



CORPORATE RENEWABLE
POWER PURCHASE AGREEMENTS:

EFFECTIVE CORPORATE ENGAGEMENT

A Guide for Renewable Energy Generators

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As three organisations that are dedicated to growing renewable energy capacity, Scottish Renewables, Schneider Electric, and Brookfield Renewable partnered to develop a set of guides, intended to help facilitate the uptake of offsite corporate renewable power purchase agreements (PPAs) by energy buyers of all sizes. Corporate sourcing of renewables is already taking place in over 75 countries and, as of 2017, corporates have actively sourced 465 terawatt-hours (TWh) of renewable electricity globally.

Companies from diverse geographies and industries are entering this market at a rapid pace, meaning the need for education and awareness of opportunities and recommended strategies has never been greater. To accelerate the deployment of renewable energy capacity, corporate energy buyers and renewable energy suppliers alike must understand the benefits and risks associated with entering the PPA market.

This guide provides definitions, considerations, recommendations and examples tailored specifically to support renewable energy generators in understanding the unique needs of the corporate buyer in order, to help developers more effectively engage with this new league of customers.

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Executive Summary

Worldwide, renewable energy generators are entering into offsite Power Purchase Agreements (PPAs) with corporate entities thanks to the falling price of renewable power. In the UK, this market is set to grow, enabling corporate entities to lock in energy prices at value when compared with today's energy market prices. Following changes to government support for renewable technologies, several project developers are seeking to go to market on a merchant basis. Interest in corporate buyers has risen, as securing a corporate buyer can provide a long-term, stable, revenue stream.

Securing a corporate energy buyer is not, however, entirely straightforward, particularly as the UK market remains young and patterns of engagement between both parties have not yet been established.

This short paper is designed to help renewable energy producers better engage with corporate energy buyers and overcome common challenges in setting up a corporate offsite PPA.

The Business Case

When considering a corporate renewable offsite PPA, it is important to understand the motivations of both parties.

THE BUSINESS CASE FOR CORPORATE ENERGY BUYERS

- **Potential to reduce costs** – using renewable offsite PPAs, which have now reached price parity in many markets, to achieve cost reduction over traditional supply.
- **Locking in secure energy prices** – providing long-term business certainty and ensuring affordability. Businesses can hedge against price volatility and potential price increases helping with business planning.
- **Reducing environmental impact** – reducing carbon emissions and progressing towards corporate energy and sustainability targets.
- **Green leadership** – supporting sustainable business credentials and Corporate Social Responsibility agendas. Corporate renewable offsite PPAs can give businesses a leadership advantage.

THE BUSINESS CASE FOR RENEWABLE ENERGY GENERATORS

Renewable energy generators also see benefits from entering into an offsite PPA arrangement with a corporate buyer.

- **Secure buyer** – the corporate buyer provides a secure energy offtaker for the duration of the contract, which helps manage project risk.
- **Bankability** – long-term, secure and creditworthy corporates provide predictable revenue streams help to ease bankability with financial institutions. This is essential for the viability of subsidy-free new build renewables.
- **Market development** – as the corporate renewable PPA market matures, and processes become standardised, a new market for selling power will develop.

Corporate Renewable Energy PPA Arrangements Explained

An offsite PPA is a contract between a power generator and a buyer (also known as an offtaker). Energy is purchased by the buyer at a pre-agreed price structure per unit for a set period.

A corporate offsite PPA is where the electricity buyer is a business or company, rather than a utility or the public sector.

This paper focuses on corporate renewable offsite PPAs, where the energy is purchased from either existing or new-build renewable energy sources.

Offsite PPAs can be structured in several different ways. Some of these are outlined below. The most appropriate offsite PPA structure will depend on various factors, such as local regulation and the corporate buyer's energy strategy.

SLEEVED/PHYSICAL STRUCTURES

In many cases it is impossible to create a physical connection to the buyer. In these circumstances the generator can appoint a third party (a licensed utility or market participant) to deliver the power from the source. This is known as sleeving.

