

Local Generation Network Credits

Considering the proposed solution and potential alternatives

Presentation slides and summary of discussion
Updated 29 March 2016

Second Stakeholder Workshop
Mercure Hotel, Sydney
15 March 2016

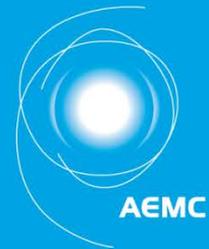
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Agenda

| Time | Item |
|---------------|---------------------------------------------------------------------|
| 10.00-10.05am | Welcome and about today |
| 10.05-10.15am | Where are we now? |
| 10.15-11.15am | Presentation by the rule change proponents + Q&A session |
| 11.15-11.30am | <i>Morning tea</i> |
| 11.30-12.30pm | Presentation by the Institute for Sustainable Futures + Q&A session |
| 12.30-1.00pm | Assessment of the rule change request – group discussion |
| 1.00-1.45pm | <i>Lunch break</i> |
| 1.45-3.15pm | Assessment of potential alternative solutions – group discussion |
| 3.15-3.30pm | Wrap-up and close |

List of organisations represented

| | | |
|-------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------|
| AECOM | ERM Power | NSW Department of Industry, Skills and Regional Development |
| AGL Energy | | |
| APA Group | Essential Energy | Origin Energy |
| Ausgrid | Ethnic Communities Council of NSW | Pooled Energy |
| AusNet Services | Frontier Economics | Citipower and Powercor |
| City of Sydney | Hydrogen Utility | Property Council of Australia |
| Commonwealth Department of Industry, Innovation and Science | Institute for Sustainable Futures (UTS) | SA Department of State Development |
| Cundall | IPART | Sydney Water |
| DGA Consulting | Jemena | Total Environment Centre |
| Endeavour Energy | Landis+Gyr | United Energy and Multinet Gas |
| Energeia | Lend Lease | University of NSW |
| EnergyAustralia | Local Volts | University of Sydney |
| Energy Networks Association | Mirvac | University of Technology, Sydney |

