AGENDA

1. Background
2. Candidate REZ definition and usage
   • What is a REZ, and how were they defined?
   • How REZ inputs influence the modelling process
3. Current REZ candidates
   • What’s changed since 2018 ISP and why?
   • Case Study – Western Victoria REZ
4. Next Steps
   • Actionable ISP
   • CoGaTI
5. Consultation Timeline
6. Questions
Background
Our changing energy environment
The Integrated System Plan (ISP) - a roadmap for the future

- Provides an integrated roadmap
- Maximises value to end consumers
- Aims to inform policy makers, investors, consumers, researchers and other energy stakeholders
ISP context

Integrated System Plan

ISP/RIT-T guidelines

Coordination of transmission & generation investment

Transmission planning & interconnection
Stakeholder engagement and consultation process to date

**Deliverables**
- **20 Mar** Submissions on forecasting and planning consultation
- **3 Apr** Briefing webinar to summarise inputs and assumptions submissions
- **12 Apr** Stakeholder workshop to explore scenarios and resolve issues
- **21 May** Consumer engagement approach and ISP workshop
- **3 Jun** ISP Scenario and Assumptions briefing
- **Date TBC** Final scenario and assumptions report published

**Engagements and consultations**
- **13 Aug** REZ briefing Webinar

**Today**
The objectives for today’s webinar are to:

- Provide background on candidate Renewable Energy Zone (REZ) definition and development
- Explain how REZs will be used within the 2019-20 ISP modelling
- Discuss REZ candidates for the 2019-20 ISP
Candidate REZ definition and usage
Renewable Energy Zones (REZs)

REZs are areas in the NEM where clusters of large-scale renewable energy can be developed to promote economies of scale in high-resource areas and capture geographic and technological diversity in renewable resources.

– ISP Consultation Paper (AEMO)
ISP modelling overview

**Scenario demand and energy forecasts**

**Scenario drivers (LRET, emissions etc)**

**Candidate REZ and generation parameters**

**Potential transmission projects**

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**Generation and Transmission Expansion Model**

**Generation Expansion**

**Transmission Expansion**

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**Time Sequential Model**

**Dispatch Outcomes**

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**Power system analysis**
## REZ inputs to model – snapshot

<table>
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<tr>
<th>Location</th>
<th>Wind generation limits (MW)</th>
<th>Solar PV plus Solar thermal Limits (MW)</th>
<th>Transmission-limited total build in the REZ</th>
<th>Indicative transmission expansion cost ($/MW Real 2019)</th>
<th>Additional generation capacity available (zero additional cost) in REZs due to the development of interconnectors</th>
<th>QNI Option 2</th>
<th>QNI Option 3B</th>
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Excerpt from AEMO 2019 Inputs and Assumptions Workbook
Candidate REZ assessment

- Environment
  - Resource quality
  - Resource diversity
  - Terrain

- Power system
  - Network limits
  - Potential upgrades
  - System Strength
  - MLF

- Planning
  - Existing land use
  - Cultural and Heritage
Current REZ candidates

+ Case Study of Western Victoria REZ
Case study – Western Victoria REZ
Regulatory process and preferred option

Note: This diagram is not to scale. Routes are yet to be confirmed and for illustrative purposes only.
Indicative project timeline

**RIT-T**
- Publish Project Assessment Draft Report (PADR)
- Key stakeholder engagement
- Consider submissions
- Publish Project Assessment Conclusions Report (PACR)

**Tender**
- Tender, negotiate and award contract
- Key stakeholder engagement

**Development approvals**
- Design
- Environmental and planning studies
- Community engagement

**Construction**
- Refine detailed design
- Construction and commissioning
- Community engagement – ongoing

2019

2025
Next Steps
Next steps

• ISP will identify an optimal development path for the power system, including:
  • transmission build/upgrades;
  • non-network solutions;
  • associated REZs.

Integrated System Plan

• ESB consulting on draft Rules later this year. It is proposed that the ISP will:
  • trigger and partially replace RIT-Ts; &
  • inform decision making by market participants (incl. VRE generators) & policy makers.
• Whole of system planning will help to overcome the current “chicken & egg” issues.

Converting the ISP into action

• AEMC’s Coordination of Generation and Transmission Investment review is exploring options to promote the efficient development of REZs.
• This review feeds into the ESB’s Post 2025 market design review.

COGATI
Consultation timeline
Proposed ISP milestones/engagements 2019-20

Legend:
- Publishing Dates
- RIT-T
- Public engagements

- REZ public briefing
- Preliminary outcomes briefing TBD
- Draft ISP published
- Final ISP published
- Public engagement on draft outcomes, development plan, REZ

July  Aug  Sept  Oct  Nov  Dec  Feb  Mid 2020

- VNI RIT-T PADR published
- QNI RIT-T PADR Published
- Marinus Link PADR published
- AER determination on EnergyConnect
- VNI RIT-T PACR Published
Questions

Jonathon Geddes