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RiverLink - The Proposed SA to NSW Interconnector from
a consumer perspective

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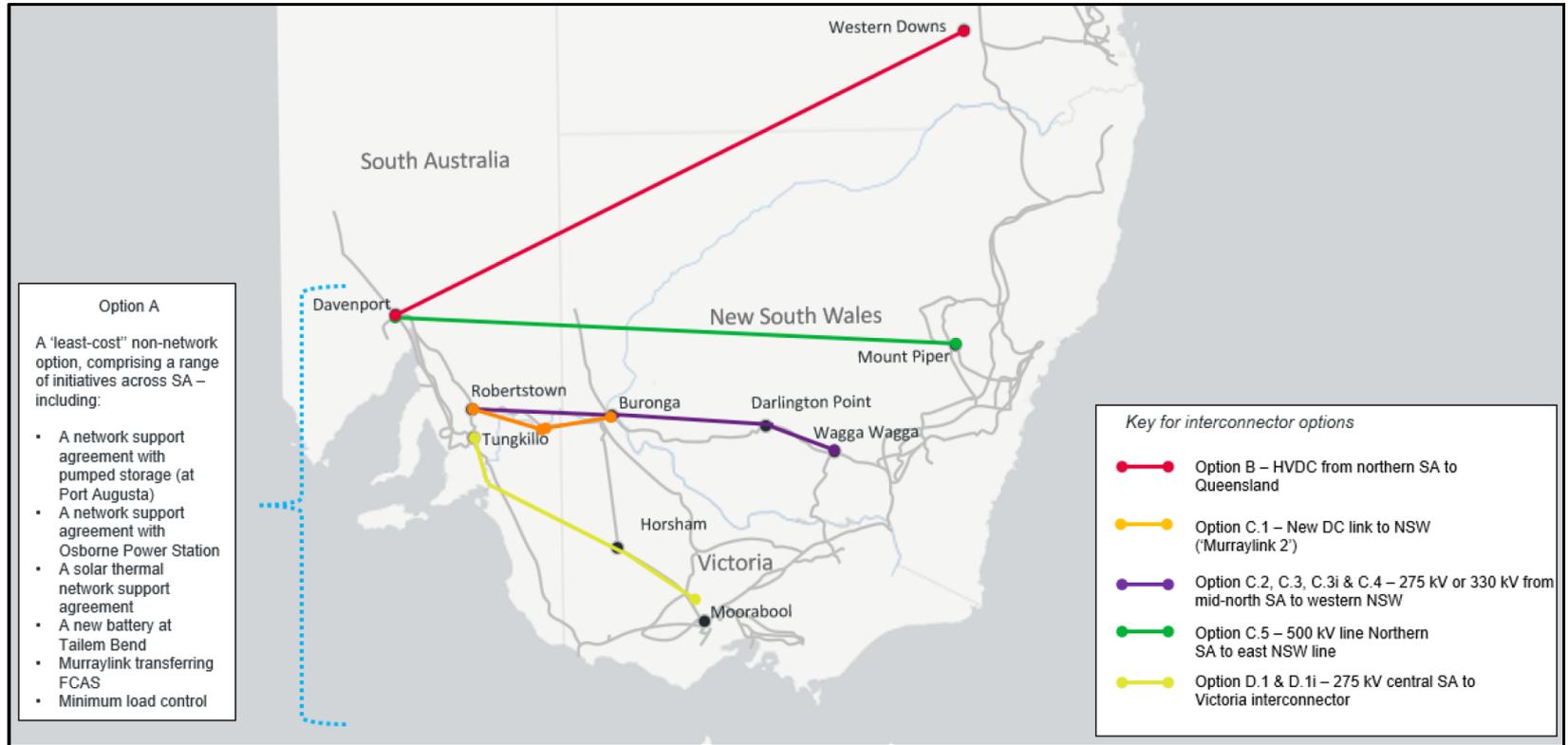
Agenda

- The Interconnector Proposal
- The Identified Need – the problem being solved
- The Context
 - The Regulatory Framework - Who Pays?
 - Uncertainty & Risk
- Our ECA Project
- Implications for the Integrated System Plan
 - Timing Risks
 - Allocation of costs and benefits

