

# DER INTEGRATION RULE CHANGES

DRAFT DETERMINATION

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VIRTUAL PUBLIC FORUM  
20 MAY 2021

AEMC



We are the rule maker  
for Australian electricity and  
gas markets

## What we do

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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

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### **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

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Inform the discussion on the 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 |

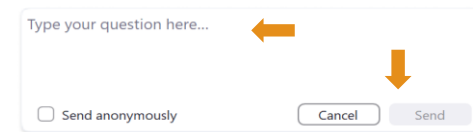
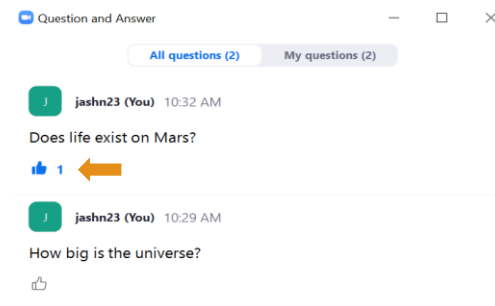
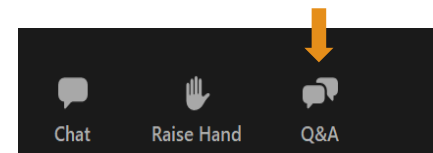
## Housekeeping

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- 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

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MICHELLE SHEPHERD – AEMC COMMISSIONER

# DRAFT RULE DETERMINATION

WHAT DOES OUR DECISION ENTAIL?



ED CHAN – AEMC DIRECTOR

## Four proponents, three rule change requests

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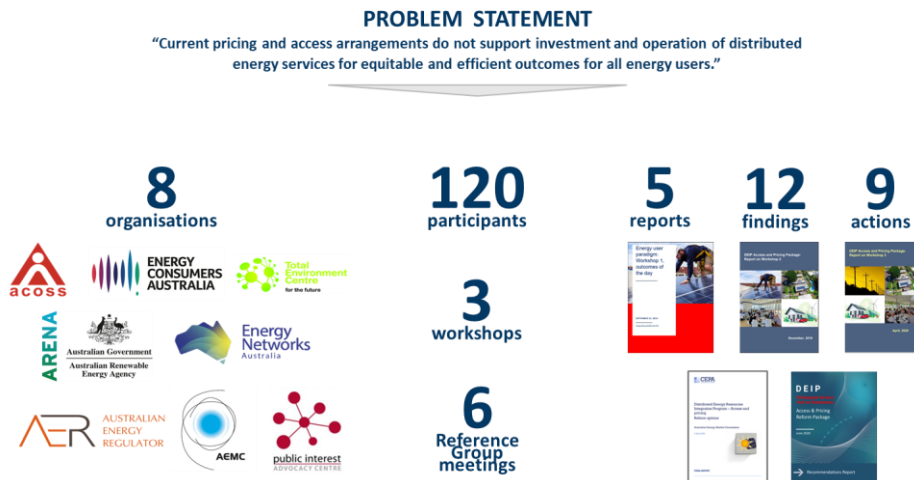
St Vincent de Paul Society  
VICTORIA  
*good works*

