

# COGATI REVIEW

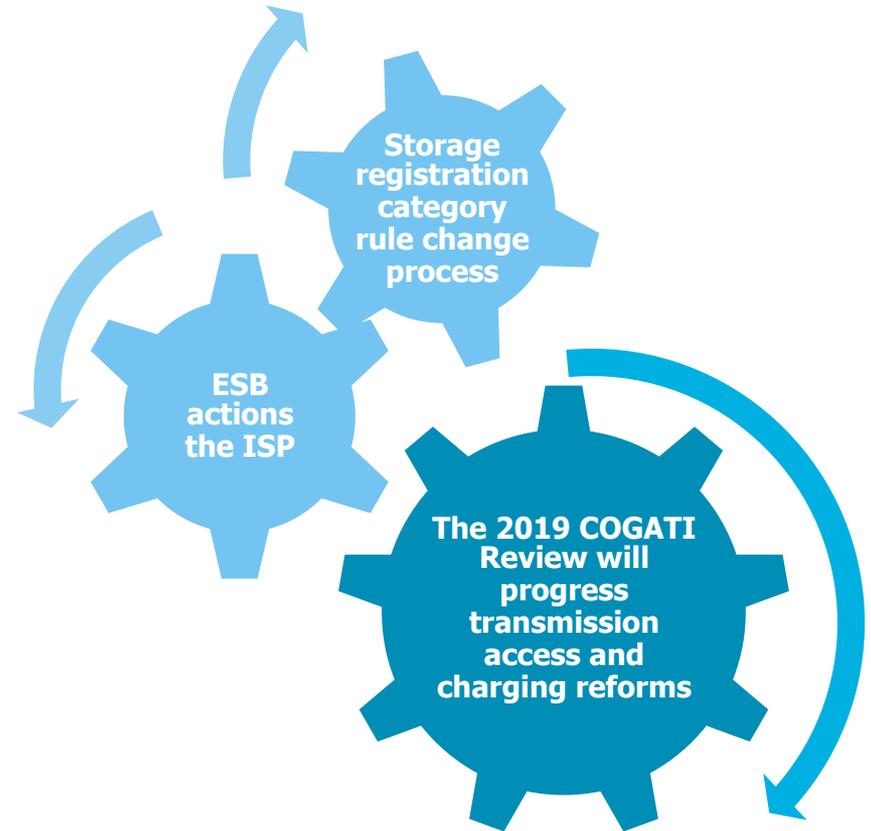
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AUSTRALIAN ENERGY MARKET COMMISSION  
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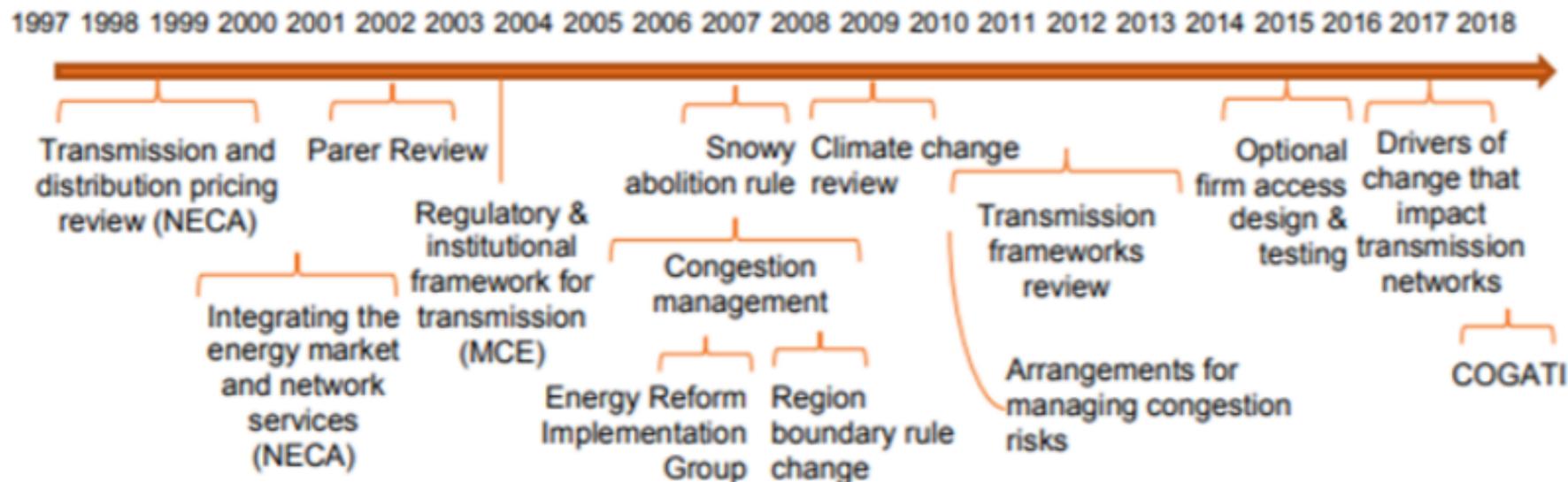
AEMC