The Proposal

- ElectraNet's South Australian Electricity Transformation (SAET) Regulatory Investment Test for Transmission (RIT-T) Project Assessment Draft Report (PADR) June 2018 identified Option C3i as the preferred option ... aka ... 'RiverLink'
- A 330kV Dual Circuit Interconnector from Robertstown in SA to Wagga Wagga in NSW
- Estimated cost of \$1.5bn - \$0.4bn in SA, \$1.1bn in NSW
- Requires significant strengthening of the SW NSW network to deliver the capacity required
- But, great project from SA perspective

Figure E.2 – Overview of the options (and variants) assessed



The Identified Need

- As published in the PSCR – November 2016: ... to deliver net market benefits and support energy market transition through:
 - i. lowering dispatch costs, initially in South Australia, through increasing access to supply options **across regions**.
 - ii. facilitating the transition to a lower carbon emissions future and the adoption of new technologies, through improving access to high quality renewable resources **across regions**.
 - iii. enhancing security of electricity supply, including management of inertia, frequency response and system strength in South Australia.
- The third, broadly capturing the need to improve security of supply in SA, is being dealt with via a number of initiatives that have been, or will soon be, implemented and this need is **not** included in the PADR

The Context

- SA System Black September 2016 freaked everybody out
- AER and AEMC Final reports yet to be released 2+ years later ...



Source: www.abc.net.au/news/2016-12-12/transmission-tower-knocked-over-in-mid-north-south-australia/8111838 Posted 12 Dec 2016

The Context (2)

- Post System Black: Finkel Review recommendation leads to AEMO releasing first Integrated System Plan (ISP) in August 2018
- Energy Security Board (ESB) tasked with converting the ISP into ACTION
- ElectraNet working in advance of the ISP (PSCR in November 2016)
- RiverLink is now the most advanced of the major ISP Group 1 and 2 ISP projects
- First new interconnector under the current Regulatory Investment Test
- Politics ... SA Gov very supportive – prefer to see a link energised by December 2021 ... faster than the PADR dates of 2022-24 ... coincidentally just prior to the next state election in March 2022 ...

Who Pays ?

- **Consumers**
- The premise of interconnector investment is: transmission costs will increase but the impact on wholesale markets and system security will have a value to consumers that will exceed the cost of the regulated infrastructure
- The Regulatory Investment Test for Transmission (RIT-T) identifies the option with the greatest net market benefits (not same as best ROI)
- Lots of modelling and spreadsheets and stuff like that – information asymmetry
- Net Market benefits = NEM overall, not any particular jurisdiction
- SA bit goes on ElectraNet's RAB, NSW bit on Transgrid's RAB
- Inter-regional TUoS rebalances to some degree based on net energy transfers