# Requests represent the outcome of a collaborative process

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

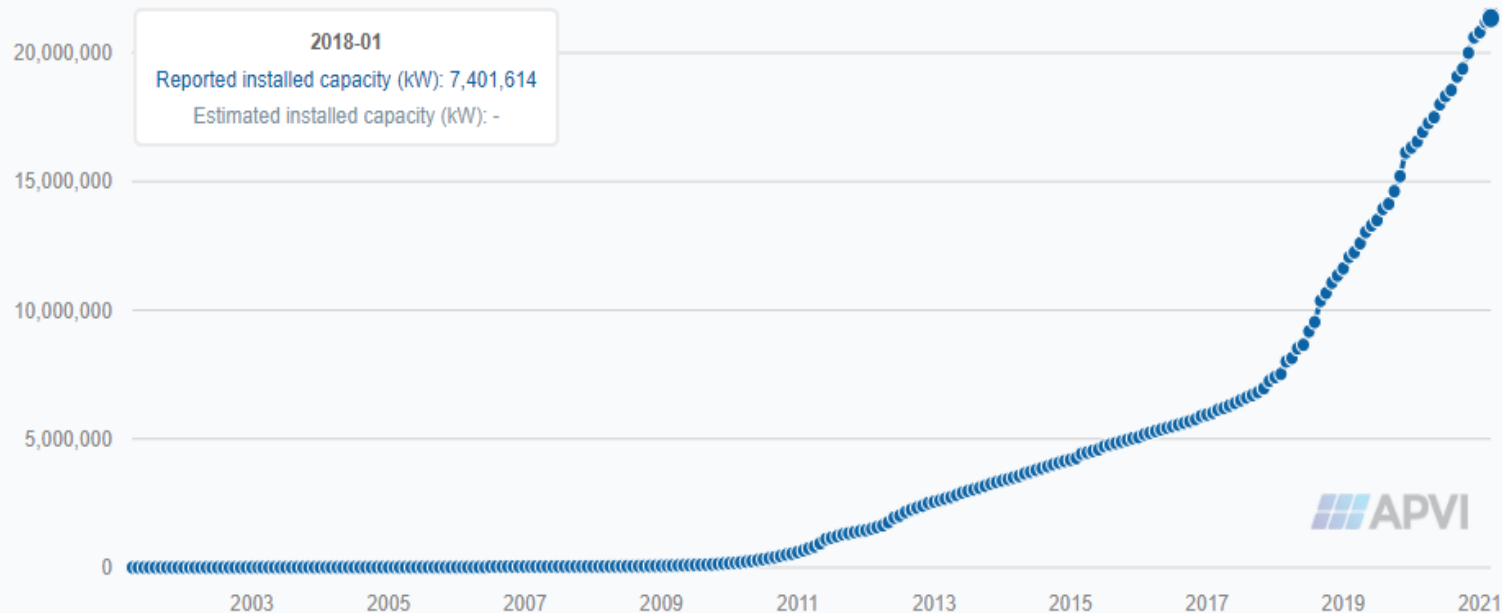
- **What was done?** Broader section of the energy sector came together to:

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



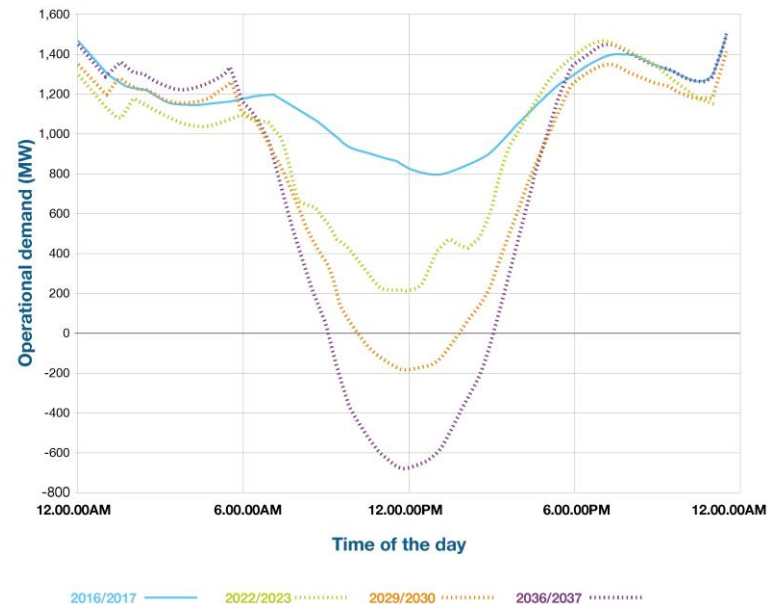
## Solar PV providing low cost, renewable energy

