

Possible Scenarios

THE FUTURE OF THE AUSTRALIAN ENERGY MARKET

Case studies

AUSTRALIA

- 220 TWh per year
- 30 GW peak (NEM)
- 21% renewable: bioenergy, hydro, wind, small & large scale solar
- Regional market for energy, ancillary services, interregional settlement residues
- Governance: COAG EC, SCO, ESB, AEMC, AER, AEMC, ACCC

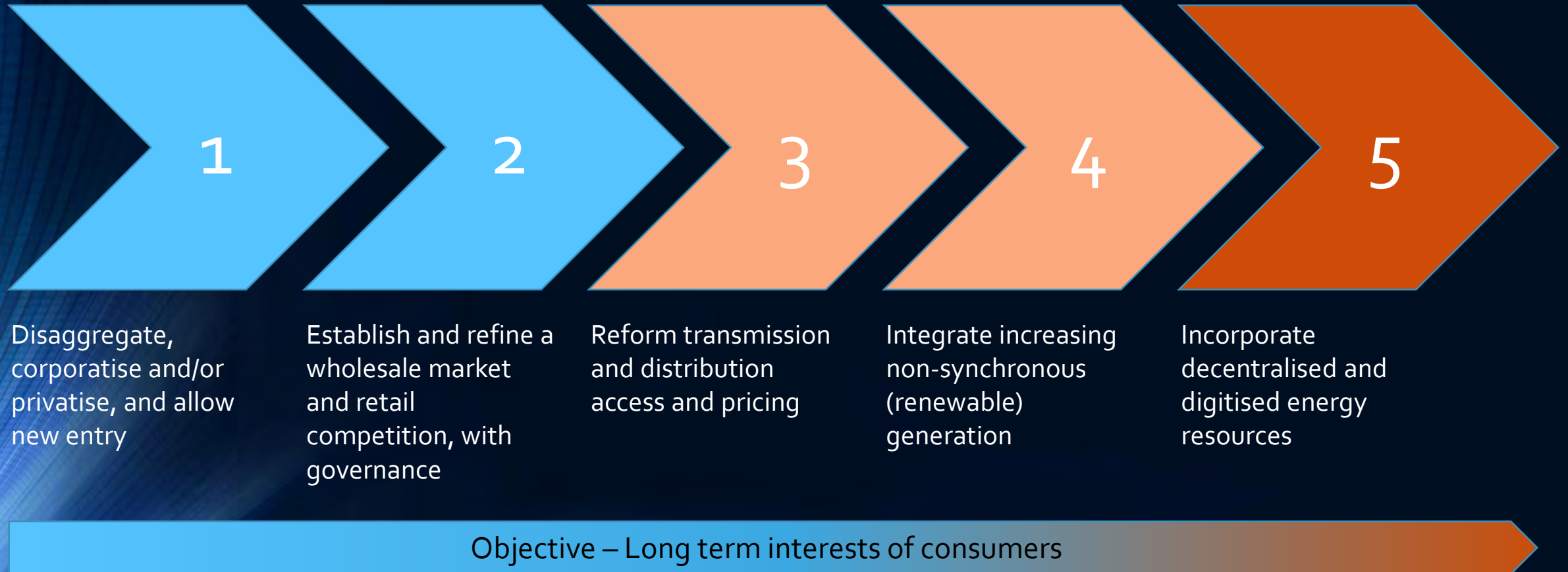
NEW ZEALAND

- 40 TWh per year
- 9.5 GW peak
- 83% renewable: hydro, geothermal, wind
- Nodal market for energy, frequency keeping, reserve, financial transmission rights
- Governance: Minister, MBIE, Electricity Authority, Commerce Commission