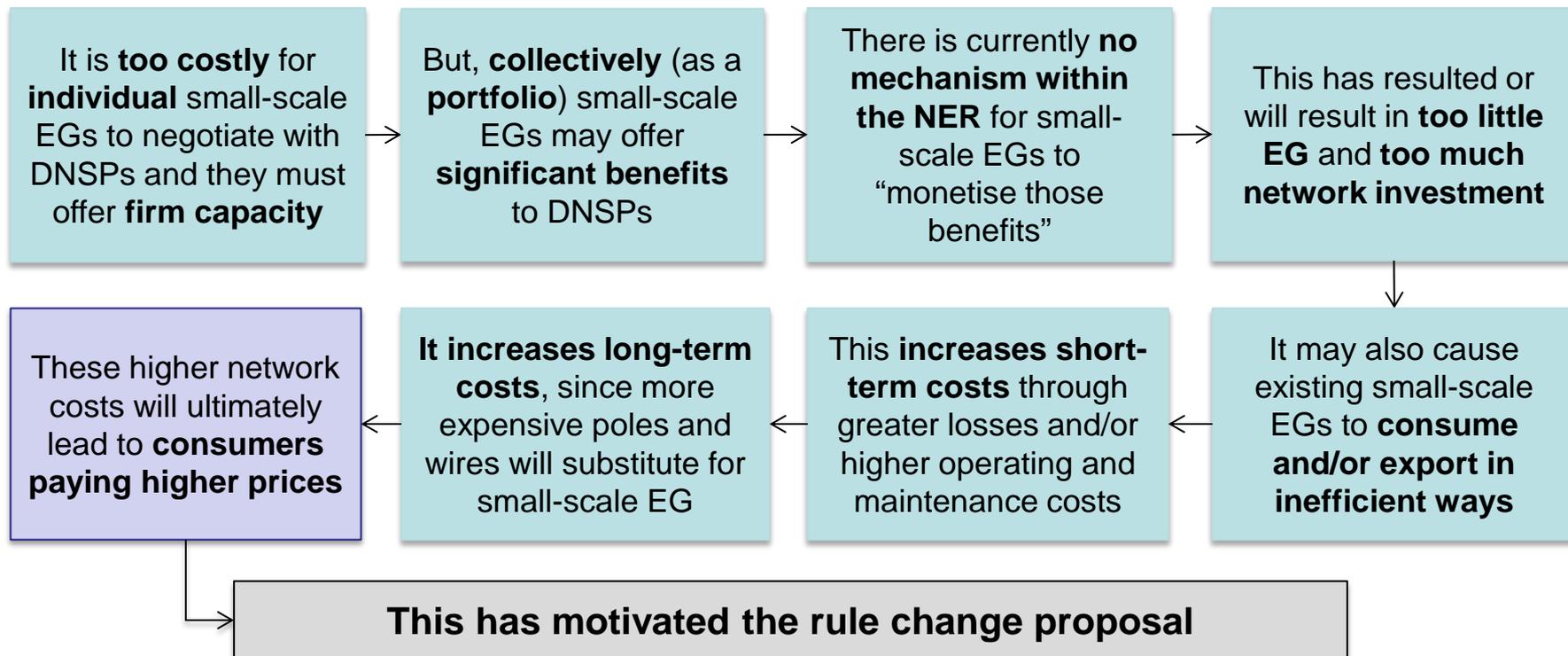


Where are we now?

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The rule change is about...

The **long-term benefits** provided by embedded generators (EGs) to networks in the form of deferred or down-sized future network investment and/or reduced operating costs



Current provisions in the NER

Network planning

The distribution network annual planning and expansion framework

Regulatory Investment Tests for Distribution and Transmission (RIT-D/T)

