

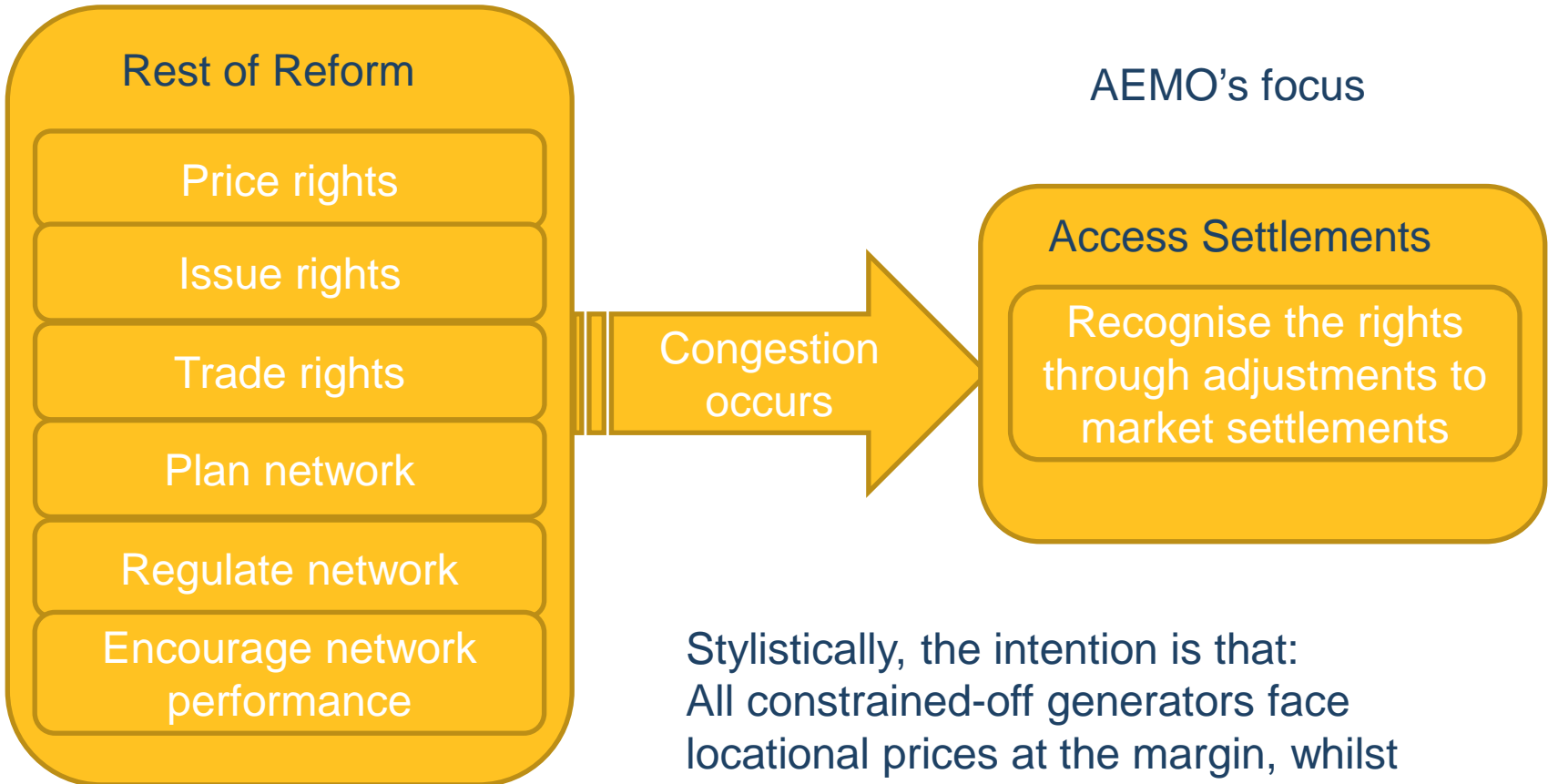
# AEMO EARLY WORK ON OPTIONAL FIRM ACCESS (OFA)

