

DER INTEGRATION RULE CHANGES

DRAFT DETERMINATION

VIRTUAL PUBLIC FORUM
20 MAY 2021

AEMC



We are the rule maker
for Australian electricity and
gas markets

What we do

We make and amend the:



National Electricity
Rules



National Gas
Rules



National Energy
Retail Rules



We also
provide market
development
advice to
governments

Market body roles



Australian Energy Market Commission

Rule maker, market
developer and expert adviser
to governments

*Setting the guard rails for the
market and industry*



Australian Energy Regulator

Economic regulation
and rules compliance

*Implement the rules, ensuring
compliance and reviewing and
approving revenue and price
proposal*



Australian Energy Market Operator

Electricity and gas systems
and market operator

*Works with industry
to keep the lights on.*

Today's Forum – Proposed reforms to integrate DER



Inform the discussion on the proposed reforms to better integrate distributed energy resources



AEMC staff will provide an overview of what's proposed under the draft reforms and answer questions



Key stakeholders from across the industry will share their views

Today's agenda

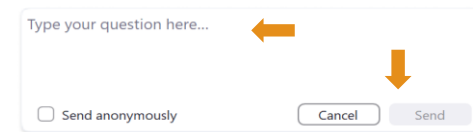
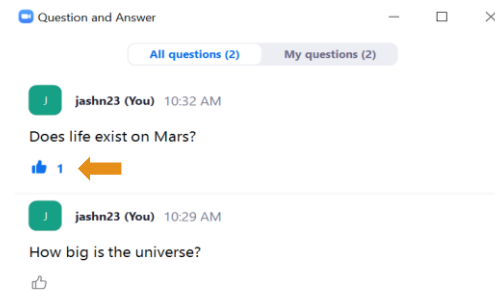
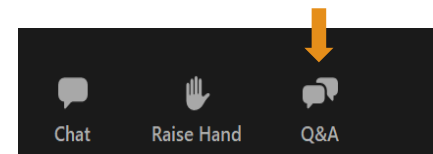
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|--|-------------------------|
| 1. Introduction | David Feeney, AEMC |
| 2. Opening remarks | Michelle Shephard, AEMC |
| 3. Integrating DER draft determination | Ed Chan, AEMC |
| 4. Implementation of export pricing | Mark Vincent, SAPN |
| 5. Short break | |
| 6. Panel introduction | |
| 7. Panel discussion and Q&A | |
| 8. Wrap up | Michelle Shephard, AEMC |

Housekeeping

- All participants are current in 'listen-only' mode
- Presentations from today will be posted on our website after the webinar
- Please engage respectfully

Asking questions

- Q&A function is open throughout the webinar
 - Use the Q&A button on the bottom of your screen
- Questions will be answered during the Panel discussion
- Please keep questions on topic – we have a large audience and limited time
- When asking questions, please indicate which presenter you are directing the question to
- If requested by moderator please switch your mic or mic/video on during the Q&A session to further explain your question.



OPENING REMARKS

THE NEED FOR CHANGE

MICHELLE SHEPHERD – AEMC COMMISSIONER

DRAFT RULE DETERMINATION

WHAT DOES OUR DECISION ENTAIL?



ED CHAN – AEMC DIRECTOR

Four proponents, three rule change requests



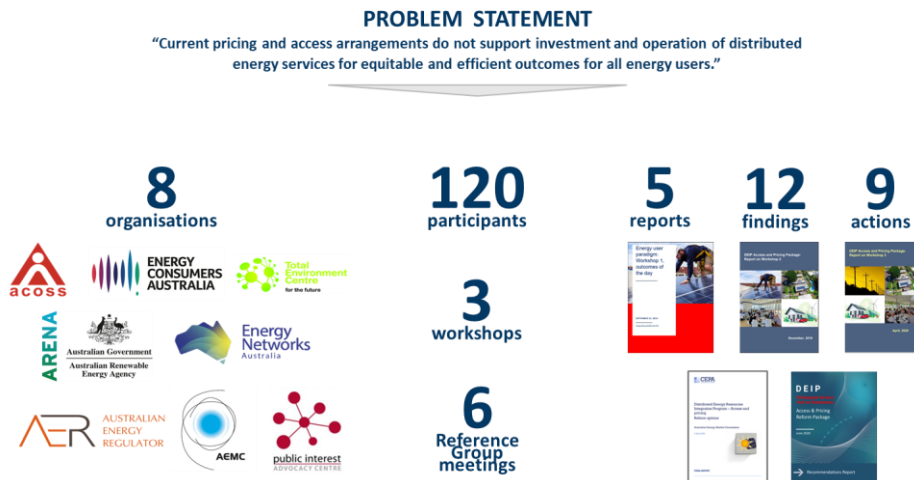
St Vincent de Paul Society
VICTORIA
good works