## Background to the COGATI review

- We have a standing terms of reference from the COAG Energy Council to undertake biennial reporting on **when** the transmission planning and investment decision-making frameworks will need to change, and **what** they need to change to.
- The final report for the inaugural COGATI Review was published in December 2018.



# History of access reform



Source: AEMO submission to the *COGATI - access and charging* review consultation paper.

## A fundamental equation

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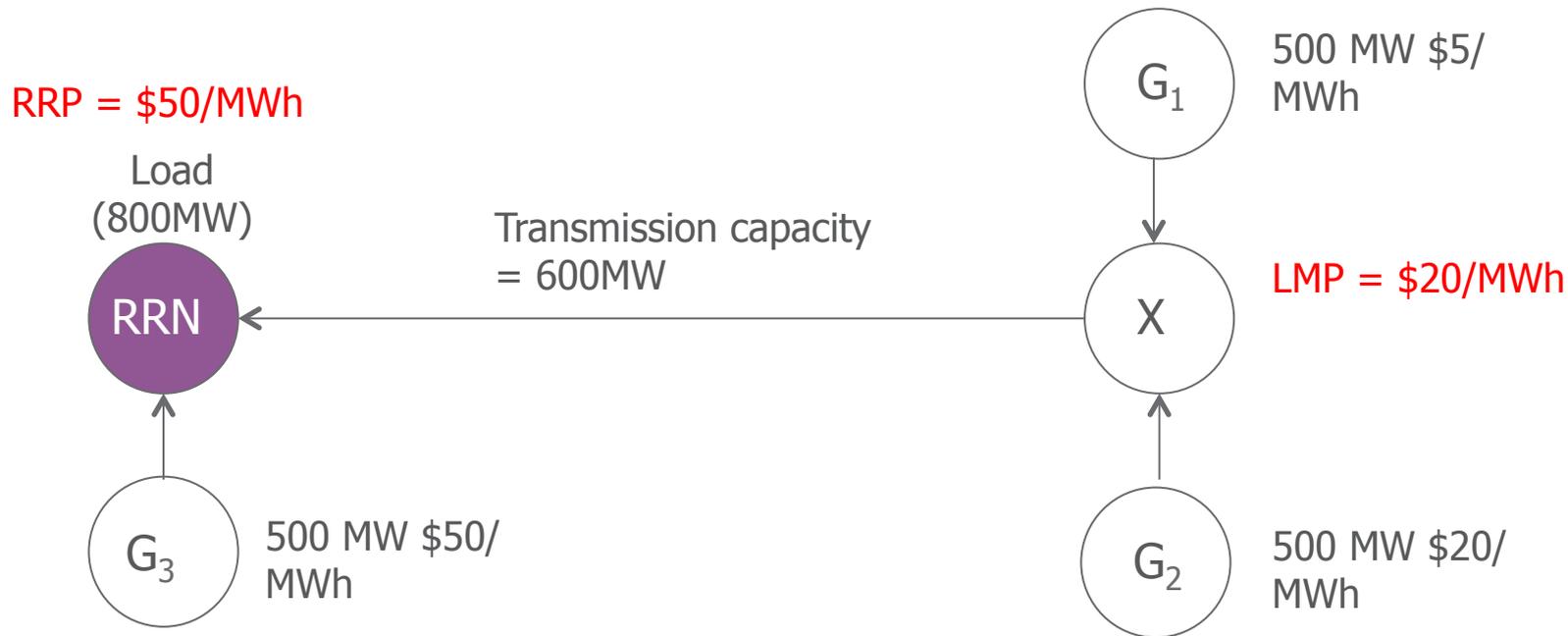
Revenue = dispatch quantity x regional reference price

Where the **regional reference price** is defined as the cost of supplying one extra MW of load at the **regional reference node**

Revenue = dispatch quantity x locational marginal price +  
dispatch quantity x (regional reference price – locational marginal price)

Where the **locational marginal price** is defined as the cost of supplying one extra MW of load at the generators' **local node**

# Local marginal prices $\neq$ regional reference prices with transmission constraints



## The access problem

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Economic efficiency is promoted when prices reflect the marginal cost of supply.