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



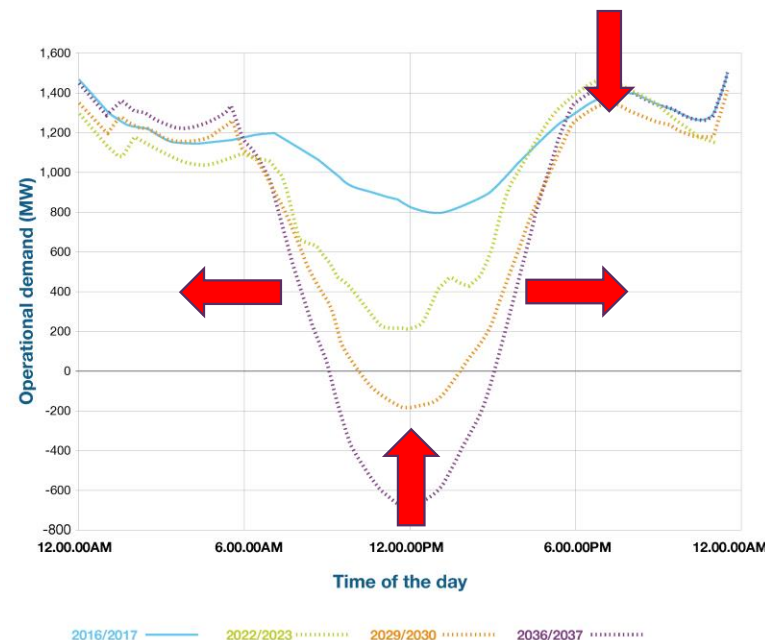
## Handbrake on more solar – the challenges we are facing

- 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

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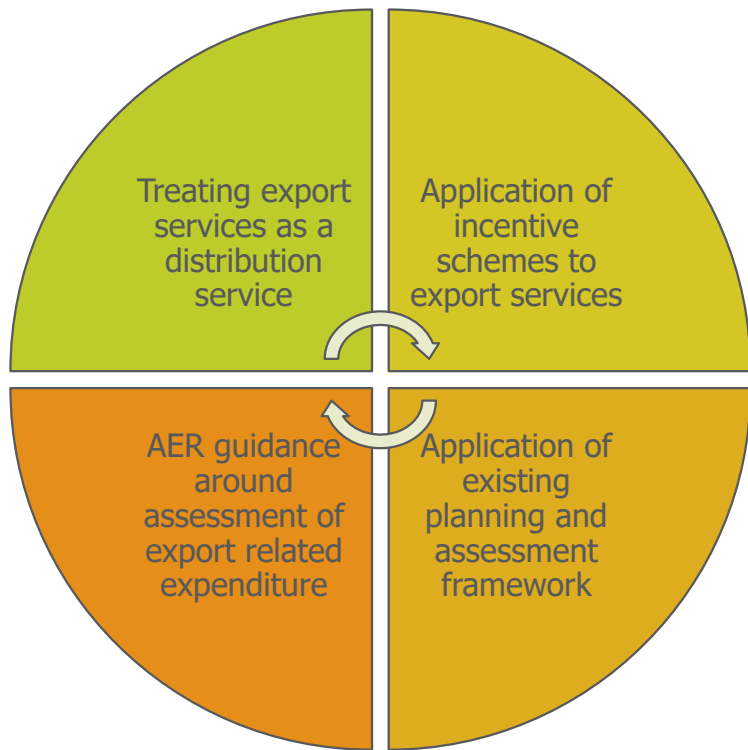
- Introduce obligations on network businesses to provide export services
- Require the development of export service performance standards
- Enable networks businesses to develop two-way pricing on both consumption and export services
- Provide flexibility and enable options to suit individual networks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





## Obligation to provide export services: what does it mean?

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

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## Export service performance



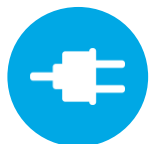
### Developing performance standards

- 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



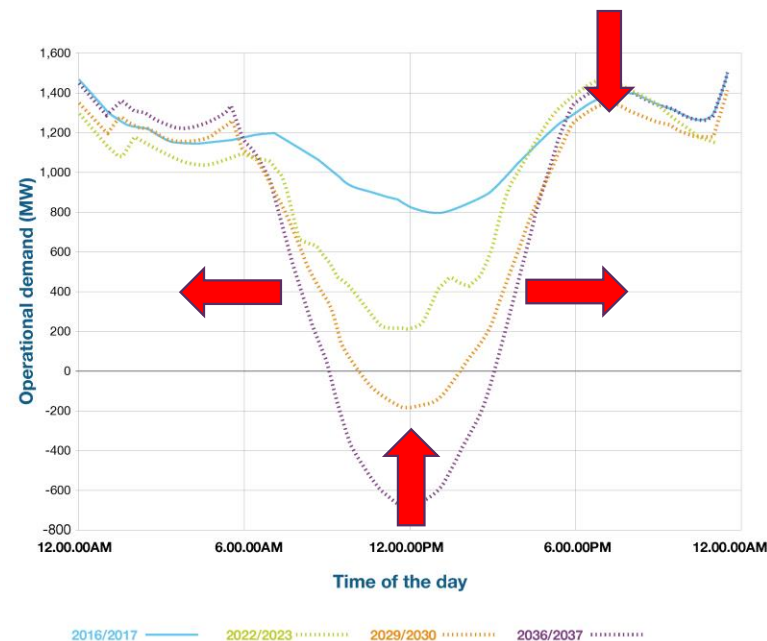
## Enabling two-way pricing for consumption and exports