Remunerating generators

Network support payments and avoided transmission use of system charges

Cost-reflective distribution network tariffs

Incentivising network businesses

Capital Expenditure & Efficiency Benefit Sharing Schemes

Demand Management Incentive Scheme & Innovation Allowance

Connection frameworks for embedded generators & small generation aggregators

Proposed solution

Benefits of EG

Deferring or down-sizing network investment



Less

Reducing network operating and maintenance costs

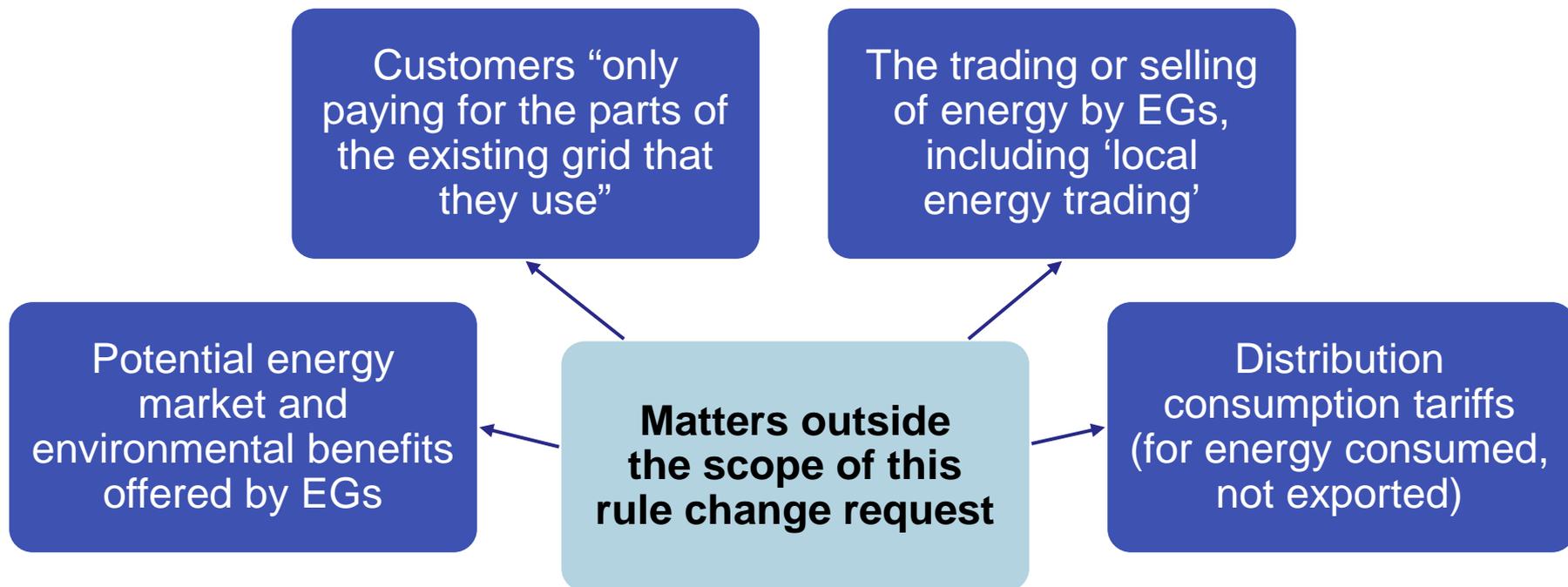
Costs of EG

Costs of catering for EG not captured by connection charges



**Local
Generation
Network
Credits**

The rule change is **not** about...



The rule change is only about the **forward-looking benefits** that EG might offer by way of **reduced future network costs**

Assessment criteria

To promote achievement of the NEO, the proposed rule (or a more preferable rule) would need to **reduce consumers' prices** in the long-term, with no adverse effect on the reliability of electricity supply and of the national electricity system



Specificity



Proportionality



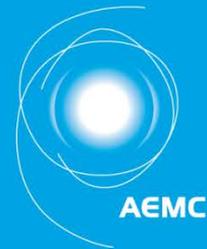
Technology-neutrality



Symmetry



Cost minimisation

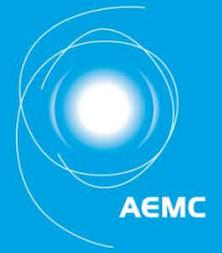


The rule change request

Presentation by the rule change proponents

Presentation speech by the rule change proponents available separately on <http://www.aemc.gov.au/Rule-Changes/Local-Generation-Network-Credits>

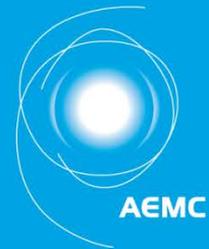
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The ISF's virtual trials

Presentation by the Edward Langham, Institute for Sustainable Futures, UTS

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The rule change request – group discussion

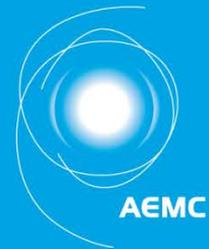
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Summary of discussion: does the LGNC proposal meet the assessment criteria?

- **Specificity:** it was agreed that the current proposal is not specific, and this was an intentional part of its design. This could be positive, as it allows for simpler implementation, with the potential for it to be mode specific in line with the development of consumption tariffs. But it could be negative, as it could mean that LGNCs are paid where there is no network constraint, with the result that network costs and consumer prices increase.
- **Proportionality:** there was no consensus on whether the proposal represents a proportionate response to the issue; this was partly due to disagreement between participants of whether a material issue has been identified by the rule change request and whether the proposal will deliver the desired outcomes. The proposal is partly a response to the risk of consumers adopting private wire solutions, but some participants suggested that a private wire will only be a realistic solution in very small number of cases so the solution appears a disproportionate response to that issue.
- **Technology-neutrality:** there were mixed views on whether the proposal is technology-neutral. Some participants considered that it was, because it resulted in consistency between consumption and generation tariffs and covers all forms of EG including storage. Others considered that it favours EG to other types of non-network solutions (such as demand response) that may also enable network cost savings.

Summary of discussion: does the LGNC proposal meet the assessment criteria?