IRELAND

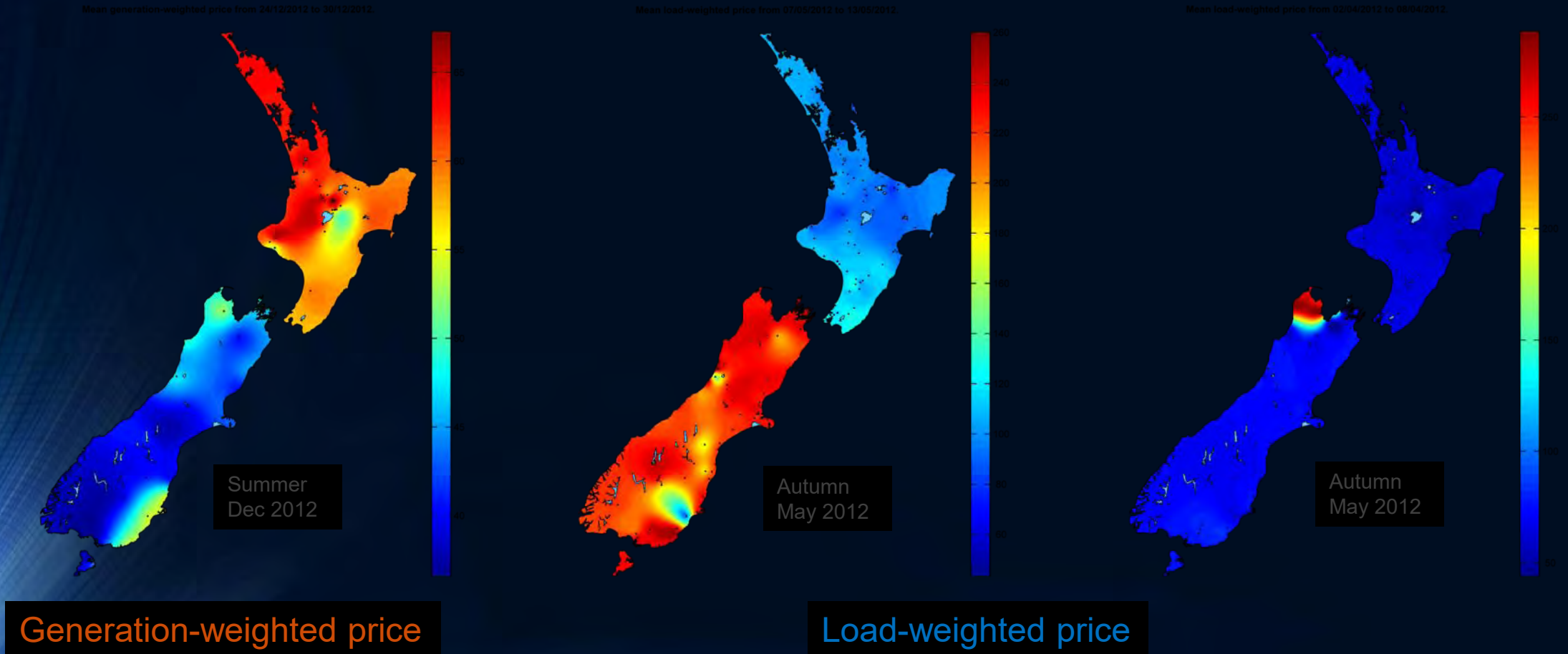
- 30 TWh per year
- 6.5 GW peak
- 40% renewable, mostly wind
- Single market for energy, capacity and 14 system services
- Governance: 2 Ministers; 2 departments, EU directives, CRU, CEER, ÉirGrid, OFGEM

