Energy Market Structures for the UK

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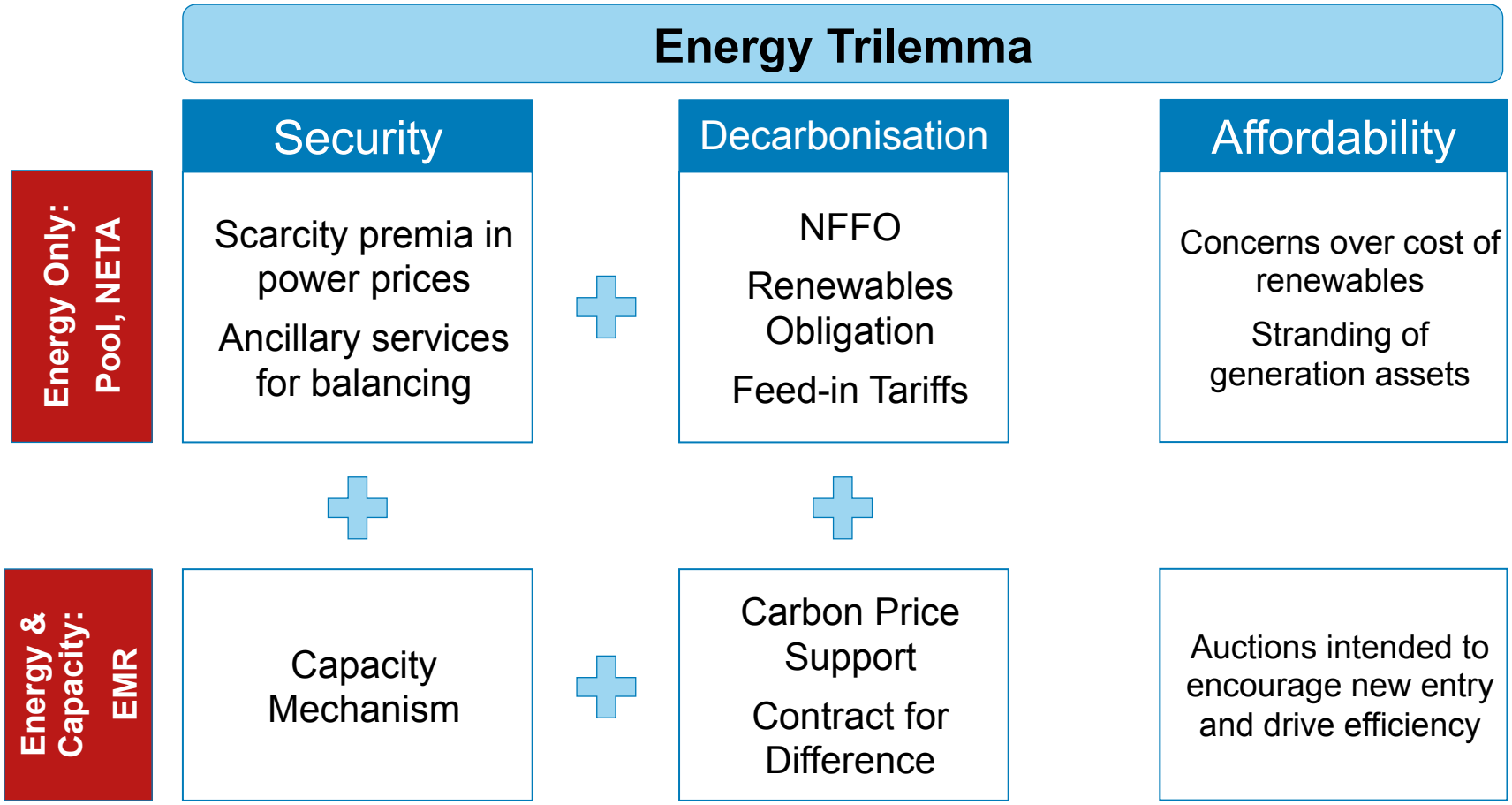
Electricity markets structures have always been tailored to delivery policy aims



Piecemeal design has lead to inconsistencies, unintended consequences and perverse incentives

Carbon Price Support

- Encouraged imports, further stranding existing generation assets and impacting UK competitiveness (heavy industry, manufacturing, etc…)
- Now frozen until end of decade; government appears uncertain on how to proceed

Contract for Difference

- Design and funding justified by Government's assumptions of ever-increasing gas prices feeding onto power price
- However, new structures have put downward pressure on power prices, increasing reliance on government support, which in turn puts constraints on government's budgets and ability to fund those future low carbon projects

Capacity Mechanism

- Technology-neutral auctions designed to fulfil capacity at least cost
- However new entrant of choice currently small-scale reciprocating engines operating outside the market, running to capture embedded benefits and suppressing the very price signals they were trying to incentivise

But market structure is more than just wholesale energy, renewables support & a capacity mechanism

Network costs

- Increasing network investments and current charging structures are driving a move from centralised to embedded / behind-the-meter new build
- Risks vicious circle of stranding assets, reducing charging base, and increasing costs that incentivises more embedded generation, further stranding assets…
- **Transmission:** changing balance of investment drivers (renewables integration vs. peak demand) not reflected in NGC's charging structures
- **Distribution:** blunt charging structures could create perverse incentives for behind-the-meter storage

Balancing Services

- Role of balancing services predicted to change radically as renewables integration both increases need for balancing and reduces viability of balancing providers in wholesale market
- Cost of services may need to rise to compensate for value destruction in traditional markets
- NGC trying to insulate themselves by encouraging new providers, e.g. demand-side, and create new products, such as EFR, that fit with capability of those new providers

Interconnection

- Cap-and-floor regime underwriting interconnector investment could allow new entry into the Capacity Mechanism as investors seek to optimise returns across revenue streams
- Could discourage new CCGT investment and foreclose market for flexible generation without proper competitive drivers being applied

Where do we go from here?

Participants will always optimise across value streams so value streams need to be aligned to ensure goals are achievable

- Market structures should be robust against continued growth of zero marginal cost plant, and be able to accommodate new technologies such as storage
- Network cost recovery needs to change to avoid perverse incentives
- New provision of transmission balancing services will require DNOs to transition towards DSOs