- **Symmetry:** there was general recognition that the proposal is not symmetrical, as EGs would be rewarded for net benefits they may offer (ie avoided network costs) but would not be liable if they impose net costs (ie if the costs imposed on the network by an EG outweighed the benefits it provides)
- **Cost-minimisation:** the proposal was considered to have relatively low administrative costs, given that it would mirror the averaged design of consumption tariffs. However, the averaged design was considered unlikely to signal where investment in EG was most valuable, which would result in higher network investment and operation costs, in addition to the cost of paying LGNCs. The administration costs will also depend on decisions about important design features, including whether the credit is paid by DNSPs directly to EGs or paid via retailers, and how DNSPs recover the costs of the credit (do they need to forecast credits as part of their regulatory proposals or is there a pass-through mechanism).



Afternoon session

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The range of potential solutions

Less regulatory intervention

More regulatory intervention

No change

Information disclosure

Network planning

Regulatory incentives

Charging arrangements

Payment

Specific

Targeted

Broad

Do not make a rule

Annual planning reports, network constraint maps

RIT-D & RIT-T

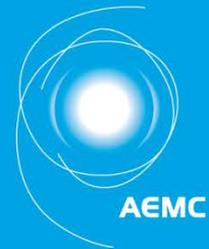
CESS & EBSS

Discounted connection charges

Network support payments/ avoided TUoS payments

Targeted LGNCs

LGNCs as proposed



Potential alternative solutions: financial mechanisms

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Targeted LGNCs

What issues would it address?

- Benefit of EGs highly specific to location, time of export, generator size
- Paying EGs 100% of expected network cost savings unlikely to result in savings to consumers

How?

- Apply eligibility criteria to payment of LGNCs (eg location, on-site consumption, etc)
- Set value of LGNCs at less than 100% of expected network cost savings

What questions remain?

- Would the mechanism be disproportionately complex compared to consumption tariffs?
- What does it add to existing network support payments/avoided TUoS payments?
- How costly would it be to implement and administer?
- What would be an appropriate sharing value?

Network support payments/ Avoided TUoS payments

What issues
would it
address?

- Make existing mechanisms more accessible for smaller EGs

How?

- Make EGs connecting under Chapter 5A eligible to receive avoided TUoS payments
- Potential stronger obligation on NSPs to offer network support payments (eg assessed for every new connection)

What
questions
remain?

- How costly would it be to apply to smaller EGs?
- Does a DNSP paying lower TUoS charges necessarily mean that the TNSP faced lower network costs?

Discounted connection charges

What issues would it address?

- Reduce the incentive to invest 'behind the meter' when the existing network could be used

How?

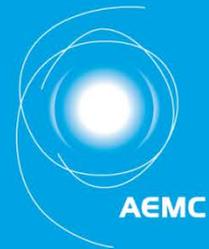
- Extend the mechanism under section 6A.26 of the NER (known as 'prudent discounts') to DNSPs

What questions remain?

- How costly would it be to implement and administer?
- Would discounts be made to smaller EGs (and other non-network solutions)?

Summary of discussion: alternative financial mechanisms

- Targeted LGNCs:
 - Participants generally considered that any benefit may be outweighed by the costs of implementation and operation of a targeted scheme
- Network support payments/avoided TUoS payments:
 - There was some sentiment that network support payments are not transparent and only apply to larger EGs and some participants considered the process to access network support payments too burdensome
 - However, networks noted that they pay network support payments and avoided TUoS to a significant number of EGs, including smaller EGs
 - It was noted that DNSPs were previously required to pay avoided TUoS to smaller EGs but that was changed after an IPART study found the costs to outweigh the benefits
- Discounted connection charges:
 - It was noted that the costs of a broad discount regime would likely outweigh the benefits; while a bespoke regime would likely only be accessible to larger EGs
 - Given that connection charges are not significant for most EGs, this option was unlikely to have a material effect



Potential alternative solutions: information, planning and incentives

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Capital Expenditure Sharing Scheme/ Efficiency Benefit Sharing Scheme

What issues
would it
address?

- Strengthen the incentive on DNSPs (and potentially TNSPs) to utilise cheaper non-network solutions

How?

- AER could increase the ratio of efficiency savings that NSPs retain under the CESS and EBSS (currently 30%)

What
questions
remain?

- Would there be a net saving to consumers? (a smaller share of efficiency savings would be paid back)
- What would be the appropriate sharing ratio?
- Would it incentivise NSPs to “game” regulatory allowances?