Requests represent the outcome of a collaborative process

- **How?** ARENA's Distributed Energy Resource Integration Program (DEIP)

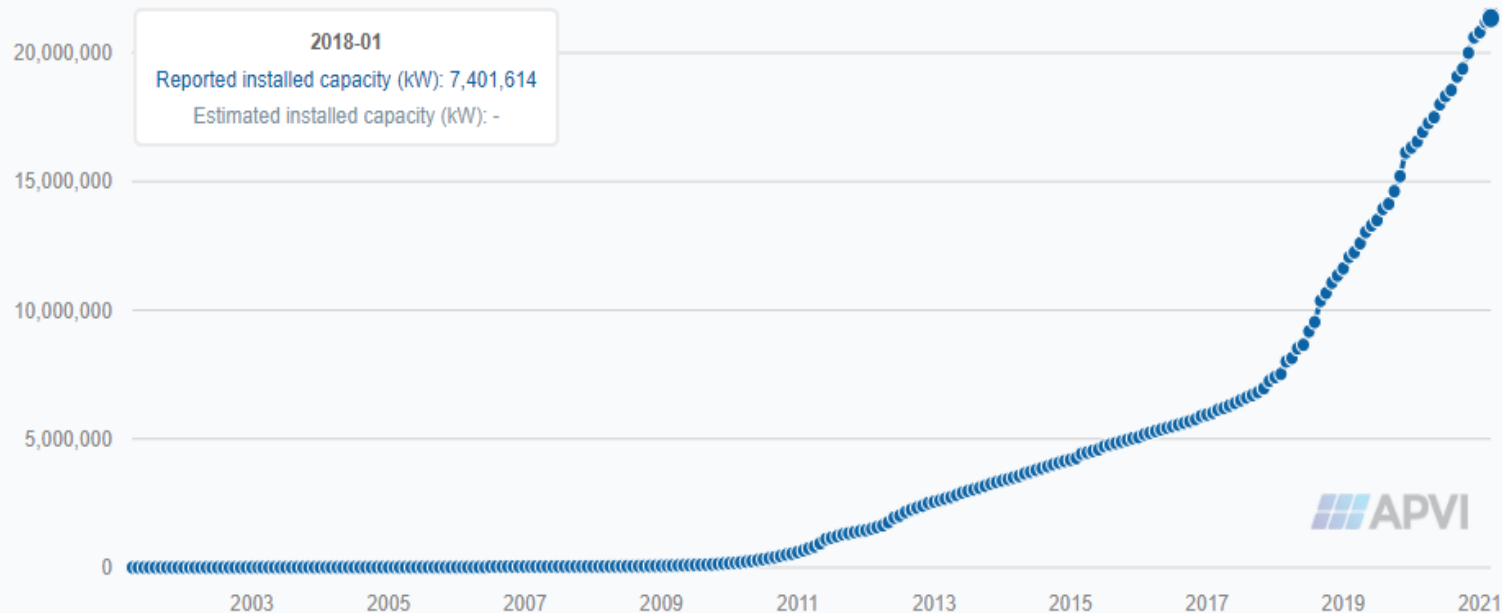
- **What was done?** Broader section of the energy sector came together to:

- Developed consensus on the issues to be addressed
- Developed and tested potential solutions
- Considered transition and implementation



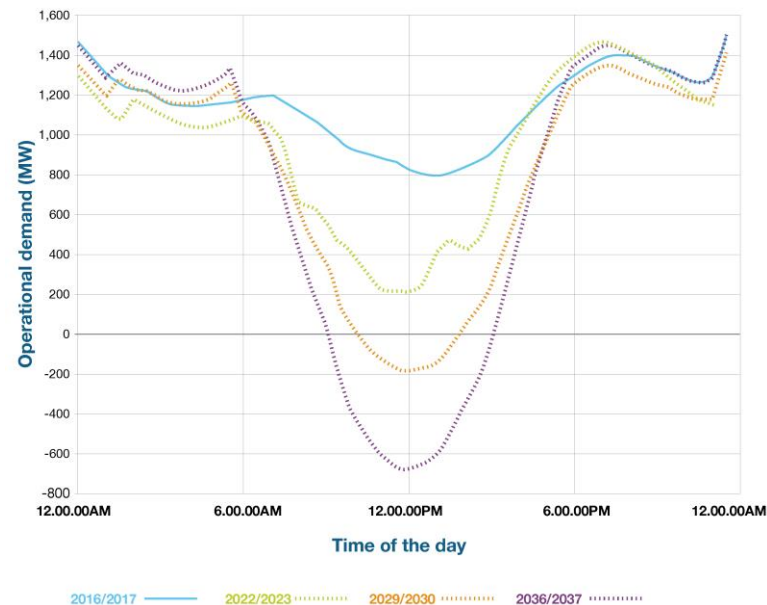
Solar PV providing low cost, renewable energy

