

Scale Efficient Network Extensions

Key design features and options for a SENEs framework

Chris Spangaro and Elisabeth Ross

Wholesale Environment and Transmission team

AEMC

Purpose of this presentation

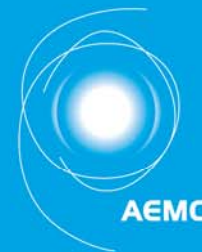
- Highlight the key issues to consider
- Outline some of the key design features for a SENE framework
- Discuss the five options presented in the Options Paper
 - Options 1 and 2 are variations on the existing proposed SENE framework
 - Options 3 and 4 use the RIT-T to assess the efficiency of building incremental capacity in addition to meeting the connection requirements of a first connecting generator
 - Option 5 introduces a new type of prescribed service for a shared connection, paid for by generators

Key questions to consider

- How is the investment decision made?
- How is the SENE funded?
- How is the SENE priced?
- What is the nature of the transmission service on the SENE?
- How should stranded asset risks be managed?

Summary of key design choices

- The trigger for considering whether a SENE should be built
- What investment test should be applied to assess the likely efficiency of the investment
- How the costs of the SENE should be allocated amongst relevant parties and the structure of the charge that they face
- What access provisions apply to the SENE
- Regulatory oversight mechanisms



Options 1 and 2

Variations on the proposed SENE framework

AEMC

Overview of Options 1 and 2

- AEMO identifies possible “SENE zones”
- NSPs undertake preplanning of future connection requirements based on a forecast profile of generation entry
- Generators pay an average cost charge based on use of SENE
- Customers underwrite the cost of spare capacity but are rebated over time if generation materialises as expected
- AER and AEMO have oversight roles to protect customer interests

Option 1: SENEs with a cost threshold trigger

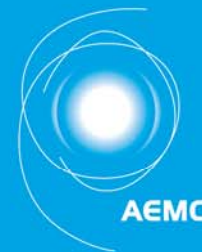
Trigger for considering a SENE	AEMO identifies possible SENE zones NSPs identify credible options, published in APR/on website
Investment test	Implicit in NSP planning and firm connection agreements representing 25% of capital costs of SENE
Cost allocation and charging methodology	Generators pay a proportional average cost charge. Customers underwrite risk but face an expected cost of zero.
Access provisions	Mandated compensation arrangements on the SENE
Regulatory oversight	AER has power of veto, AEMO reviews forecasts

Option 2: SENEs with an economic test and no capacity rights

Trigger for considering a SENE	AEMO identifies possible SENE zones NSPs identify credible options, published in APR/on website
Investment test	Explicit assessment of net market benefits and firm connection agreements representing 25% of capital costs of SENE
Cost allocation and charging methodology	Generators pay a proportional average cost charge. Customers underwrite risk but face an expected cost of zero.
Access provisions	As per the shared network. Terms of access to be negotiated between NSP and generator
Regulatory oversight	AER has power of veto, AEMO reviews forecasts

Summary of Options 1 and 2

Design feature	Option 1	Option 2
Trigger for considering a SENE	AEMO identifies possible SENE zones NSPs identify credible options, published in APR/on website	As per Option 1
Investment test	Implicit in NSP planning and firm connection agreements representing 25% of capital costs of SENE	Explicit assessment of net market benefits and firm connection agreements representing 25% of capital costs of SENE
Cost allocation and charging methodology	Generators pay a proportional average cost charge. Customers underwrite risk but face an expected cost of zero.	As per Option 1
Access provisions	Mandated compensation arrangements	As per the shared network. Terms of access to be negotiated between NSP and generator
Regulatory oversight	AER has power of veto, AEMO reviews forecasts	As per Option 1