The jobs to be done



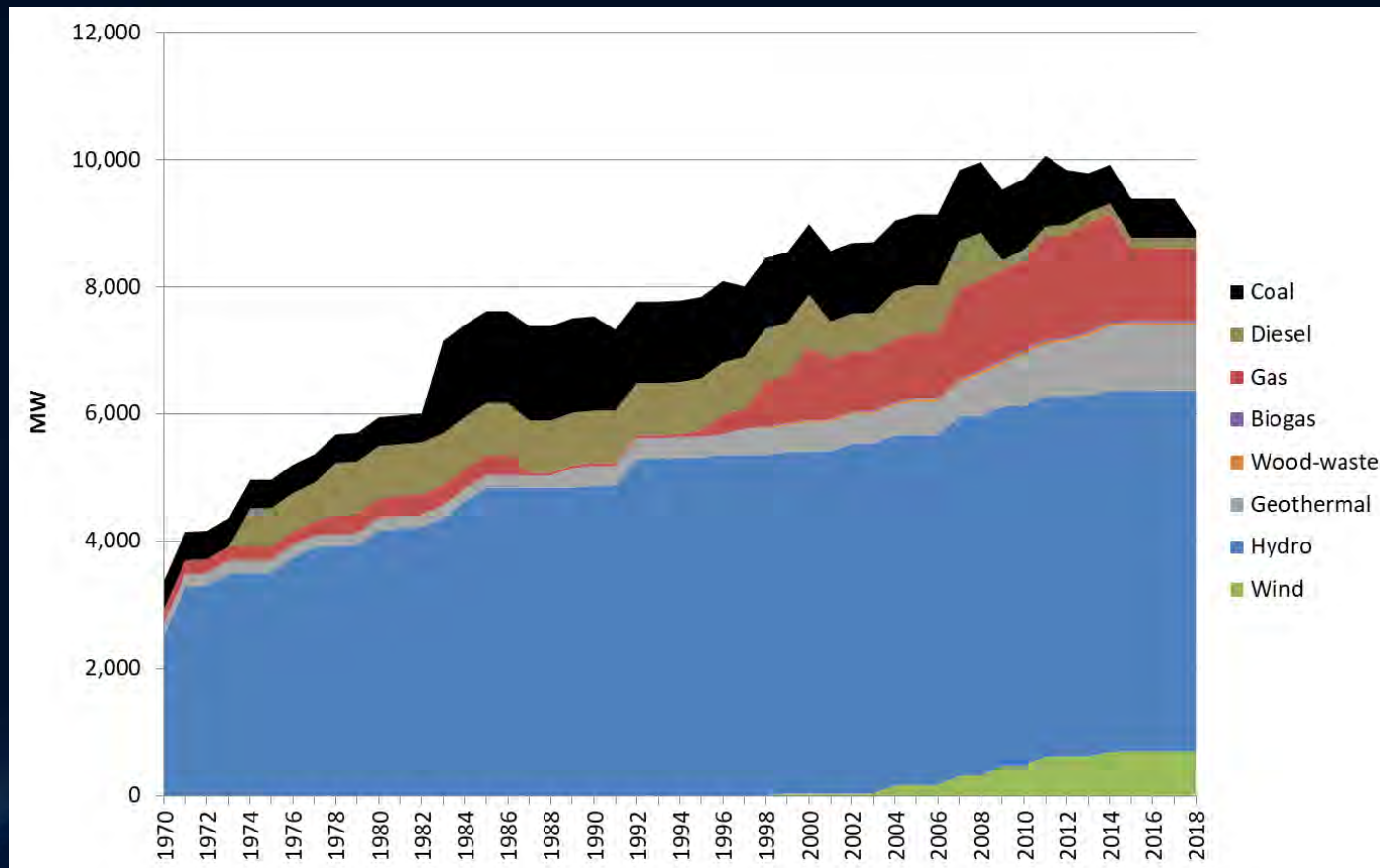
2. Establish and refine a wholesale market and retail competition