AEMC OFA Public Forum 14 August 2014, Sydney

PRESENTED BY BEN SKINNER



# WHAT IS ACCESS SETTLEMENT?



Stylistically, the intention is that:  
All constrained-off generators face locational prices at the margin, whilst firm generators hold a financial transmission right to the regional reference node

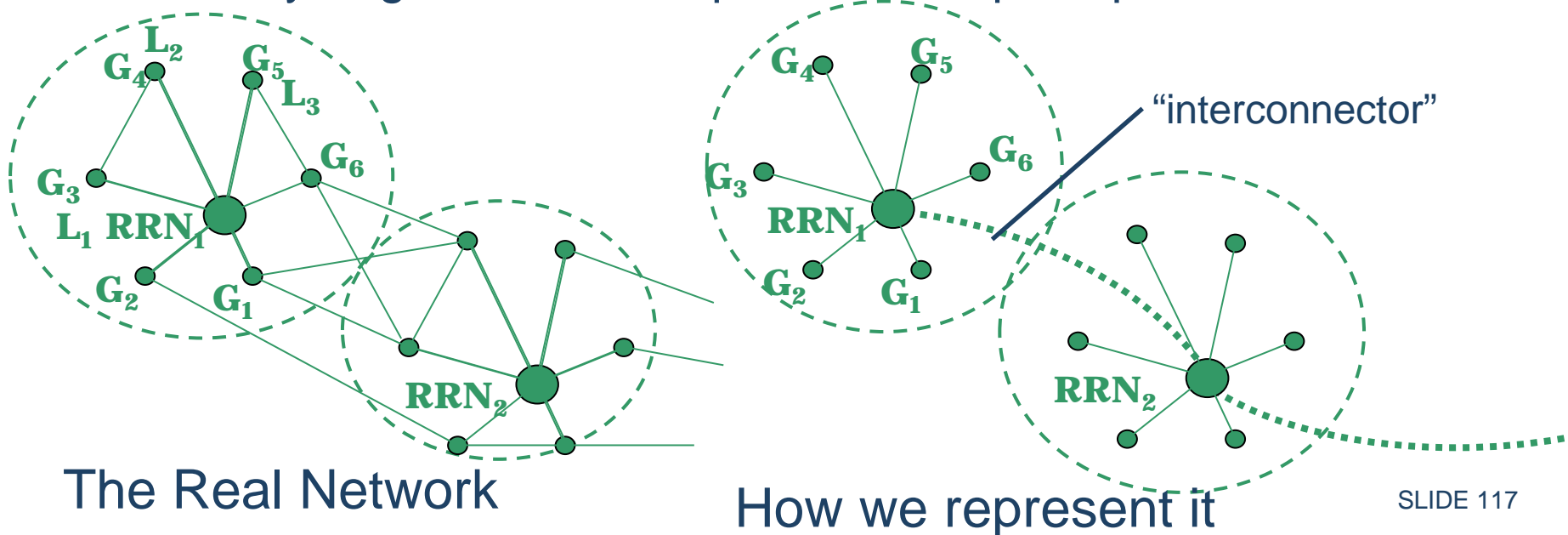
# PRESUMED BENEFITS OF ACCESS SETTLEMENTS VERSUS STATUS QUO



- Firm generators get more reliable RRN settlements
  - Reduce congestion risk for hedged generators
- Need to rebid during congestion removed
- More efficient dispatch: merit-order restored
- Greater use of network when looped
  - i.e. small co-efficient terms don't constrain-off large co-efficient terms
- Firmer inter-regional instruments
- No negative inter-regional settlement residue
  - No clamping
- More predictable dispatch and price outcomes
  - Reduce major dispatch swings and prices lurching to cap or floor