Options 3 and 4

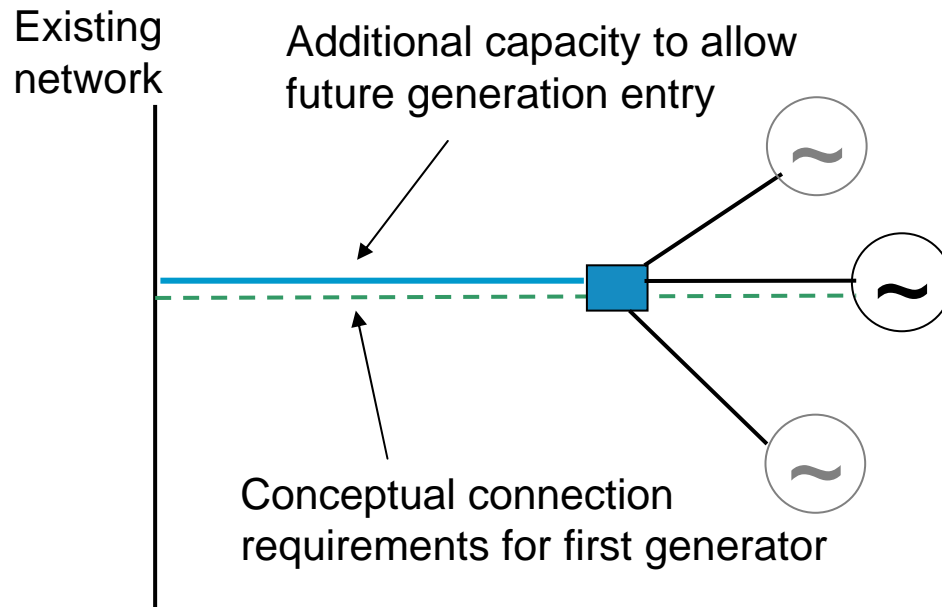
Incremental approach to SENEs

AEMC

Overview of Options 3 and 4

- Generator (or group of generators) connection enquiry to NSP triggers consideration of need for incremental capacity above first generator's requirements
- RIT-T used to assess efficiency of incremental capacity
- First generator(s) pay stand alone cost of their connection – subsequent connecting generators contribute to this cost
- Under Option 3, customers permanently fund incremental capacity
- Under Option 4, customer charges reduce as subsequent generators connect