Australian PV installations since April 2001: total capacity (kW)



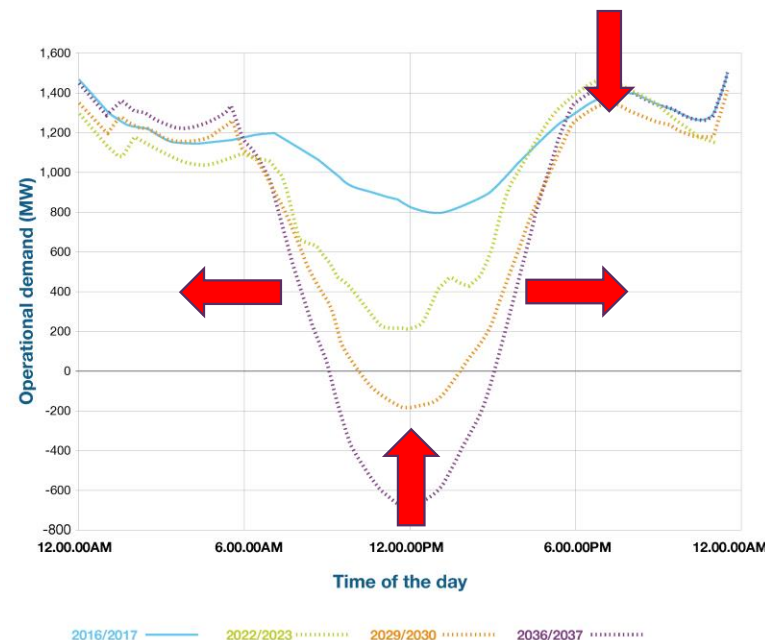
Handbrake on more solar – the challenges we are facing

- No clear rights for customers to export surplus generation
 - First come, first serve
- No clear standards of export service on networks
 - Reducing level of export allowance
 - Increasing instances of curtailment
 - Zero export limits
- Increasingly complex network operation



Our draft rule aims to support better integration of solar

- Helping to make distributed energy resources an integrated part of the system – for the benefit of everyone
- Enabling more distributed solar to get to the grid (And future technology like battery storage and electric vehicles too!)
- Supporting transition to a lower cost, decarbonised electricity system
 - Solar: using this renewable resource when the system needs it most
 - Network: Making most of what we already have

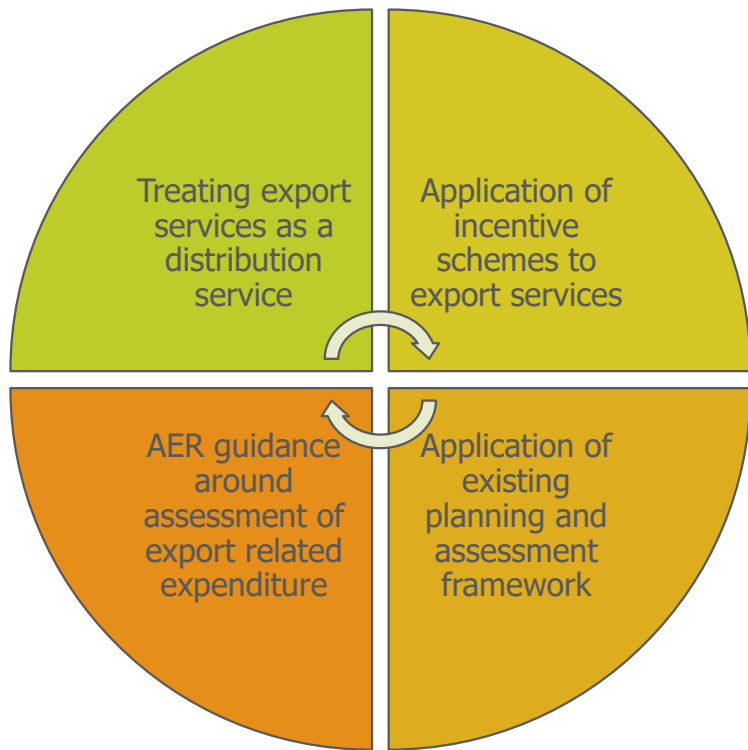


Key elements of our draft rule

- Introduce obligations on network businesses to provide export services
- Require the development of export service performance standards
- Enable networks businesses to develop two-way pricing on both consumption and export services
- Provide flexibility and enable options to suit individual networks (or their state's and territory's) circumstances



Obligation to provide export services: what does it mean?