- 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

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### **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

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- 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?

# DRAFT RULE DETERMINATION

SETTING THE FOUNDATION FOR THE FUTURE  
ENERGY SYSTEM

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ED CHAN – AEMC DIRECTOR



# What should tomorrow's electricity system look like?



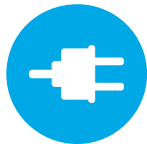
- **Benefits for all users**

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



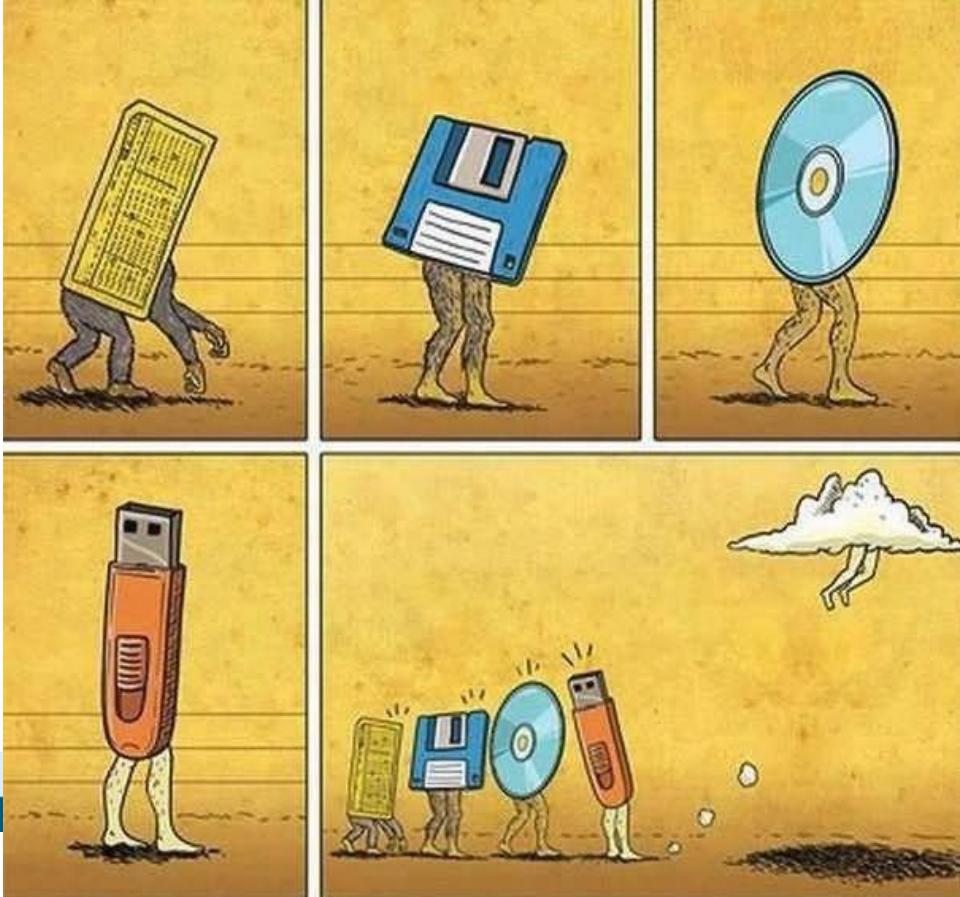
- Obligations on networks to support export services