There is a disconnect between the price generators are being paid and the marginal cost of supplying energy when transmission constraints bind.

### **Dispatch inefficiency**

To maximise dispatch quantity and because generators do not face the LMP, generators behind a constraint “**disorderly bid**”, resulting in **inefficient dispatch**

### **Risk management**

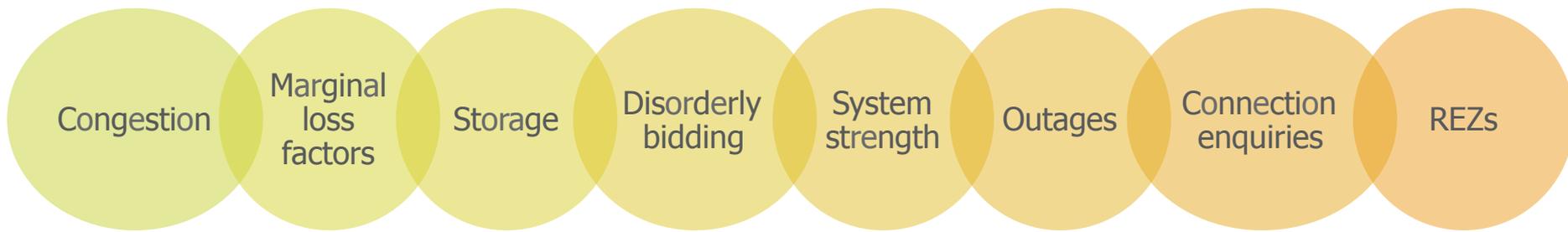
When transmission constraints bind, this reduces dispatch quantity, creating a **volume risk** that generators cannot manage.

### **T and G investment coordination**

- Generators do not face locational price signals (because they are not exposed to the LMP) negatively influencing their locational investment decisions
- Generators do not invest in transmission capacity to alleviate the problem because other generators benefit.
- Consequently, transmission investment is the province of centralised decision making – with the risk borne by consumers – as opposed to the market process for generators.

## Need for access reform

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Generators, consumers and transmission businesses are facing worsening and related issues as the electricity market transitions.

We consider that these issues can be resolved through a holistic reform to access arrangements

## Our proposal for access reform

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### 1. Wholesale electricity pricing



Generators receive a locational marginal price (aka dynamic regional price) that better **reflects the marginal cost** of supplying electricity at their location in the network

### 2. Financial risk management



Generators are better able to **manage the risks of congestion** by purchasing a transmission hedge

### 3. Transmission planning and operation



Transmission planning is **informed** by the purchase of transmission hedges

Cost of transmission investment no longer solely recovered from consumers

## Our proposal for access reform

- Remember, currently:
  - Revenue = dispatch quantity \* RRP
  - Revenue = dispatch quantity \* LMP + dispatch quantity \* (RRP – LMP)
- The “settlement residue” that would otherwise arise if generators were paid at the LMP and load continued to be paid at the RRP is automatically allocated back to generators based on their dispatch quantity (the red bit of the equation above)
- We propose:
  - Revenue = dispatch quantity \* LMP + hedge quantity \* (RRP – LMP)
- Settlement residue is allocated to generators which have purchased hedges
  - Allows them to manage the existing risk of congestion
  - Sends appropriate price signals to generators in operational and investment timescales
  - Sale of hedges can be used to inform transmission planning
  - Cost of transmission now partially recovered from generators

## Implementation and transition

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Our proposal is for all three elements of access reform to be introduced in **July 2022**.

Transitional processes will be necessary to make sure that access reform:

- does not create **sudden changes** in the market, and
- allows for a **learning period**.

Access reform has **winners** and **losers**. Transitional arrangements, both in terms of the timeframes for introduction and grandfathered rights, will be important to manage this.

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# Next steps