Providing a framework to decide on the type and level of services to be provided

Export service performance



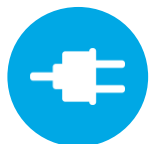
Developing performance standards

- AER to review feasibility of extending Service Target Performance Incentive Scheme to exports within 18 months



Reporting on export performance

- Networks will be required to report on export performance metrics annually



Value of customer exports

- AER to develop framework and calculate the value of customer exports



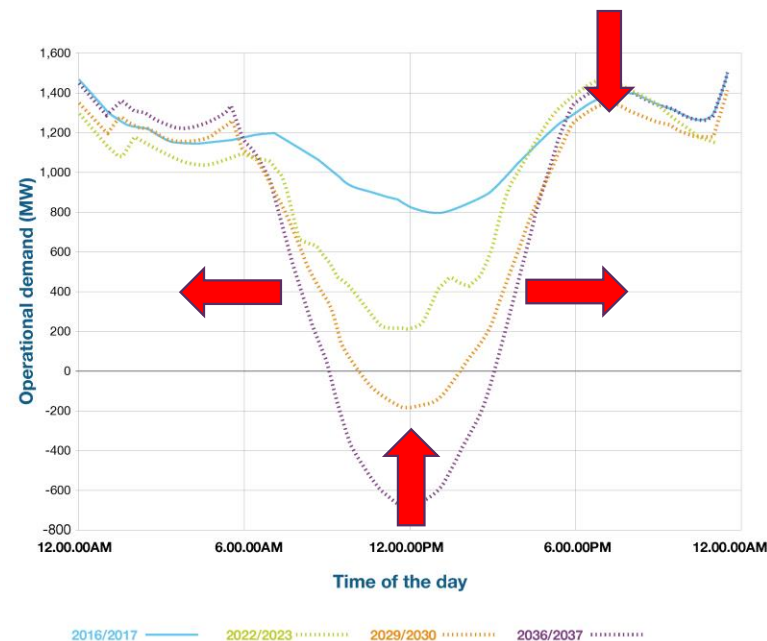
Enabling two-way pricing for consumption and exports

- Networks will have the **option** to develop pricing for export services
 - This rule removes the barrier for networks to develop export tariffs
 - It does not mandate for it to happen
- Clarify that pricing can be 'two-way'
 - Signalling costs and providing rewards
- Temporary increase of threshold for 'in period' tariff trials



Two-way pricing: a useful tool in the toolkit

- Making best use of existing infrastructure
 - Rewarding customers when their actions support the grid
 - Signalling high cost or congestion periods
- Helps to smoothing of 'demand' for network services
 - higher productivity and lower average network costs for all system users
 - new investment may be deferred
- Foundational to future market development



Flexibility to accommodate different circumstances – horses for courses

What the draft rule enables

- Networks to develop options suitable for their own circumstances
- Provides a clear framework for how services should be provided
- All customers to have a say on services to be provided, and how costs should be allocated
- Export pricing only to be introduced if it is in the interest of consumers

What the draft rule does not do

- Prescribe specific outcomes
- Requiring network businesses and the AER to implement export pricing options

Networks will need to explain how they will introduce new pricing options

- In addition to the current tariff structure statement process (TSS), networks must:
 - develop and consult on an **export tariff transition strategy** – outline when and how each DNSP intends to phase-in any proposed export pricing over time
 - include in a **plain language overview** how different aspects of their regulatory and pricing proposals are linked
- AER guideline specific to export pricing – reinforcing the need for continued consultation and collaboration



It is not a 'blank cheque' to invest or introduce new charges

Is there a need?

- Are you expecting more solar uptake?
- Are there constraints on your network?
- Does benefit outweigh costs?

Is it efficient?

- Is the proposed option the most efficient?
- Have you already exhausted all the 'low hanging fruits'?
- What about 'non-network options'?

Who should pay?

- How should the cost of this investment be recovered?
- What should the tariff structure look like?
- Can pricing options help enhance the outcome?

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SETTING THE FOUNDATION FOR THE FUTURE
ENERGY SYSTEM



ED CHAN – AEMC DIRECTOR

What should tomorrow's electricity system look like?



