Increasing Renewable Energy Uptake through Auctions

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OUR APPROACH

- The world needs to produce more energy with fewer greenhouse gas emissions if global society is to meet its development and environmental goals.

- Achieving these goals will require significant shifts in the way the world produces and uses energy over the course of this century.

- Shell’s long-term success relies on our ability to provide much-needed energy and related products in a way that is commercially competitive as well as socially and environmentally responsible.
Electricity currently makes up 20% of final energy consumption and that figure could increase to as much as 50% by 2060. To help meet this demand, Shell aims to make electricity a significant business.

**Supply and generation**
- Wind, solar, and selected gas and storage assets
- Third-party offtake agreements to buy power
- 15+ years of experience in wind power
- Interests in wind farms with potential to generate over 5GW once fully built
- Solar generation capacity – operating and signed – of over 1.6GW through our Silicon Ranch and Cleantech Solar platforms
- 10K+ megawatts of managed power generation capacity in North America with 1/3+ from renewables

**Optimisation**
- Leverage portfolio flexibility and arbitrage opportunities
- Power trading in 20+ countries
- Analysing intermittent supply and demand

**Customers at the centre**
- Commercial, industrial and residential customers
- Innovative behind the meter solutions focused on energy efficiency and flexibility
- Electric vehicle infrastructure for charging flexibility
- On-site generation and storage solutions
Auctions are seen as a pathway to cheaper sustainable energy

- A large number of countries are turning to auctions for introducing renewables to their energy mix.
- Whilst traditionally generation capacity has been auctioned, there are some pathfinder nations auctioning for storage solutions as well.
- This push for more renewables comes as a consequence of countries wanting to benefit from the declining cost of renewables.
- Some of the critical factors that contribute towards a good auction design include:
  - Transparency of process
  - Clarity of participation rules and RES legislation
  - Barriers of entry for non-serious players and reward for serious developers
  - Capacity targets
  - PPA terms
  - It helps to have a multilateral institution back the auctions
- However, auctions alone do not guarantee a successful renewable energy programme.
ORGANIZING SUCCESSFUL AUCTIONS IS JUST ONE PART OF THE SOLUTION

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5 = Highly attractive       1 = Unattractive / high risk

Assessment of RE tariff

Benchmarked against global RE auction results in year of auction

Extract from Shell’s 2018 Kazakhstan RES white paper by Navigant Consulting