# NOT STARTING FROM A CLEAN SHEET

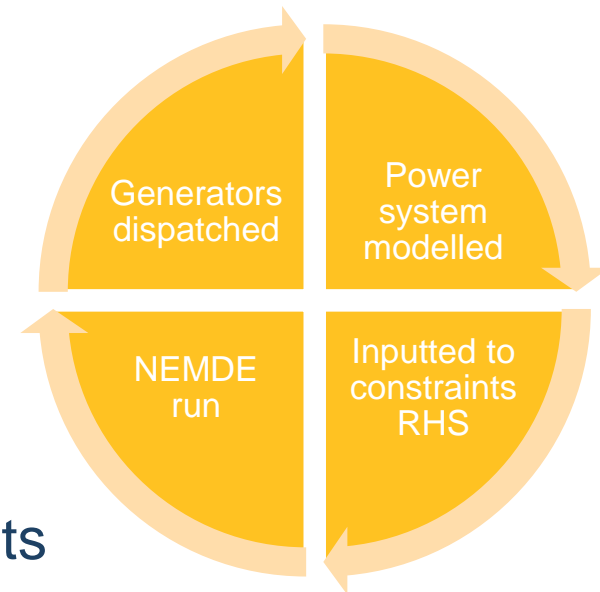
- Access settlements is built on top of a hub & spoke network representation
  - Locational prices indirectly calculated from our constraint representations
- OFA built on current regions
  - Very large and don't represent true pinchpoints



- Dispatch and settlement environments divorced
  - As-gen versus Sent-out
    - Some loads netted off (“auxiliaries”....variously defined)
    - Non-conformance energy settled
  - 5-minute dispatch versus 30-minute settlement
  - Market price cap and floor, constraint violations
  - Settlement RRP versus Dispatch ROP (price over-rides)
- Many generators and responsive loads non-scheduled
  - Outside of access settlement, but affect flowgate capacity
- Generators are operated in portfolios
  - Non-atomistic bidding incentives

# HOW CAN AEMO BE MOST USEFUL?

1. Attempt to verify the workability of the access settlements algebra operating on top of real world
    - By building a model as close as possible to our real settlements data
  2. Considering the outputs of the above, postulate and test changed bidding incentives.
    - More efficient dispatch?
    - More reliable hedging?
- Dispatch and Training Simulator
    - Power system model tied to NEMDE model
      - Intricate (and inflexible)
    - Select historical congestion events and study AS results



- TFR AS design prototype required further refinement
  - Access definition by station or unit?
  - Dispatch or settlement metering?
  - Loss factors handling
  - Constraint violation
  - 5 versus 30 minute settlement
  - Marginal prices below price floor
  - Price over-ride market conditions
- These matters explored with AEMC
  - Some resolved in AEMC interim report
  - Aiming for clarification of others by end 2014
    - Seeking external views on these matters

# RE-RUNNING EVENTS PROGRESSING SLOWLY



- Simulator backcast (much) less volatile prices...????
  - Possibly due to removing meter noise & non-conformance
- Recent NEM history reviewed for events where AS would change behaviours
  - Start with simple constrained-off/floor-price bidding events
    - Numerous recent rapid rebidding events with sudden and major changes of flows, prices and dispatch
  - But all have been complicated by other issues
    - Portfolio positions around a network loop
    - Withdrawal of critical constrained on generation
    - Last minute rebidding
    - Re-bids related to thirty-minute settlement
    - Non-scheduled generation
  - These matters outside the scope of access settlement to address



- Submissions due 4 Sep
  - Do you have a view on the AS design issues that have emerged?
    - E.g. loss factors & 30 minute settlement
  - Please suggest some recent events we could study
    - “clean” of these complications
  - How can we remove these complications from the incentive issue being tested?
    - Is a ceteris paribus model really possible?

<http://www.aemo.com.au/Electricity/Market-Operations/Optional-Firm-Access>