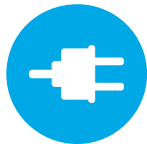
- **Benefits for all users**

A fully integrated system delivering benefits for all users



- **A consumer-centric system**

A flexible system responding to consumer preferences



- **Dynamic and resilient**

New technologies and business models creating different dimensions of system usage



Decentralised energy resources plays an important role in the future grid

Networks have an important role to play, but their role will need to evolve



Yesterday



Today



Tomorrow

Regulatory framework needs to evolve



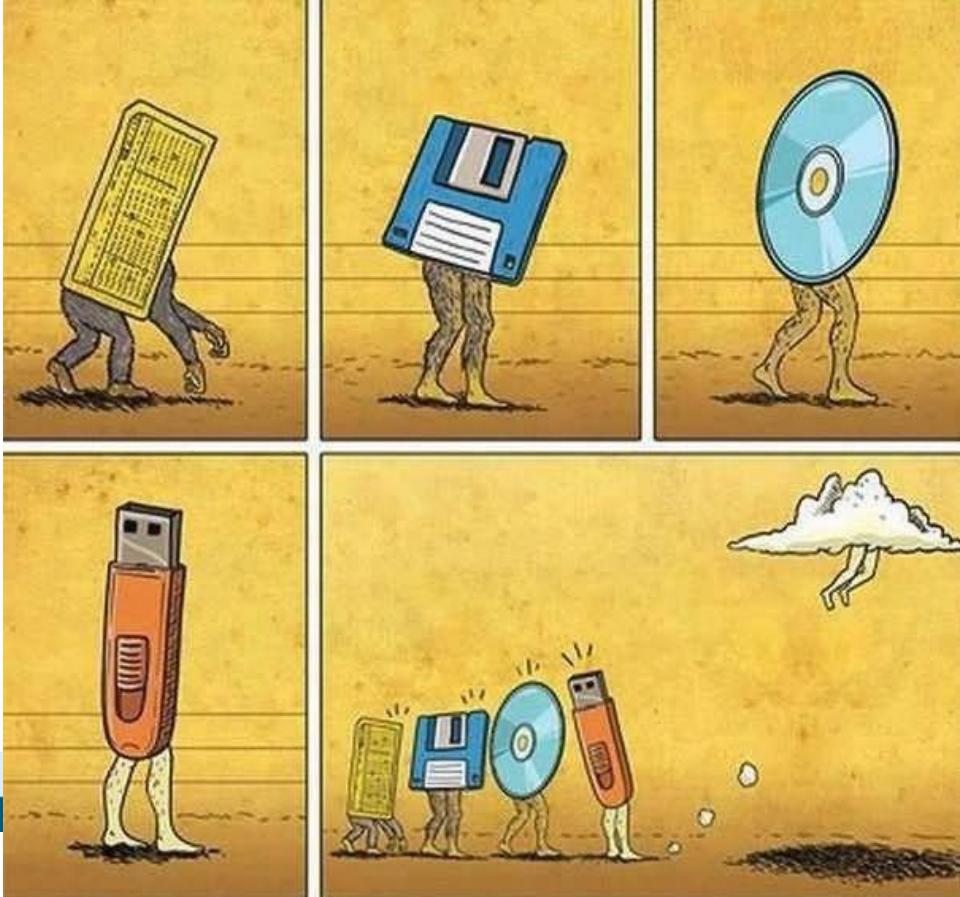
- Obligations on networks to support export services



- Development of service standards for export services



- Enabling options to develop rewards and prices for export services



This is just the start of the process



- Opportunities for stakeholders to have a say on how new pricing structures are implemented



- Collaboration is key – all participants working together with consumers to deliver better outcomes for all

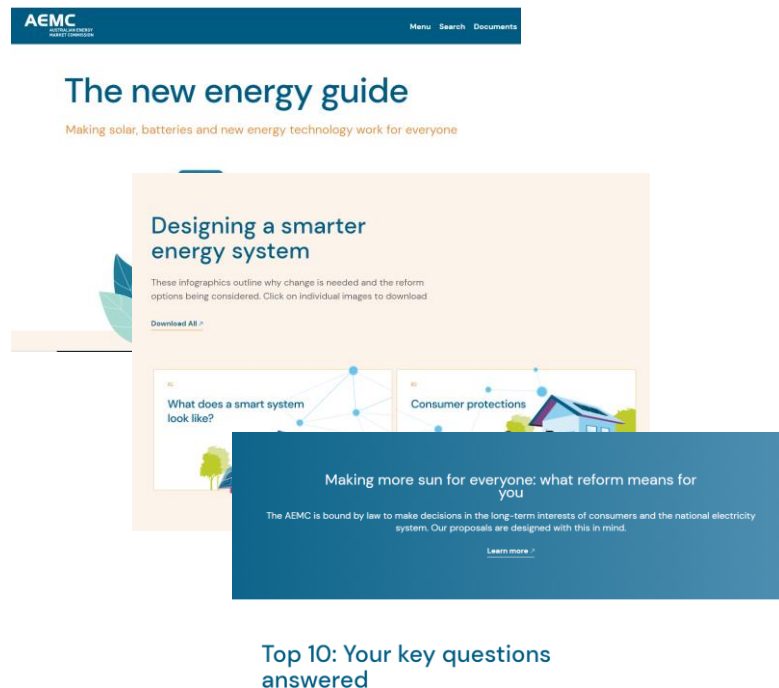


- There is no one 'correct' answer – balancing economics and other objectives best done at network and jurisdiction level