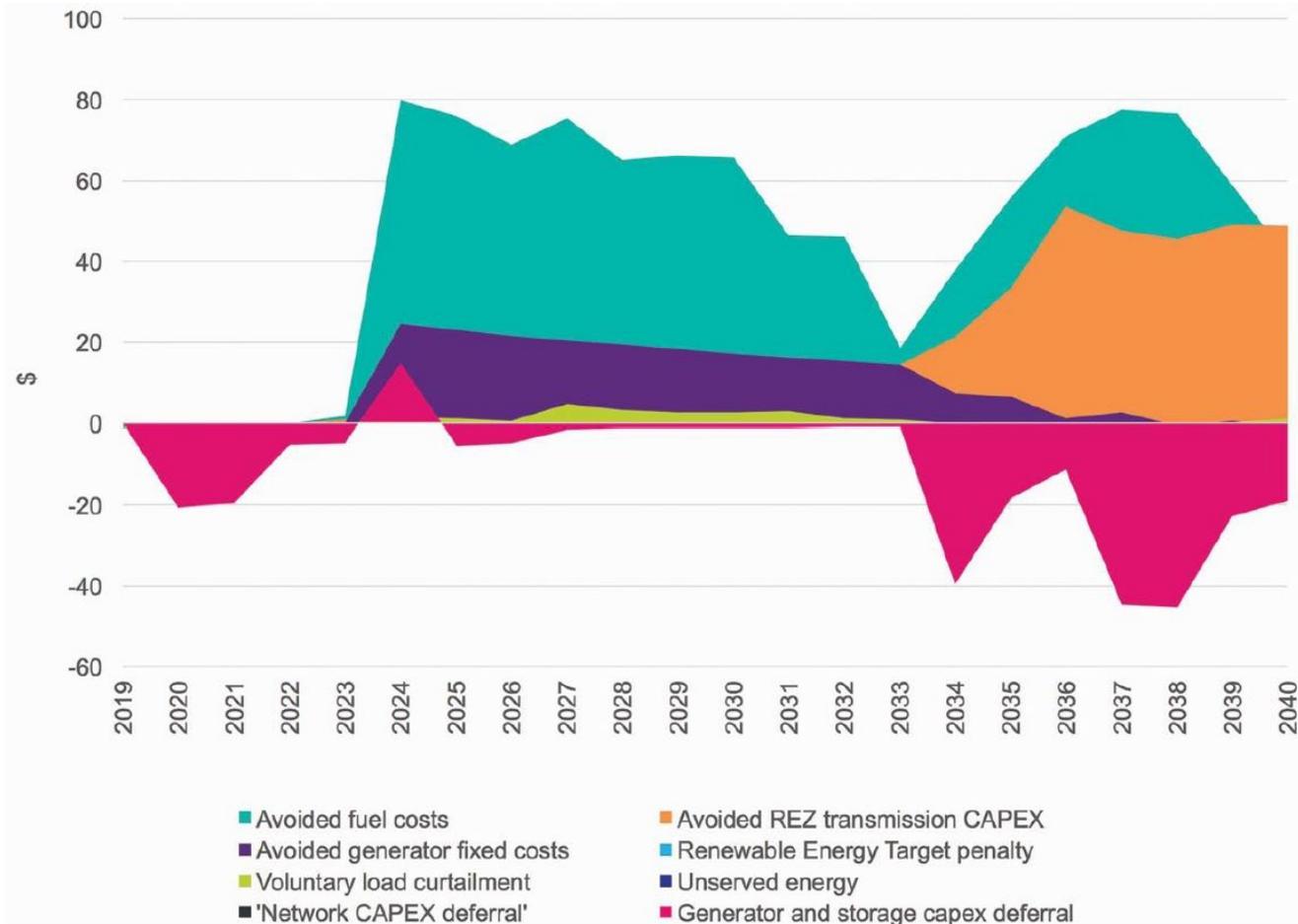
Uncertainty and Risk

- the Standard definition of risk *AS/NZS ISO 31000:2009 Risk management - Principles and guidelines*:

risk is defined as the effect of uncertainty on objectives

- From a consumer perspective (i.e the National Electricity **Objective**), the risks of this project are in the uncertainty of the market conditions that will contribute to, or hamper, the benefits identified in the RIT-T used to justify the expenditure
- Arguably, **Policy** uncertainty and **Technology** advances mean predicting the market conditions in 2033 from 2018 are even less likely to be right than predicting 2018 from 2003 (when the SA small customer market opened up)

Figure 7 – Breakdown of gross market benefits for Option C.3.i over time – central scenario



Our ECA Project

- Participate in the ElectraNet consultation process (public forums, submissions, annoying questions etc)
- Support consumer groups to engage and make submissions
- Critical analysis of the modelled costs and benefits from a consumer perspective
- Timing Risk - Repeated the NPV analysis to 2033 instead of 2040 to assess consumer exposure to uncertainty in market conditions >15 years out (See Figure 7 on previous slide) – options other than C3i emerge as ‘preferred’
- Used public info to provide an alternate cost for the ‘non-interconnector’ option that was materially lower to that of the PADR
- Challenged the allocation of costs and benefits between SA and NSW consumers
- Recommended a combination of options, staged to better match costs and benefits (especially in NSW)

15 years

- Received strong feedback on restricting the analysis to a 15 year horizon - 2033
- In 2003 how well did we forecast market outcomes in 2018?
- In 1988 how well did we forecast market outcomes in 2003?
- Consumers pay for the RAB regardless of utilisation
- A test of consumer exposure to uncertainty in policy and technology
- Doesn't mean NO interconnector – just thoughtfully scaled & timed and optimised with non-network options

Implications for ISP

- Consistency between projects with data and modelling
- Transparency with data and modelling
- Engage early and often – especially until ISP matures – build trust
- Mandate consideration of Timing Risk – consumers pay for the time value of money
- Reform of inter-regional charging to provide fair balance of costs and benefits between regions
- Opportunities for alternate funding models that more efficiently allocate risks between consumers, governments, networks and generators