New Zealand went nodal



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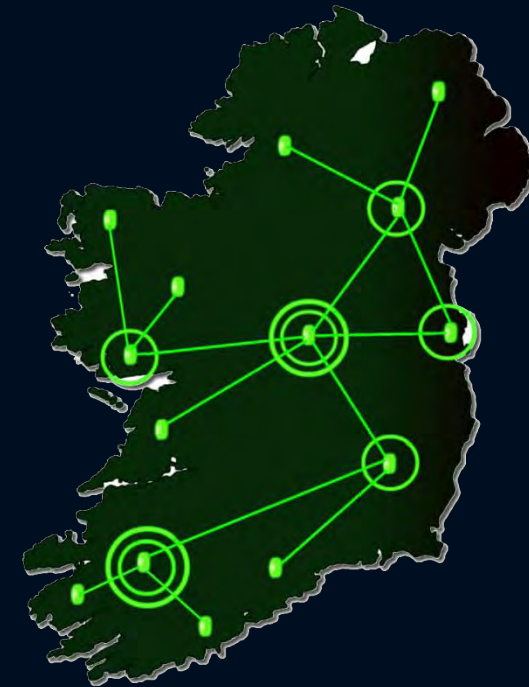
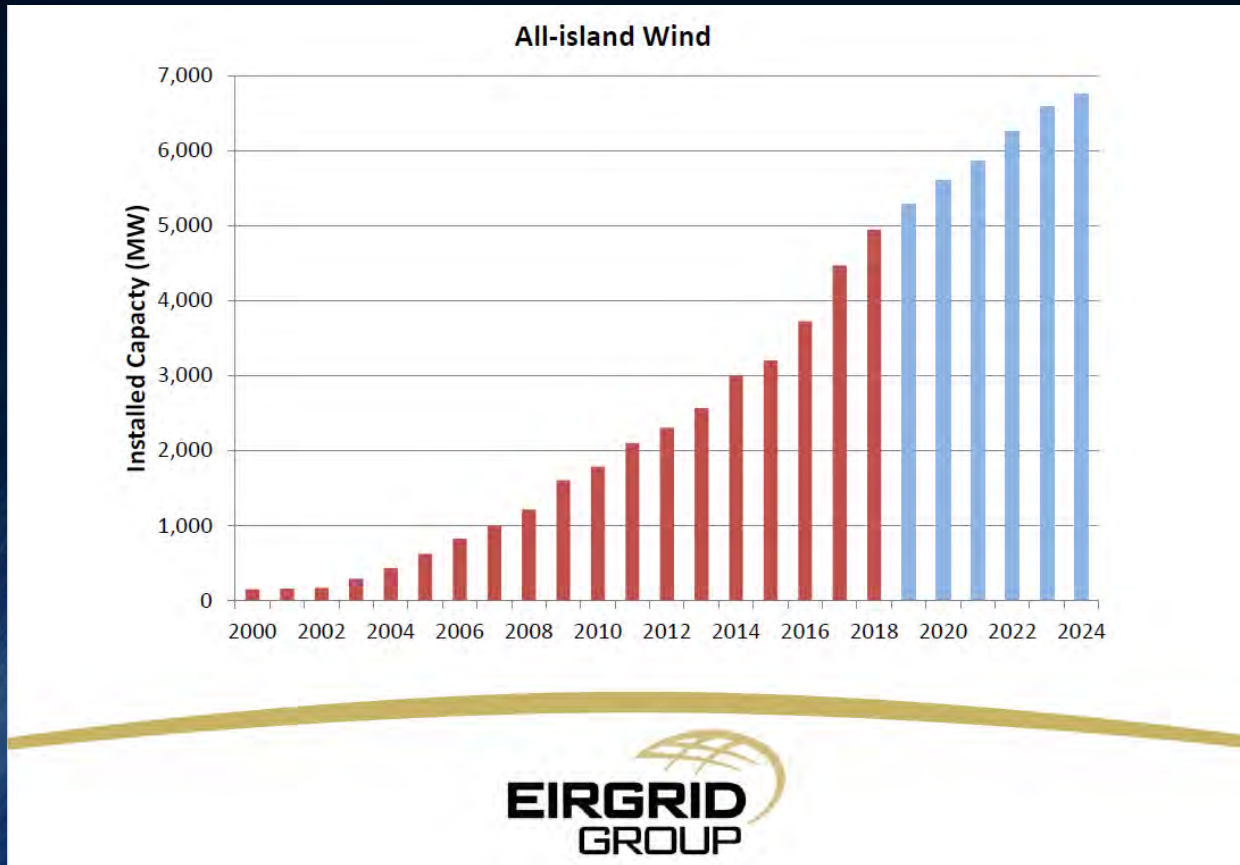
New Zealand went nodal