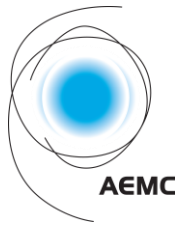


For more information

- A dedicated website to provide more information
- Online resources to explain opportunities and challenges of integrating distributed energy
- More explanatory material about these reform proposals
- Include helpful documents – all printable



Top 10: Your key questions answered



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**AEMC draft rules: Access, pricing
and incentive arrangements for DER**

**SA Power Networks' vision and
implementation considerations**

Mark Vincent – General Manager Strategy and Transformation



Empowering South Australia

Outline

1. Our vision for a high renewables future
2. Updating the regulatory framework to support customer DER
3. Our expectations on engagement with customers and stakeholders
4. What might DER service options look like for customers
5. Guardrails and safeguards for customers
6. Enabling the distributed energy transition



Our vision for a high renewables future

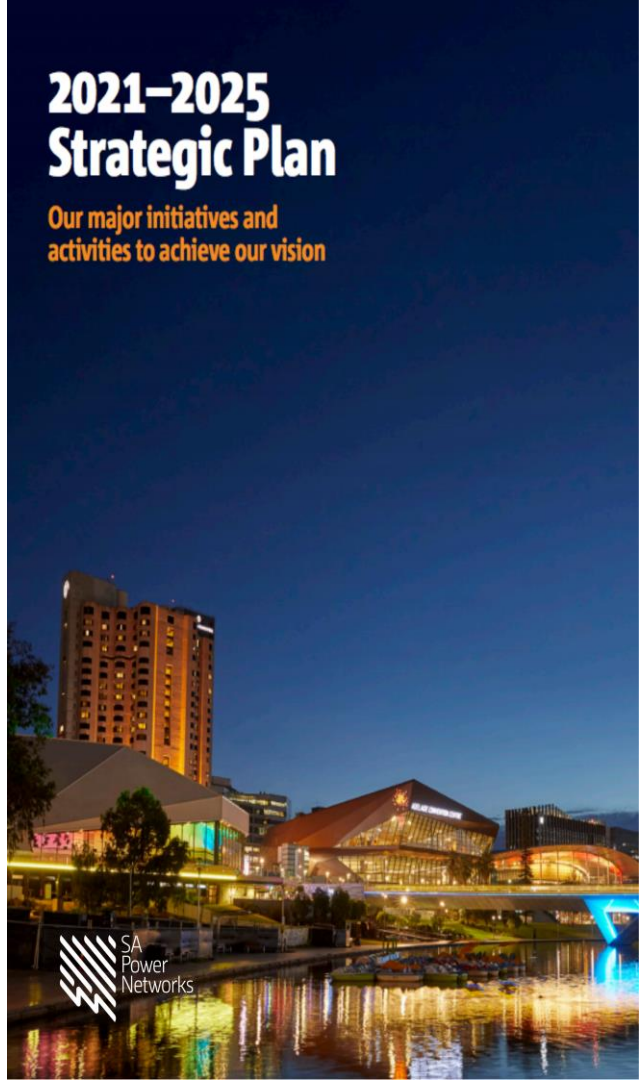
A smart energy future we can all be a part of

“South Australia’s leadership in the take up of solar PV will enable us to demonstrate how distributed energy, supported by a stable network foundation, can deliver safe, reliable, low cost and low carbon energy to support State growth and broader decarbonisation.”

- Australia’s transition to distributed energy places distribution networks at the heart of the future energy system
- We are pursuing a range of measures to meet our public goal of doubling the amount of solar we can host on our network by 2025
- We consider that network access and pricing reform is fundamental to ensuring regulation supports an efficient transition to the distributed energy future

2021–2025 Strategic Plan

Our major initiatives and
activities to achieve our vision



Updating the regulatory framework to support customer DER

Key objectives & what they achieve for customers

Export services recognised in regulation

- Providing customers a clear right to connect DER to the distribution network and use it to export energy

Clear obligations to invest to support DER

- Distributors must plan to meet or manage customer demand for the export service

Export service pricing

- Customers provided incentive to use network efficiently and payments for assisting the network
- Customers can select service options commensurate with the value they place on the service
- Customers without DER won't pay for services they don't receive

