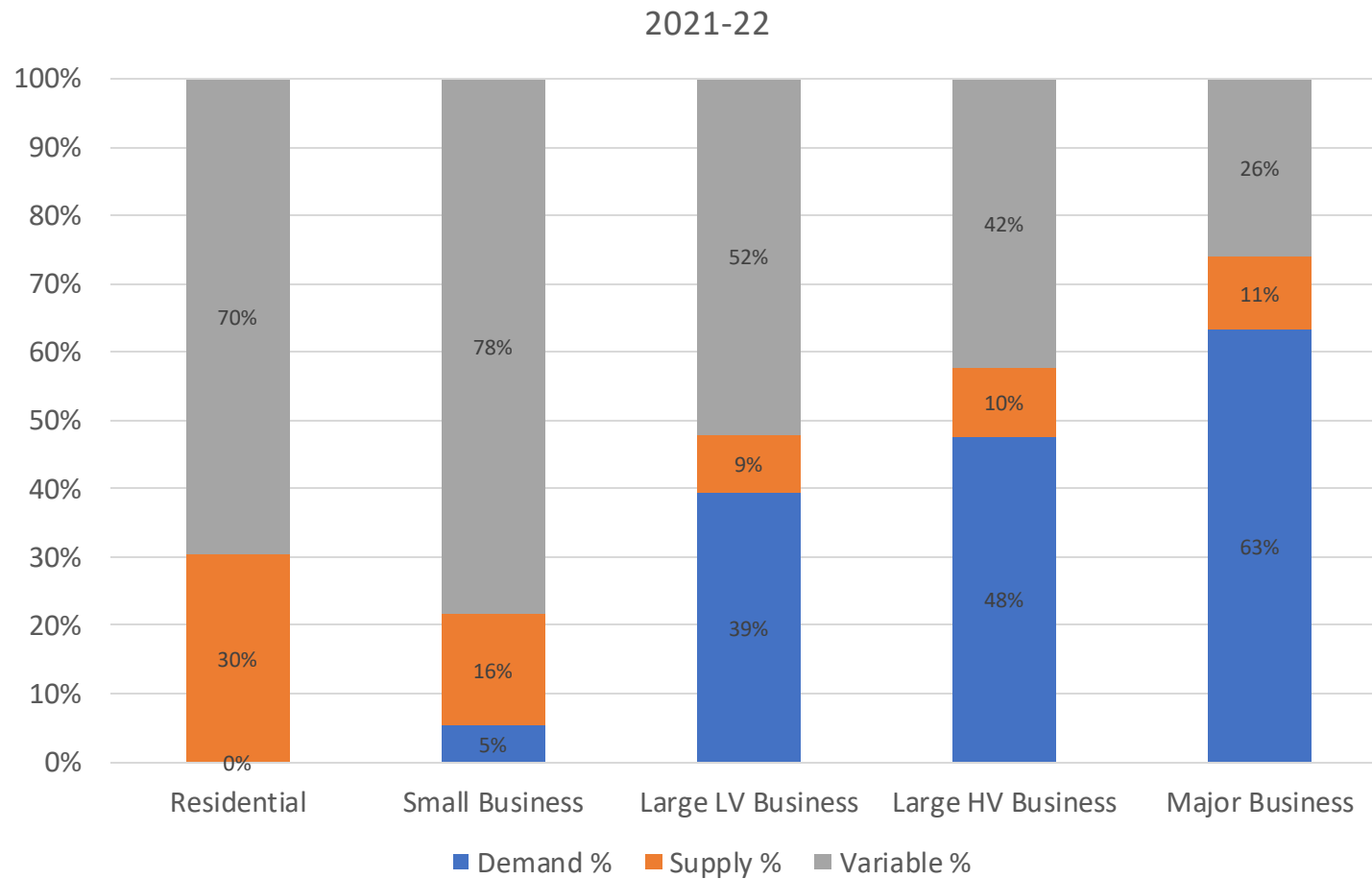
*Reset matter for consideration/discussion in future workshop

^BAU matter for response by SAPN

Cost Allocation – Fixed Vs Variable

- Fixed costs include the daily supply charge and demand kVA
- Variable costs are usage – kWh
- In the current RCP of 2020-2025 the daily supply charge is increased annually:
 - Residential: \$10 p.a.
 - Small Business: \$20 p.a.
- We consider this to be cost reflective for these customer cohorts as a greater proportion of customer related costs (e.g. service wire and LV wires) are recovered on a per customer basis.
- This increase in fixed charges is also considered to more equitable between customers with and without Distributed Energy Resources (DER) such as solar, noting that the average residential customer has annual consumption of 4,000 kWh. This is approximately 20% less consumption than from 10 years ago.
- South Australia is continuing to lead the way in the uptake of DER in projections for 2025-2030.
- An increase in fixed charges allows for a reduction in variable charges i.e. usage charges.

Cost Allocation – Fixed Vs Variable



- Demand charges are to be reflective of Long Run Marginal Cost (LRMC).
- LRMC is forward looking costs that are responsive to the changes in electricity demand and include investment in additional network capacity to meet growing peak demand and replacement of fixed assets at the end of their economic life where demand is a consideration.
- Efficient pricing signals ensure that the demand charging components are not materially under or over recovering LRMC.

Discussion | Questions | Comments | Observations



Do you support the continuation of annual increases to the supply charge?

- General consensus that this seemed reasonable

What analysis would you like to see to assist in your decision making?

- No feedback provided

General discussion

- As we move to a more electrified society and some people will be needing to increase the capacity of their homes and businesses accordingly, where do costs such as connection costs factors in?[^]

RESET ACTIONS – SAPN

- Consensus to continue with annual increment in supply charge for Residential and Small Business Customers
- Split out the kVA component on Slide 85 – Complete

*Reset matter for consideration/discussion in future workshop

[^]BAU matter for response by SAPN

Next Steps – Engagement

Date	Description
Mid-August 2022	• Summary of workshop outputs and discussion to all invitees and attendees
Workshop 2 24 August 10.30am – 12pm	• Continuation of Cost Allocation / Tariff Design
Workshop 3 14 September 9.30am – 1pm	Initial discussion: • Enabling the Energy Transition – Residential • Enabling the Energy Transition – Business
Workshop 4 28 September 9.30am – 1pm	Continuation & finalisation of: • Enabling the Energy Transition – Residential • Enabling the Energy Transition – Business
Workshops 5-8 October-November TBA	• Export Tariffs
People’s Panel Deliberation	• February – March 2023



Empowering South Australia