

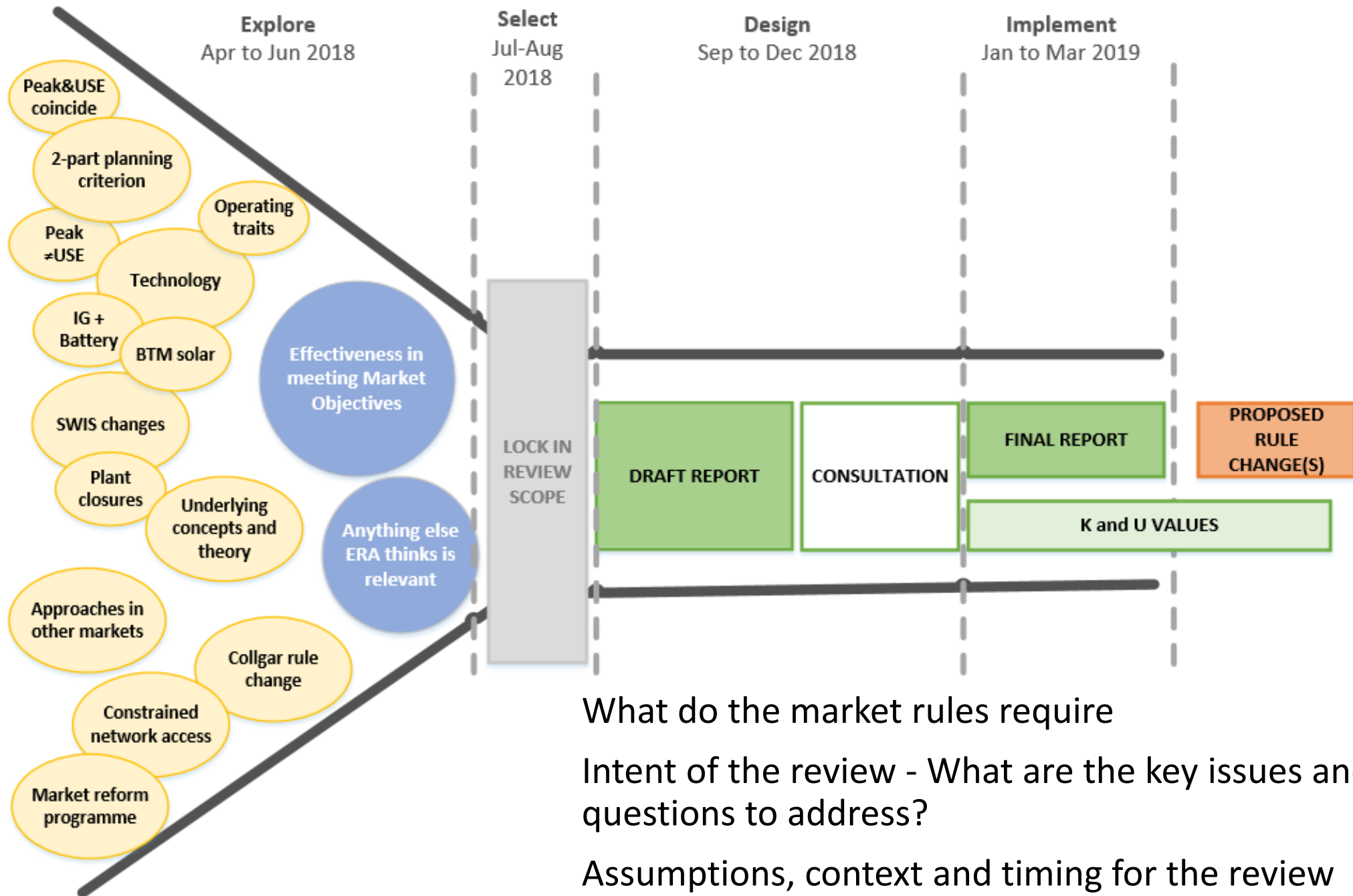
Capacity certification for Intermittent Generators

ERA's method review

Progress update for MAC – June 2018

Disclaimer

- We are at a very early stage in the review process
- Working documents and ideas
- Secretariat level
- ERA has not made any decisions or taken any position yet
- So please do not draw any conclusions



What's happened over the last two months?

- 8 May – Informal meeting with the Governing Body.
- 25 May – First meeting of the Stakeholder Working Group.
- With both groups we've been exploring issues associated with certifying capacity for IGs, including the:
 - current method in practice – session with AEMO yesterday;
 - history of the method review process in the WEM;
 - approaches in other jurisdictions;
 - academic literature on capacity certification; and
 - context for the review – constrained network access, technology changes since the last review.

FYI – the ERA webpage for the method review is live.

Capacity to meet peak and unserved energy

Currently a hybrid (2-part) planning criterion exists in the Market Rules:

- 1. 1 in 10 year forecast, plus reserve; and**
- 2. Limit expected energy shortfalls to 0.002% of annual energy consumption**

- Minimal conflict between the planning criteria if load for scheduled generation (LSG) and peak demand coincide
- If energy shortfall events and highest peak do not coincide - peak LSG (net-load) can be relevant for the calculation of Effective Load Carrying Capability

What data and analysis is required to help resolve this issue?

Other considerations

- Technology
 - Utility scale – differences in operational characteristics (wind/solar) and geographical characteristics (wind patterns).
 - Capacity value of emerging resources, eg batteries
- Constrained network access:
 - Current RL method does not consider capacity constraints
 - Limited detail (yet) on application of network constraints
- Other markets:
 - Most use approximation methods for IGs – time based or risk based
 - Only one market (US MISO) uses fundamental analysis to model effective load carrying capability
 - Some jurisdictions exclude IGs from capacity market, eg UK

What's next?

- Working on:
 - key questions associated with the review;
 - arguments identified so far;
 - potential data collection, research and analysis to help answer each question; and
 - A framework to assess the current method against market objectives.
- Will share with the Stakeholder Working Group - 28 June
- Short summary paper to the GB:
 - Summary of issues and findings;
 - Recommendations on what to include in the review scope and why; and
 - Indicative timing and resources.
 - GB may choose to publish an issues paper and consult.
- Progress update at the August 2018 MAC meeting.

Timing concerns

- Final report and recommendations due by 1 April 2019
- Any associated rule change proposal, is unlikely to be progressed before the next one or two capacity cycles (beginning Oct 2019 or Oct 2020), so will need to calculate K&U values in the interim.

Points to note:

- The market rules require the method used to certify capacity for Intermittent Generators to be reviewed every three years.
- The last method review was conducted by the Independent Market Operator in 2014.
- Responsibility for conducting the method review passed to the ERA in 2016. Transitional arrangements enabled the ERA to delay completing its first review until April 2019
- The current method for certifying capacity for intermittent generators has been utilized for the past six years and was relatively unchanged at the last review.
- Collgar Wind Farm submitted a proposed rule change on a related issue in advance of the ERA beginning its review. Details on the proposed rule change can be found on the Rule Change Panel webpage.
- Information on the review is published on the ERA's webpage:
- <https://www.erawa.com.au/electricity/wholesale-electricity-market/methodology-reviews/relevant-level-methodology>