Regulatory Investment Tests – Distribution / Transmission

What issues would it address?

- Increase the opportunity to propose non-network solutions as an alternative to network investment
- Could encourage NSPs to consider whether more non-network solutions should receive network support payments

How?

- Reduce the threshold for the RIT-D (currently \$5 million) and potentially for the RIT-T (recently updated to \$6 million)
- Clarify the application of the RIT-D/T to ‘integrated solutions’ involving several investments below the threshold value

What questions remain?

- Would adjusting the threshold be sufficient to achieve the desired outcome?
- How costly would it be to implement and administer?
- What would be an appropriate threshold?

Annual planning reports and constraint-mapping

What issues would it address?

- Help improve the quality of non-network solutions that are proposed as an alternative to network investment
- Could help smaller EGs make a case for receiving network support payments

How?

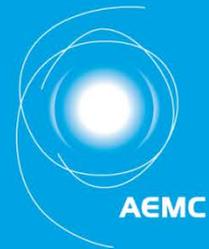
- Require DNSPs to disclose more and better information on planned investment and expected capacity constraints (eg network constraints maps)

What questions remain?

- Would more and better information be sufficient to achieve the desired outcome?
- What information would be useful but is not publicly available?
- How costly would it be to implement and administer?

Summary of discussion: alternative mechanisms relating to information, planning and incentives

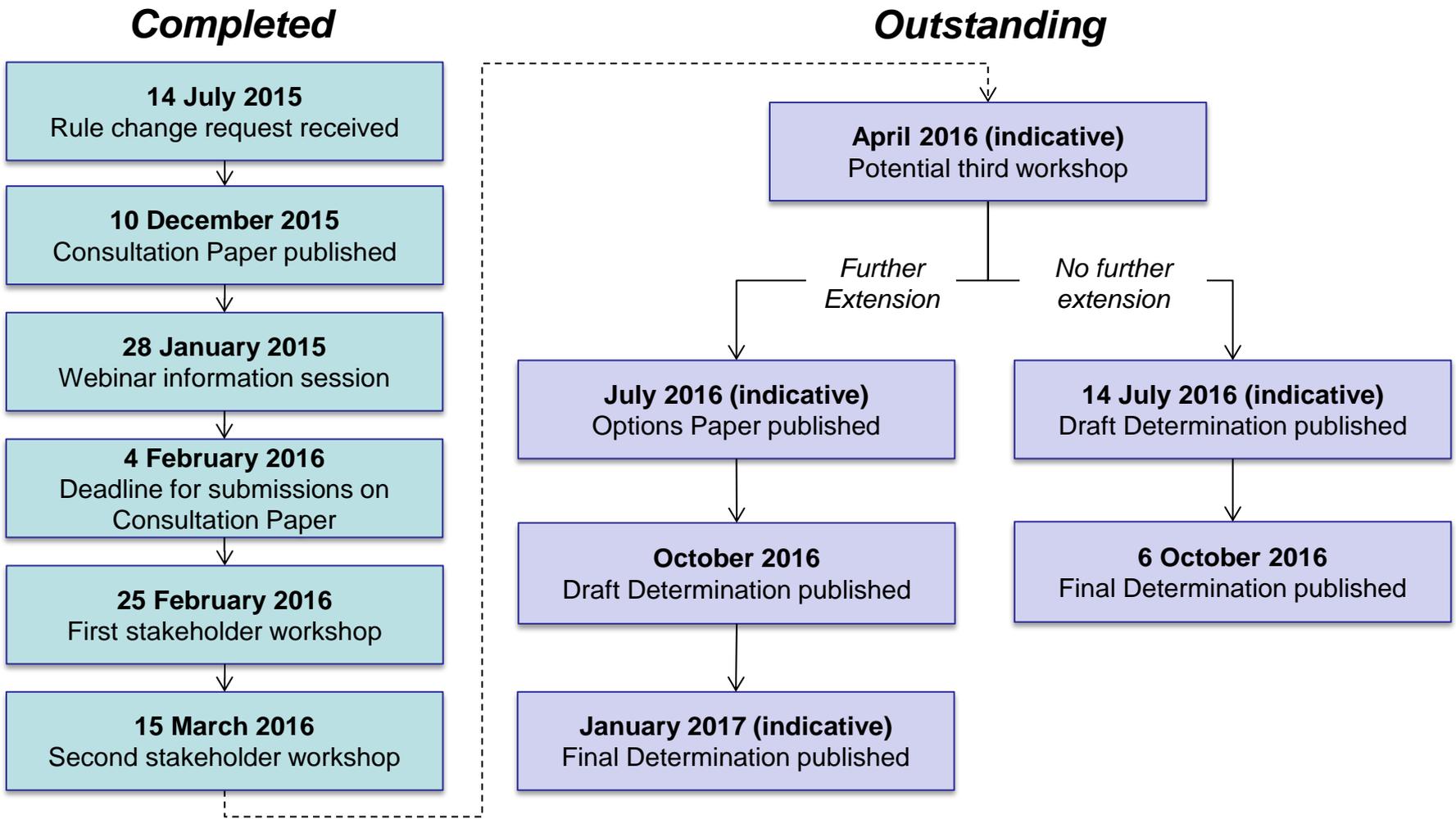
- **CESS and EBSS:**
 - Participants noted that the CESS is relatively new, and considered that it is too early to judge whether it (together with the EBSS) is correctly calibrated to influence DNSPs' behaviour
- **RIT-D and RIT-T:**
 - Some participants considered that very few non-network solutions were being proposed in RIT-Ds
 - One participant noted that this may just be a sign that networks are not spending much on network or non-network solutions, noting that some network businesses are willing to accept higher risk in terms of network constraints and not undertake any solution – network or non-network
 - It was also noted that the RIT-D currently only applies to network augmentation, and that replacement expenditure might be a more material area of concern. It was noted that the AER is considering submitting a rule change request to the AEMC to extend the RIT-D/T to repex
- **Annual planning report and constraint-mapping:**
 - It was noted that information may be available in distribution businesses regulatory proposals, but may not be in a form or location which is easily accessible to third parties
 - Some participants considered that information about the cost of network solutions would be particularly helpful for considering whether to propose a non-network alternative, but that such information was typically lacking from most Annual Planning Reports
 - Some participants considered that longer planning horizons are needed to better assess the benefits of the incremental accumulation of EG, which may lead to the deferral of network investment over time