SYNTHETIC/VIRTUAL/FINANCIAL STRUCTURES

Some offsite PPA models go one step further and use financial structures to replicate the economic effect of a sleeved PPA. This can be effective in reducing costs, as sleeving fees are cut. These structures are known as synthetic, virtual, or financial PPAs.

PRICING STRUCTURES

There are several different pricing structures available across distinct types of corporate offsite PPAs, and these differ depending on whether energy is being purchased from an existing or new build asset and the corporate buyer's strategy.

The most common structures are Fixed-Price and Discounted to Market PPAs.

For Fixed-Price arrangements, the generator and buyer agree upon a fixed PPA price for the duration of the contract. This PPA price is then net settled against the wholesale market power price, with any fluctuations created by this difference being issued as credit or an invoice to the buyer.

For Discounted to Market PPAs, the PPA price is linked to the wholesale power price or an index price with a set percentage or nominal amount below the price. A price floor is set to guarantee a minimum PPA price for the generator.

Effective Corporate Engagement

PROMOTING THE BENEFITS OF RENEWABLE ENERGY

Valuable drivers for corporates entering the offsite PPA market are the green credentials brought to their brand and reputation by supporting renewable energy. Corporates are also using renewable energy to reach carbon reduction goals, many of which have been set publicly as part of COP21 initiatives or science-based targets. It is therefore important that the full spectrum of socio-environmental benefits associated with renewable technology is made clear to potential buyers.

Entering offsite renewable PPAs with well-known corporate entities can also be beneficial to the renewable generator's image.

Buyers will require appropriate assurance that the energy they procure is renewable. Developers should expect to provide certification and evidence. The needs of the buyer should be considered carefully at the outset.

SPEAKING IN CORPORATE LANGUAGE

Most large corporates will be involved in the energy market in terms of procurement strategies and price forecasting, but their approach will be very different to that of renewable energy generators and developers. It is important therefore to use neutral terminology understood by both parties.

LONG-TERM CONTRACTS & POWER PRICE FORECASTS

The majority of offsite PPAs are long-term arrangements, offering price security for at least a ten-year period. For some businesses, this makes a PPA the longest contract they will enter into, so renewable energy developers should expect to negotiate a contract length suitable for both parties. Corporates may be hesitant to enter such a long contract without assurance on the project's economic risks and performance expectations.

Ahead of entering a PPA, developers must also consider their view on the long-term price of power to understand the economic impacts of a corporate renewable PPA.



FINDING SUITABLE CORPORATE BUYERS

While the market for corporate offsite PPAs is growing, market first-movers have been large, multinational businesses, and thus the pool of buyers remains relatively small.

Similarly, as corporates are likely to be risk averse, they may only look to procure a portion of their annual electricity usage through a PPA model, limiting revenue for renewable generators.

Market development shows that offsite PPA structures involving multiple buyers are becoming more common, with smaller corporates “clubbing” together, sharing risk and entering into the market as a consortium. Similarly, there have been arrangements where buyers and utilities, or even the public sector, have entered an agreement.

While large corporates make up most of the market at present, renewable energy developers would be well advised to think about a wide range of potential buyers, from local community installations through to energy intensive sites and industries which may benefit from securing a long-term energy supply.

CHOOSING THE RIGHT BUYER

Though the market may present limited options, the profitability of a project will be determined by the credit rating of the corporate buyer. It is important that projects are bankable, and that PPA arrangements are attractive to lenders.



CASE STUDIES:
Royal Philips
Corporate PPA
Pioneer

Royal Philips was one of the first non-data centre companies to utilise PPAs. The company announced a major step to meeting its 2020 carbon neutrality goal in 2015 when Philips North America signed a 65 MW offsite power purchase agreement for electricity from a wind farm in Texas, used to power its North American operations with 100% renewable energy while positively impacting the bottom line. Philips' decision to use a PPA to advance this goal was simple: it's a solution that reduces the environmental impact of its operations and improves human well-being in a way that drives business value.