- 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

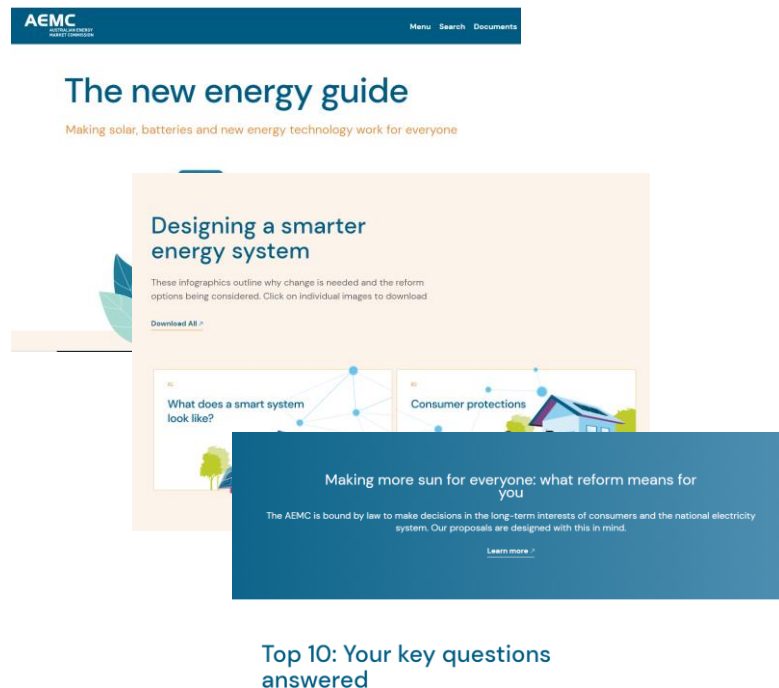


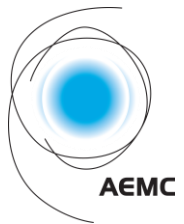
- There is no one 'correct' answer – balancing economics and other objectives best done at network and jurisdiction level



## 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





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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

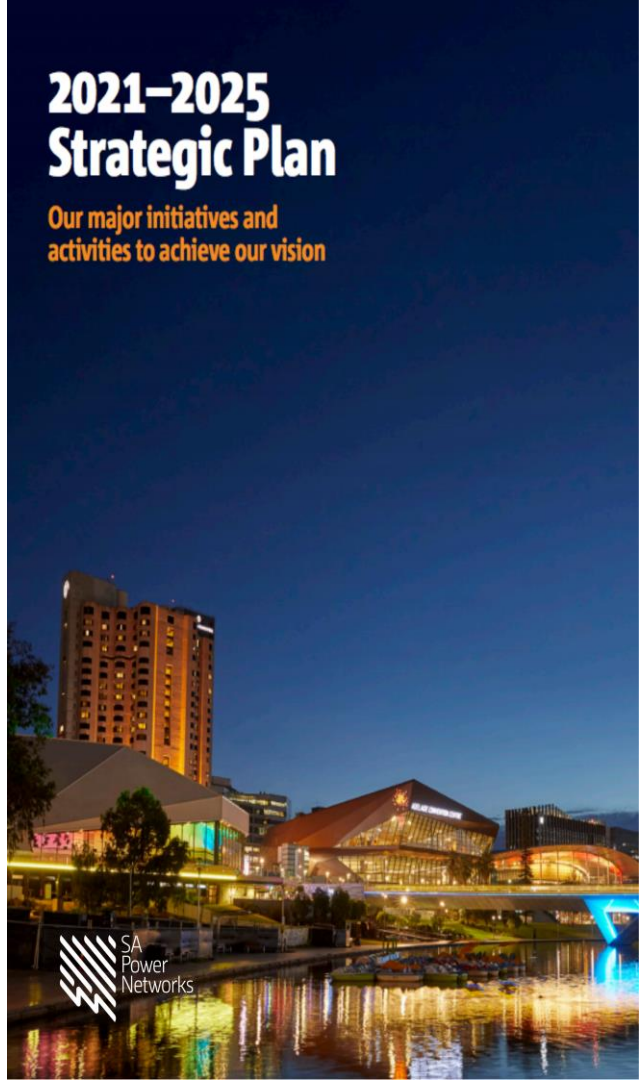
## *A smart energy future we can all be a part of*

