Who we are

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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<td>David Feeney, AEMC</td>
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<td>Michelle Shephard, AEMC</td>
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<td>Michelle Shephard, AEMC</td>
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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
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)

2018-01
Reported installed capacity (kW): 7,401,614
Estimated installed 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?

Treating export services as a distribution service

Application of incentive schemes to export services

AER guidance around assessment of export related expenditure

Application of existing planning and assessment framework

Providing a framework to decide on the type and level of services to be provided
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?
DRAFT RULE DETERMINATION
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

The electricity system is transforming
• 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
AEMC draft rules: Access, pricing and incentive arrangements for DER

SA Power Networks’ vision and implementation considerations

Mark Vincent – General Manager Strategy and Transformation
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
## Key Objectives & what they achieve for customers

<table>
<thead>
<tr>
<th>Export services recognised in regulation</th>
<th>Clear obligations to invest to support DER</th>
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</thead>
<tbody>
<tr>
<td>▪ Providing customers a clear right to connect DER to the distribution network and use it to export energy</td>
<td>▪ Distributors must plan to meet or manage customer demand for the export service</td>
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<table>
<thead>
<tr>
<th>Export service pricing</th>
<th>Incentives to improve service performance</th>
</tr>
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<tbody>
<tr>
<td>▪ Customers provided incentive to use network efficiently and payments for assisting the network</td>
<td>▪ Customers can have confidence in the service levels they can expect to receive</td>
</tr>
<tr>
<td>▪ Customers can select service options commensurate with the value they place on the service</td>
<td></td>
</tr>
<tr>
<td>▪ Customers without DER won’t pay for services they don’t receive</td>
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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**

- Customers & Advocates
  - Forums

- Industry
  - Deep-dive workshops

- Retailers & Aggregators
  - Bi-lateral discussions
  - Written feedback on draft plan, proposal & revised proposal

- Government
  - Deliberative/co-design work

- AER oversight
  - Surveys

- AER CCP

**Methods**

- Deliberative/co-design work

**Indicative – based on 2020-25 proposal**

**SAPN ongoing engagement**

**SAPN engagement on proposal & TSS**

**AER engagement on draft decision**

**SAPN engagement on revised proposal & TSS**

**AER engagement on final decision**

+30 months of engagement opportunity for stakeholders
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

<table>
<thead>
<tr>
<th>Tariff option</th>
<th>Inverter requirement</th>
<th>Export limit</th>
<th>Service level</th>
<th>Standing charge</th>
<th>Variable charge/credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>Basic inverter</td>
<td>1.5 kW fixed</td>
<td>1.5 kW @ 9x.x%</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Fully flexible</td>
<td>Smart inverter</td>
<td>1.5 – 10 kW</td>
<td>Min 1.5 kW @ 9x.x%</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Prosumer</td>
<td>Smart inverter</td>
<td>1.5 – 10 kW</td>
<td>Min 5 kW @ 9x.x%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
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### 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**
PANEL DISCUSSION
<table>
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<th>Organization/Role</th>
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<tbody>
<tr>
<td>Michelle Shepherd</td>
<td>Moderator</td>
</tr>
<tr>
<td>Kellie Caught</td>
<td>Australian Council of Social Services</td>
</tr>
<tr>
<td>David Markham</td>
<td>Australian Energy Council</td>
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<tr>
<td>Ed Chan</td>
<td>Australian Energy Market Commission</td>
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<tr>
<td>Dale Johansen</td>
<td>Australian Energy Regulator</td>
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<tr>
<td>Jonathon Dore</td>
<td>Solar Analytics</td>
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<tr>
<td>Ellen Roberts</td>
<td>Solar Citizens</td>
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<tr>
<td>Mark Vincent</td>
<td>SA Power Networks</td>
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<tr>
<td>Dylan McConnell</td>
<td>University of Melbourne</td>
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