Incremental approach



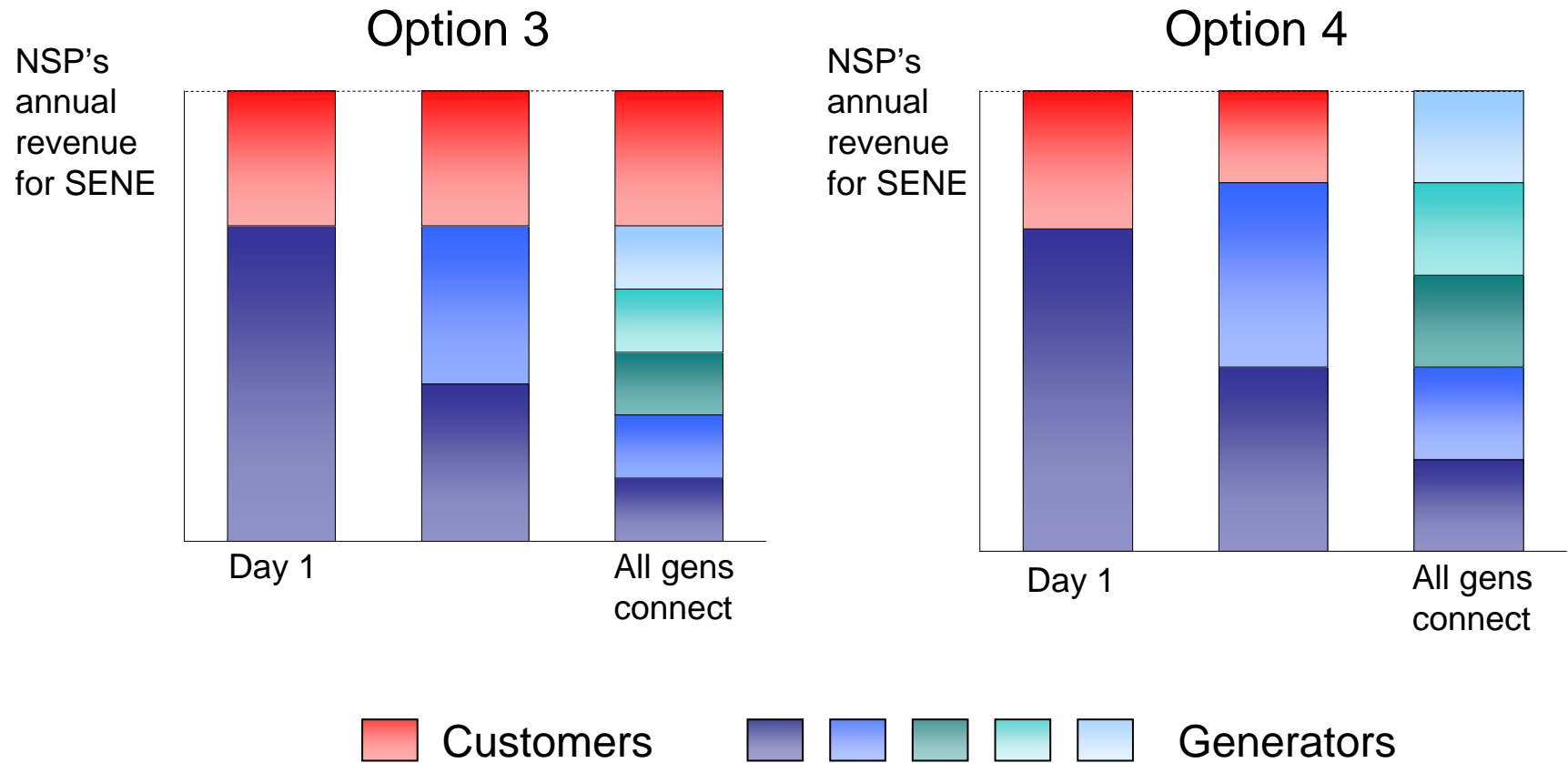
Option 3: Incremental approach to SENEs

Trigger for considering a SENE	A generator connection enquiry
Investment test	Signed connection agreement with first generator, RIT-T applied to incremental capacity
Cost allocation and charging methodology	First generator(s) pays stand alone cost, subsequent generators contribute to this, customers pay for incremental capacity
Access provisions	As per the shared network. Terms of access to be negotiated between NSP and generator
Regulatory oversight	AER reviews application of RIT-T, AEMO reviews generation forecasts

Option 4: Incremental approach with generators bearing costs

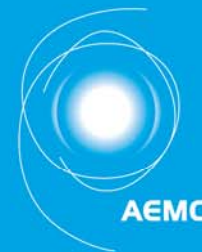
Trigger for considering a SENE	A generator connection enquiry
Investment test	Signed connection agreement with first generator, RIT-T applied to incremental capacity
Cost allocation and charging methodology	First generator(s) pays stand alone cost, customers underwrite additional capacity. Both these charges reduce with additional connections
Access provisions	As per the shared network. Terms of access to be negotiated between NSP and generator
Regulatory oversight	AER reviews application of RIT-T, AEMO reviews generation forecasts

Comparison of charging arrangements for Options 3 and 4



Summary of Options 3 and 4

Design feature	Option 3	Option 4
Trigger for considering a SENE	A generator connection enquiry	As per Option 3
Investment test	Signed connection agreement with first generator, RIT-T applied to incremental capacity	As per Option 3
Cost allocation and charging methodology	First generator(s) pays stand alone cost, subsequent generators contribute to this, customers pay for incremental capacity	First generator(s) pays stand alone cost, customers underwrite additional capacity. Both these charges reduce with additional connections
Access provisions	As per the shared network. Terms of access to be negotiated between NSP and generator	As per Option 3
Regulatory oversight	AER reviews application of RIT-T, AEMO reviews generation forecasts	As per Option 3