Wholesale market
commenced in the
late 1990s

4. Integrate increasing non-synchronous (renewable) generation

The island of Ireland is making good progress

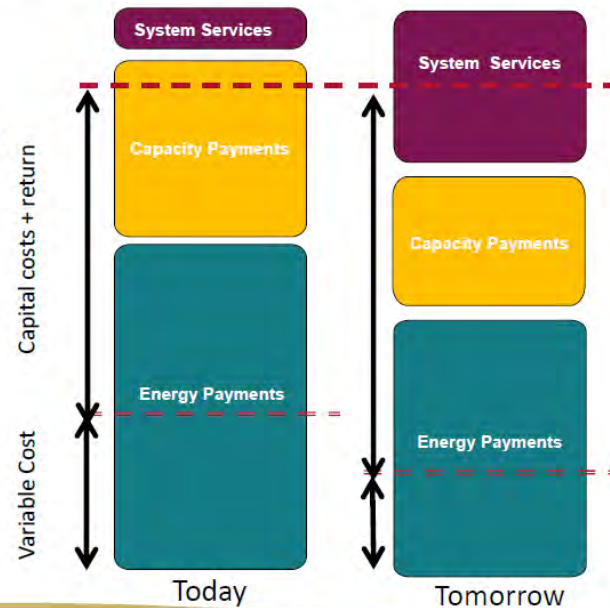


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Changing the Market Design for investment

- Financial Mix will move to higher capital lower variable cost technologies
- Incentivise performance to obtain the plant mix that matches the system requirements and achieves the policy objectives



Australia has several things going on at once

DELAYS DEVELOPING MARKET

- Price rises correlate with distrust of business
- Design of the retail market, the measures of success
- Transmission and distribution access and pricing, landing an outcome
 - Integrated System Plan
 - COGATI
 - Regulatory Investment Test
- Integration of non-synchronous (renewable) generation, maintaining security
- Post 2025 project

