



Green
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Pioneering Green Investment

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Dedicated Green Investment Platform



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The Green Investment Group was created following the integration of the Green Investment Bank with Macquarie Capital's renewables team to create one of the world's largest team of specialist renewables investors



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A committed green investor

- Europe's largest specialist green energy investor, capital provider, asset manager and adviser
- A roster of **70+** experienced professionals with commercial, technical and financial expertise

Committed to investing in the low carbon economy, across all technologies:



Development | Construction | Operational | Equity | Mezzanine Debt | Asset Management | Advisory

Targeting £3 billion of new investments over the next 3 years

The PPA Trilemma



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Offtakability

Does the PPA solve the offtaker's sustainability, brand and/or hedging goals without introducing undue complexity or risk into the offtaker's energy procurement portfolio?



Bankability

Does the PPA provide enough protections for the lenders to ensure that their business case for providing debt to the project is secure?



Investability

Does the PPA provide a sufficient rate of risk-adjusted return for the investor?

Key PPA Terms



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Key issues to negotiate for your own OBI (Offtakable, Bankable and Investable) PPA?

01 **Tenor:** When does the PPA start, how is “start date” defined and how long is the PPA?



02 **Price:** Is the price fixed or market-based? Inflation-linked? Are risks capped or unlimited?



03 **Volume and Profile:** How much of each commodity is trading hands, and when? Physically?



04 **Termination Events and Payments:** Just in case, what happens in case of termination?



05 **GoO inclusion:** How is the renewable component of the energy priced and managed?



06 **Security packages:** How do all stakeholders ensure that they are not left empty-handed?



Typical PPA Structures



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PPA Volume and Profile Structures



Pay-as-produced volume and profile

An agreed percentage of production is sold by the producer to the offtaker. The offtaker pays according to the agreed pricing structure regardless of how much energy is produced or when it is produced.



Fixed volume and profile

An agreed volume of energy is sold and delivered by the producer to the off-taker at a pre-agreed time. The producer may have to use the spot market to purchase energy for delivery in times of low production.



P-a-P volume but fixed profile

An arrangement whereby the offtaker buys an agreed percentage of production over an agreed period of time, but it is the producer that carries the "cannibalisation risk" over the life of the PPA.



Fixed volume but P-a-P profile

The project delivers a pre-agreed volume of energy, but the delivery is spread out over an agreed period of time in accordance with the actual production profile. The offtaker carries the "cannibalisation risk" but not the production volume risk.



Fixed price

A fixed price is agreed per MWh. This can either be indexed or kept flat on a nominal basis.



Floor pricing

A floor structure guarantees the producer a minimum price, whilst maintaining the upside potential to sell at market prices above the floor. This flexibility usually comes at a fixed cost per MWh or some upside sharing with the buyer.



Collar pricing

A collar structure also features a price floor for the producer, but rather than charging a fixed cost for the provision of the floor, there will be a cap on the upside of the merchant price range.

Pricing Structures

All combinations can be OBI, but not for every offtaker, bank or investor.

Markbygden ETT Wind Farm Case Study



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Green Investment Group acted as development partner and 50% equity investor on the acquisition and financing of the Markbygden ETT 650MW wind farm in partnership with GE

- 179-turbine onshore wind farm with an installed capacity of 650MW located in Sweden
- Project developed by Svevind, is fully permitted and early construction works are ongoing
- Strong wind resource with over 13 years of data
- GE Renewables to supply turbines in a 27 month construction period and provide a 20 year turbine O&M agreement
- Long-term 19 year corporate PPA with a blue chip Norwegian industrial company
- Green Investment Group and GE partnered with Svevind in June 2016 to complete project development, finalise project agreements and raise third party capital



SCALE

Largest onshore wind development in Europe.



INNOVATIVE FINANCING

Unique lending structure, with long-term maturity and low cost of debt that maximises equity value.



CORPORATE PPA

19 year corporate PPA and innovative structured floor solution on green certificates provide higher contracted revenue than other Nordic projects.



Contact details



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