*“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**

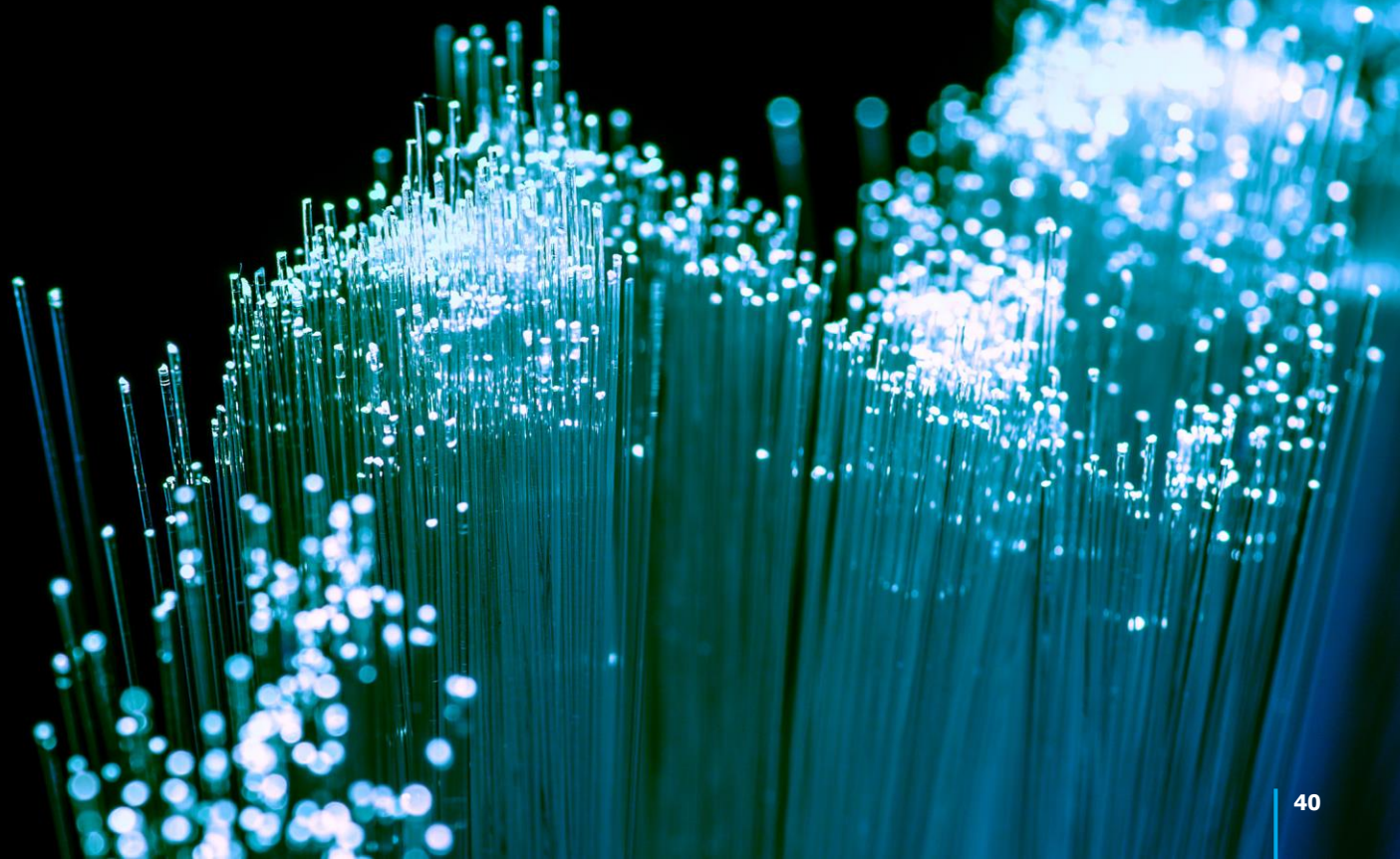




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# PANEL DISCUSSION





## Our panellists

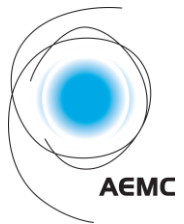
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Michelle Shepherd	Moderator
Kellie Caught	Australian Council of Social Services
David Markham	Australian Energy Council
Ed Chan	Australian Energy Market Commission
Dale Johansen	Australian Energy Regulator
Jonathon Dore	Solar Analytics
Ellen Roberts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

# CLOSING REMARKS

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