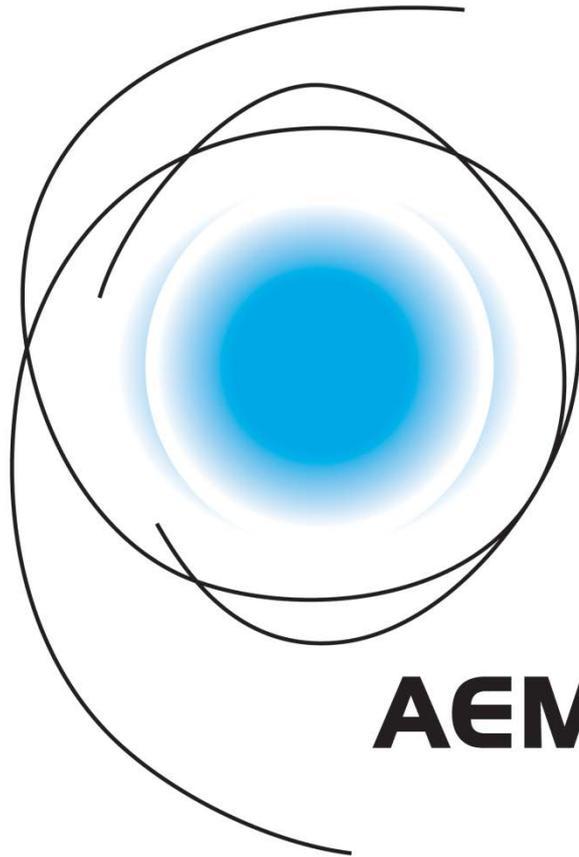


What's next?

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The rule change process





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