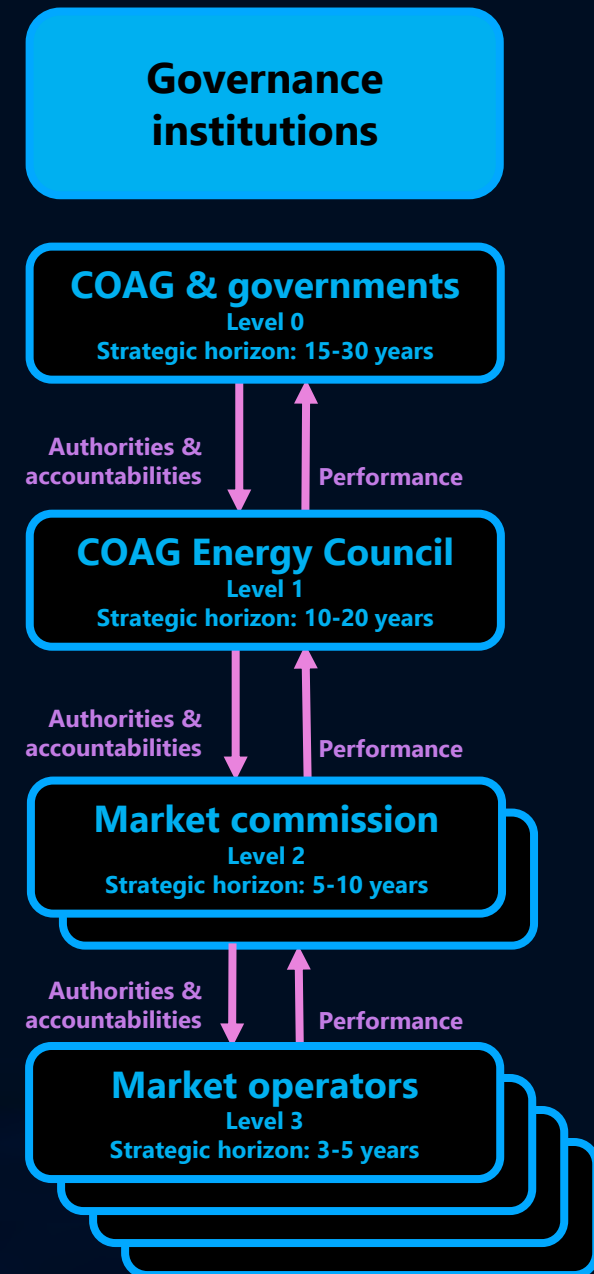


GOVERNMENT INTERVENTION

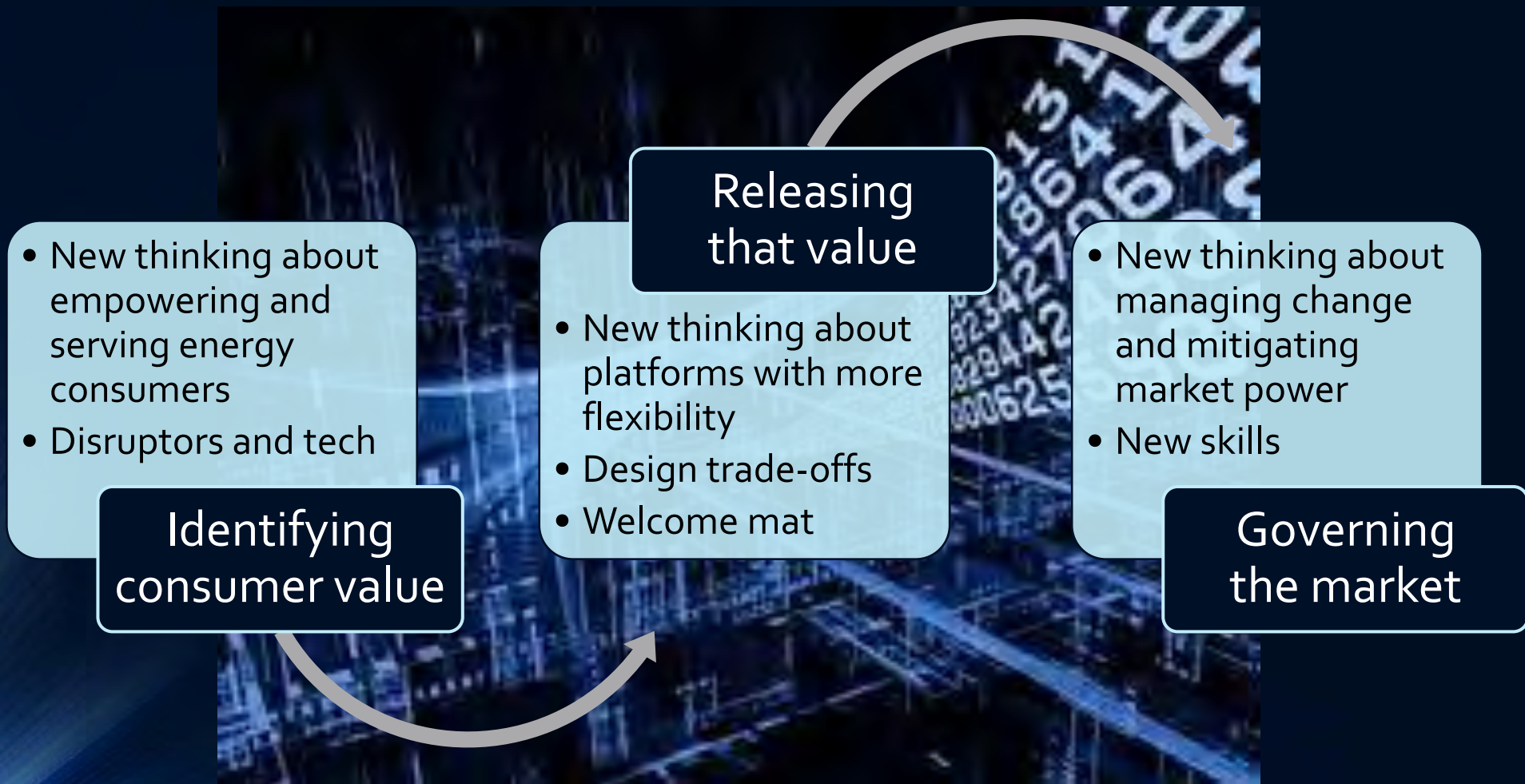
- Consumers and government are disillusioned with the market
- Commonwealth and State governments directly intervene:
 - Carbon targets
 - Default offers
 - Big stick
 - Snowy 2.0
 - Thermal plant closures
- Energy Council governance to be replaced by bilateral deals.

Let's talk about a governance

- Small number of governing entities with clear accountabilities and the necessary authorities and resources, with greater transparency
- Valuable role for Government who holds the ultimate accountability for outcomes of the market
- Functional decision-making and operations delegated to independent expert entities
- Accountabilities align with the strategic horizon on an entity with no overlaps or gaps
- Integrated mechanisms for managing change: both strategic and incremental



Elements of future scenarios



Thanks