Philips has further advanced its renewable energy goals in Europe by joining with three other companies to form the Dutch Wind Consortium. In 2016 and 2017, the Consortium executed two Dutch PPAs for a total of 140 MW. Power from those projects began to be delivered to Dutch operations in early 2018.

Today, the company is exploring additional PPA opportunities in the hopes of replicating this success and advancing its green energy agenda.

Kennoxhead
Subsidy Free
Wind Development

The trend towards declining or zero subsidy availability for new renewable energy operations has dramatically changed the way renewable power developers approach routes to market for new build onshore wind. A viable commercial route to market is an increasingly important factor in ensuring that new developments have the bankability required to build out.

Coinciding with the decline of government supported subsidies, however, is a dynamic and accelerating trend of corporates contracting renewable power directly with generators. As such, renewable power is on the cusp of breaking through into a new subsidy-free world. Corporate offsite PPAs allow corporate offtakers to stabilise their energy costs at a value below current electricity market prices as well as potentially supporting the corporate's own sustainability goals.

Brookfield's 112 MW Kennoxhead wind development project in Scotland is an example of what this new renewable power partnership between power generators and corporates will look like. The project is planning consented and has contracted grid connection in place. Kennoxhead also benefits from valuable local support from neighbouring community groups. Following the closure of the community's Glentaggart coal mine in 2011, they have embraced the move away from fossil fuels and are actively working with Kennoxhead to help secure a more sustainable future.

Brookfield Renewable is currently engaging with interested corporates on securing a route to market for Kennoxhead. Upon completion, the wind farm will revolutionise the sector and provide 330 GWh of 100% truly additional green energy to the UK market.



About Scottish Renewables

Scottish Renewables is the voice of Scotland's renewable energy industry. Our vision is for Scotland leading the world in renewable energy.

We work to grow Scotland's renewable energy sector and sustain its position at the forefront of the global clean energy industry. The industry we represent delivers investment, jobs, social benefits and reduces the carbon emissions which cause climate change.

Our members work across all renewable energy technologies, in Scotland, the UK, Europe and around the world. In representing them, we aim to lead and inform the debate on how the growth of renewable energy can help sustainably heat and power Scotland's homes and businesses.

To be part of our business community and help Scottish Renewables shape our work on your behalf join us as a member today.

www.scottishrenewables.com

About Brookfield Renewable

Brookfield Renewable is one of the world's largest renewable platforms, with an installed capacity of more than 17,000 MW across five complementary renewable technologies (hydro, wind, solar, distributed generation and storage). Brookfield Renewable is the flagship listed renewable power company of Brookfield Asset Management and is on the New York and Toronto stock exchanges. Operating across 25 power markets in North America, Latin America, Europe and Asia, our 2000+ employees combine a global presence with unique local expertise and partnerships in the communities where we live and work.

Our UK and Ireland wind portfolio has an operational capacity of approximately 400 MW with a development pipeline more than 1 GW. Our in-house development and operations teams are experienced in managing renewable power projects at every stage of the development life cycle, while our trading and power marketing teams work with corporates to develop flexible, customer focused, renewable power solutions with the ability to provide various terms, shapes, and volumes; competitively priced, without exposure to fossil fuels.

Contact us for more information about how Brookfield Renewable can help you achieve your sustainability vision. www.brookfieldrenewable.com Email: uk@brookfieldrenewable.com

About Schneider Electric Energy & Sustainability Services

Schneider Electric's Energy & Sustainability Services helps thousands of companies in more than 100 countries buy energy smarter, use energy more efficiently, and drive sustainable growth.

ESS' Renewables & Cleantech team is a pioneering global supplier of renewable energy and clean technology products and services—including the New Energy Opportunities (NEO) Network™—for the C&I sector. For more than 15 years, the team has been providing unparalleled experience and expertise on strategic renewable energy procurement. The ESS team has advised on more than 4 GW of new wind and solar capacity and is the recognized global leader in cleantech consulting, serving more clients than any other procurement advisor, worldwide.

[Contact us](#) to learn more about how strategic renewable PPAs can accelerate your energy goals.

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