ELECTRICITY MARKET REFORM - WHITE KNIGHT OR HORSEMAN OF THE APOCALYPSE?

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- Statkraft is Europe’s largest generator of renewable energy
- Hydropower, wind power, gas power and district heating assets.
- Statkraft in the UK owns and develops on and off shore wind and hydropower assets and is the market leader independent long term PPA provider
  - Over 1250MW under contract
  - ROC and CfD Off-take contracts
The Feed in Tariff Contract for Difference (FiT CfD) will replace the Renewable Obligation (RO) as the primary support mechanism for large scale renewable/low carbon generators.

The FiT CfD is a long-term contract which remunerates low carbon generation at a defined strike price. The generator is expected to sell its output into the wholesale electricity market and receive a portion of its revenue from this. In addition, the generator may receive (or pay) top up payments between a defined electricity market index (the market reference price) and the strike price.

If the wholesale market reference price is below the contract strike price, then the generator receives a difference payment and if the reference price is above the strike price, the generator makes the difference payment.
Capture values under RO and CfD PPAs

- **RO PPA** discounts cover forward curve volatility, within day re-trading, imbalance and transaction costs.
- **Floor prices** mitigates market price downside risk

- **CfD PPA** discount includes “Basis Risk” (within day re-trading risk and imbalance costs), transaction costs and price negative price provisions
CfD Basis Risk

- Basis risk exists from day one, however, success of EMR in delivering renewables will drive up basis risk
  - Within day trading (from confirmation of reference price to Gate Closure)
  - Imbalance
  - Negative Prices

- Price the risk now or take it on later?
Basis Risk Management

Imbalance
Re-trading Risk
Off-taker of Last Resort and the Back-stop PPA

- CfD-FiT ambitions are to encourage a vibrant competitive PPA market
  - One major flaw – what if nobody offers a route to market

- Introduction of the concept of an Off-taker of Last Resort (OLR) and a default (Back-stop PPA) to address market failure and off-taker insolvency risks
  - 6-12 month PPA at a known discount to the Strike Price (£25/MWh)
  - Big Six will be mandatory providers, other suppliers can enter the process
  - 6-8 week window to obtain a Back-stop PPA – process run by Ofgem
  - OLR providers will bid a Management Fee (+ or -)

- OLR provides a floor to CfD PPA discounts at £25/MWh (c.a. 25% discount) but clearly has a massive impact on debt sizing capacity
Debt Sizing and Risk Under CfD PPAs

Price

Short term route to market

CfD Strike Price
Long term route to market
Back-stop PPA

Debt sizing (Equity return) grey area

Time
CfD Settlement Process

**Generator settlement**
- Billing Periods – daily
- 7 business days after Billing period – issue of Billing Statement
- 5 business day after receipt of Billing Statement (12 days after Billing Period in total) generator pays any money owed to the CfD counterparty (ref price above strike price)
- 28 calendar days after the Billing Period counterparty pays the generators top ups against metred generation (ref price below strike price)

**Supplier settlement**
- Billing Period - daily
- 5 business days after Billing period – CfD counterparty receives settlement data.
- 2 business days after receipt of data - issue of invoice (7 business days after Billing period in total)
- 5 business days after receipt of invoice suppliers make payment (12 business days after billing period in total), plus a possible 2 business day rectification period (14 business days after billing period in total).

Timing difference between supplier receipts and generator payments creates natural reserve
Structurally a CfD PPA will look very similar to a ROC PPA
- References to CfD legislation and processes
- Eligibility
- Termination provisions and cross default
- CfD Counterparty Credit
- Settlement
- Negative Prices
- Ancillary Services
Discussion Points

- Can projects be funded under a CfD
- PPA term and debt sizing
- Settlement and Settlement Agents – cash flow management
- Negative Prices and Ancillary Services
- Off-taker of Last Resort
- Reporting
THANK YOU