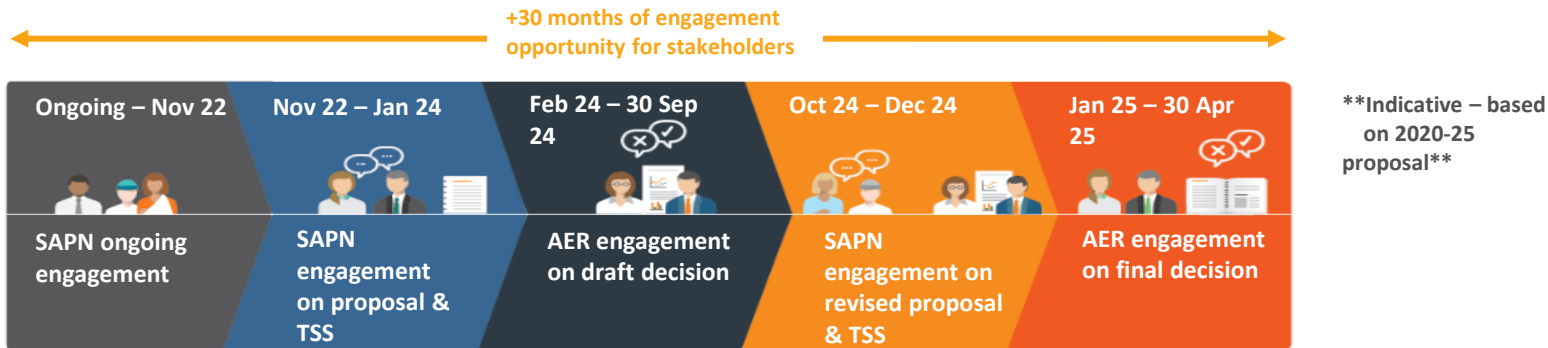
Incentives to improve service performance

- Customers can have confidence in the service levels they can expect to receive

Overall, we think the draft rules provide:

- a clear and comprehensive framework for solar enablement; and
- flexibility to accommodate change (e.g. customer demand, market prices, policy, technology – EVs, batteries etc)

Our expectations on engagement with customers and stakeholders



Likely key engagement topics

Connections arrangements

- Approach to connection charging for large generators
- Terms and conditions of export services

Network spend

- Network hosting capacity investment that customers support
- Network and non-network options for maximising hosting capacity

Tariffs

- Further reforms to consumption tariffs
- Costs to allocate to export tariffs
- Customers to allocate export tariffs to
- How to manage customer impacts
- Tariff structure design for exports (+\$p or -\$p)
- The menu of tariff / service options

Who

Methods

Customers & Advocates

Forums

Deep-dive workshops

Industry

Bi-lateral discussions

Retailers & Aggregators

Written feedback on draft plan, proposal & revised proposal

Government

Deliberative / co-design work

AER oversight

AER CCP

Surveys

What might DER service options look like for customers?

Guiding concepts:

- DER customers are diverse in how they value the 'export service'
- We want to enable choice in service levels
- DER customers should not pay for the network's intrinsic hosting capacity
- Flexible export limits enable an increased range of cost reflective service options



SAPN initial thoughts on service options – subject to customer and stakeholder consultation

Tariff option	Inverter requirement	Export limit	Service level	Standing charge	Variable charge/credit
Basic	Basic inverter	1.5 kW fixed	1.5 kW @ 9x.x%	No	No
Fully flexible	Smart inverter	1.5 – 10 kW	Min 1.5 kW @ 9x.x%	Yes	No
Prosumer	Smart inverter	1.5 – 10 kW	Min 5 kW @ 9x.x%	Yes	Yes



Guardrails and safeguards for customers

Concerns our customers have raised

Customers have bought solar panels on the basis of no network charge

Lack of service options

Too much cost allocated to export tariffs

Tariff signals are confusing

Distributors may over or under invest in network hosting capacity

SAPN intent

Encourage efficient decisions, but provide time to respond

Options to avoid charges or pay for higher service

Signal only LRMC & residuals of export service

Test views on tariff design

Invest to achieve service levels that customers value & support

SAPN customer panel tariff 'Customer Impact Principles'



AER oversight

Effective balance of customer impact vs cost reflectivity?

Has DNSP offered options that promote efficient choices by customers?

Is the cost allocation compliant?

Were concerns from customers, retailers & aggregators resolved?

Is the proposed spend prudent, efficient, and supported by customers?