Option 5

SENEs as part of the shared network with a new generator charge

AEMC

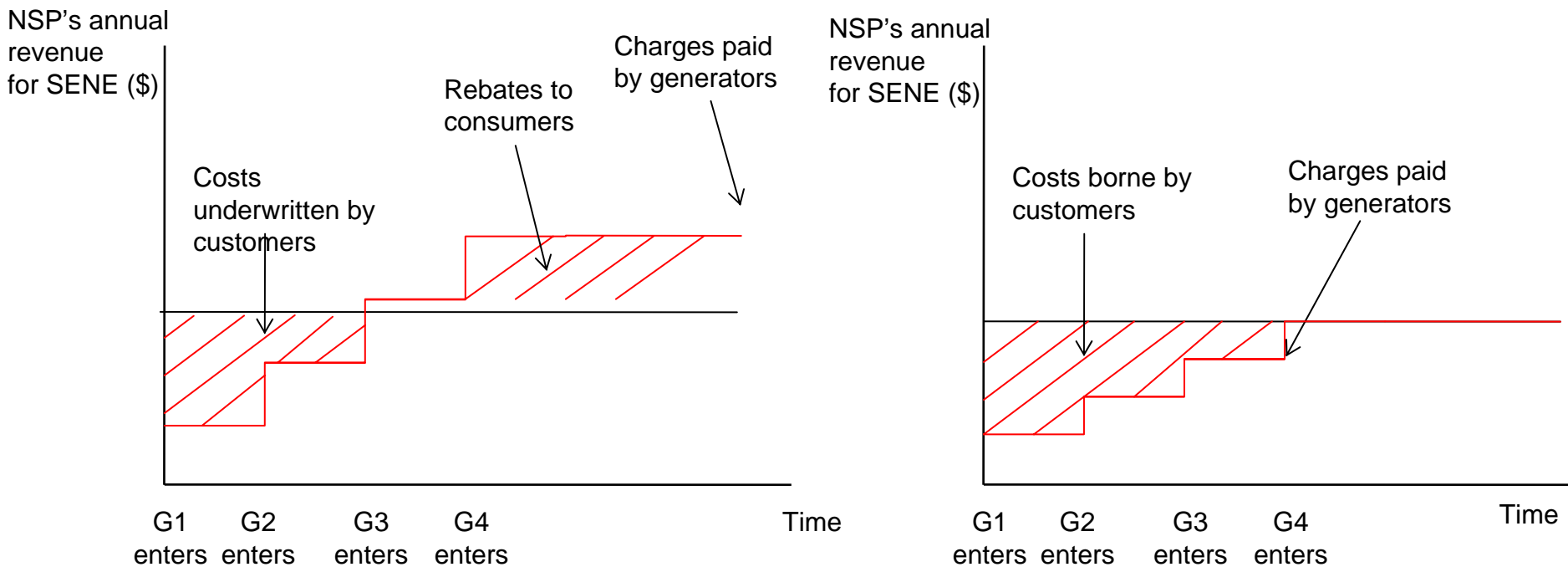
Overview of Options 5

- A new type of prescribed transmission service for shared connections, such as SENEs
- Shared connections are defined as all elements of transmission network spurs shared by more than one party but which are not required to support DNSP load
- These assets would support a new type of prescribed transmission service, paid by generators
- The cost of the SENE would enter the regulatory asset base and charges would form part of the maximum allowed revenue
- Any costs not recovered from generators would automatically be recovered from customers

Option 5: SENEs as shared network

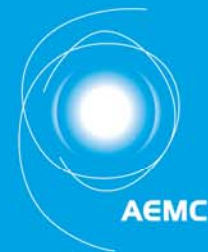
Trigger for considering a SENE	A generator connection enquiry
Investment test	Signed connection agreement with first generator, RIT-T applied to entire investment
Cost allocation and charging methodology	A charge for a new type of prescribed transmission service is introduced relating to SENEs, which generators pay. Customers pay for spare SENE capacity
Access provisions	As per the shared network. Terms of access to be negotiated between NSP and generator
Regulatory oversight	AER reviews application of RIT-T, AEMO reviews generation forecasts

Comparison of charging arrangements for Options 1 and 5



Option 5: SENEs as shared network

Trigger for considering a SENE	A generator connection enquiry
Investment test	Signed connection agreement with first generator, RIT-T applied to entire investment
Cost allocation and charging methodology	A charge for a new type of prescribed transmission service is introduced relating to SENEs, which generators pay. Customers pay for spare SENE capacity
Access provisions	As per the shared network. Terms of access to be negotiated between NSP and generator
Regulatory oversight	AER reviews application of RIT-T, AEMO reviews generation forecasts



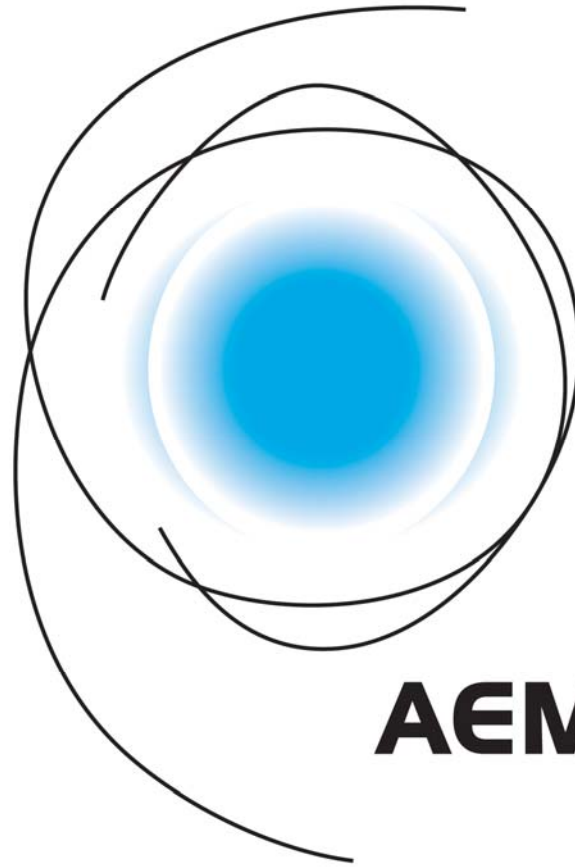
Where to from here?

AEMC

Process from here

- Submissions to the Options Paper due on 12 November
- Draft Rule determination due on 17 February
- Final Rule determination due on 12 May





AEMC