Enabling the distributed energy transition

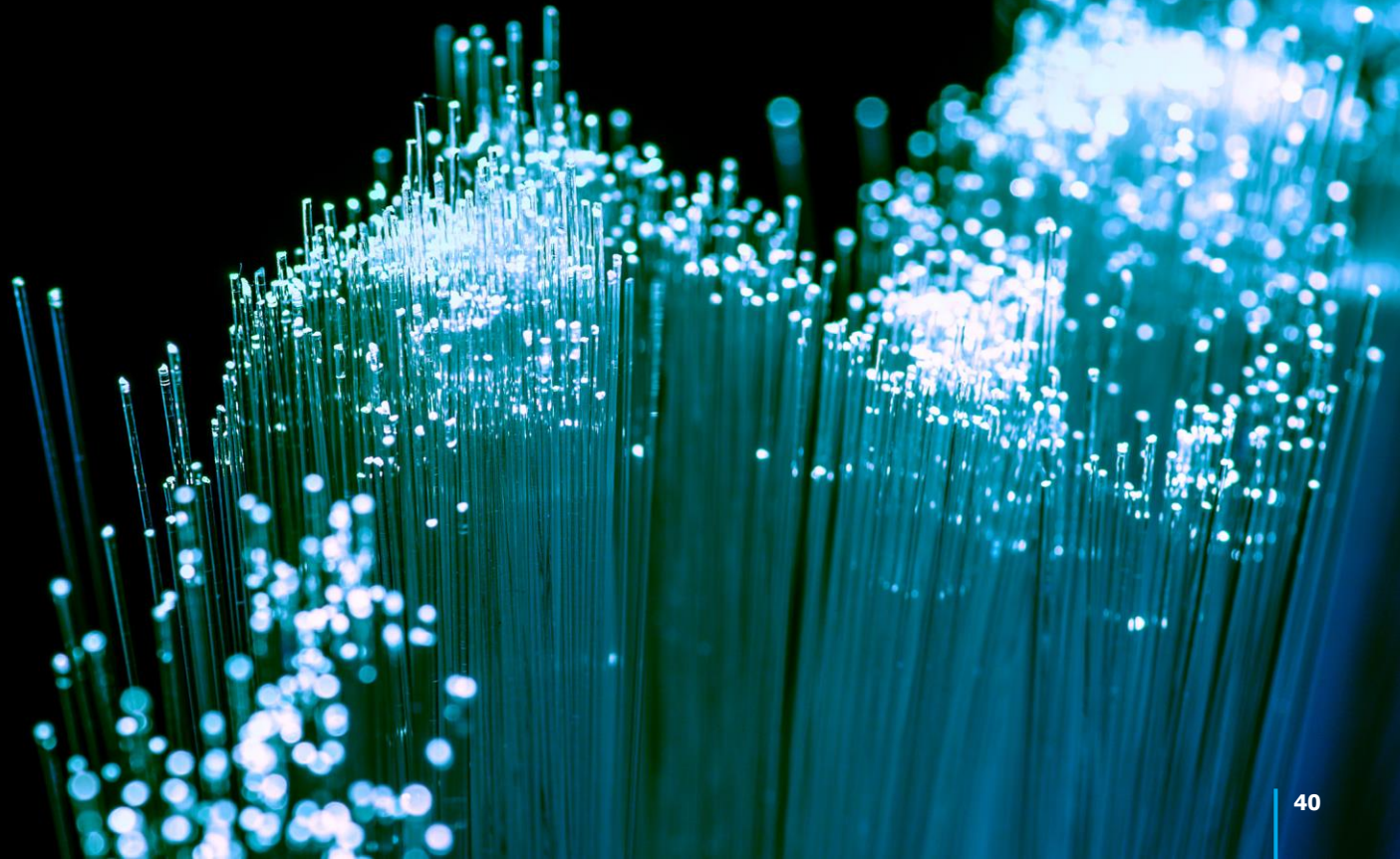
- The existing regulatory framework provides **no certainty nor choice to DER customers**
- Equally, network businesses have **no clear obligations nor incentives to invest**
- We consider the proposed access and pricing reforms go a significant way to addressing these issues
- They do not prescribe specific outcomes, but provide a **framework to engage with our customers and develop options to meet their needs**
- We consider this an **essential foundation in support of customers' DER playing an increasingly important role in our new energy future**





Empowering South Australia

PANEL DISCUSSION



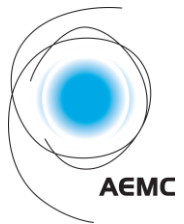
Our panellists

Michelle Shepherd	Moderator
Kellie Caught	Australian Council of Social Services
David Markham	Australian Energy Council
Ed Chan	Australian Energy Market Commission
Dale Johansen	Australian Energy Regulator
Jonathon Dore	Solar Analytics
Ellen Roberts	Solar Citizens
Mark Vincent	SA Power Networks
Dylan McConnell	University of Melbourne

CLOSING REMARKS

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