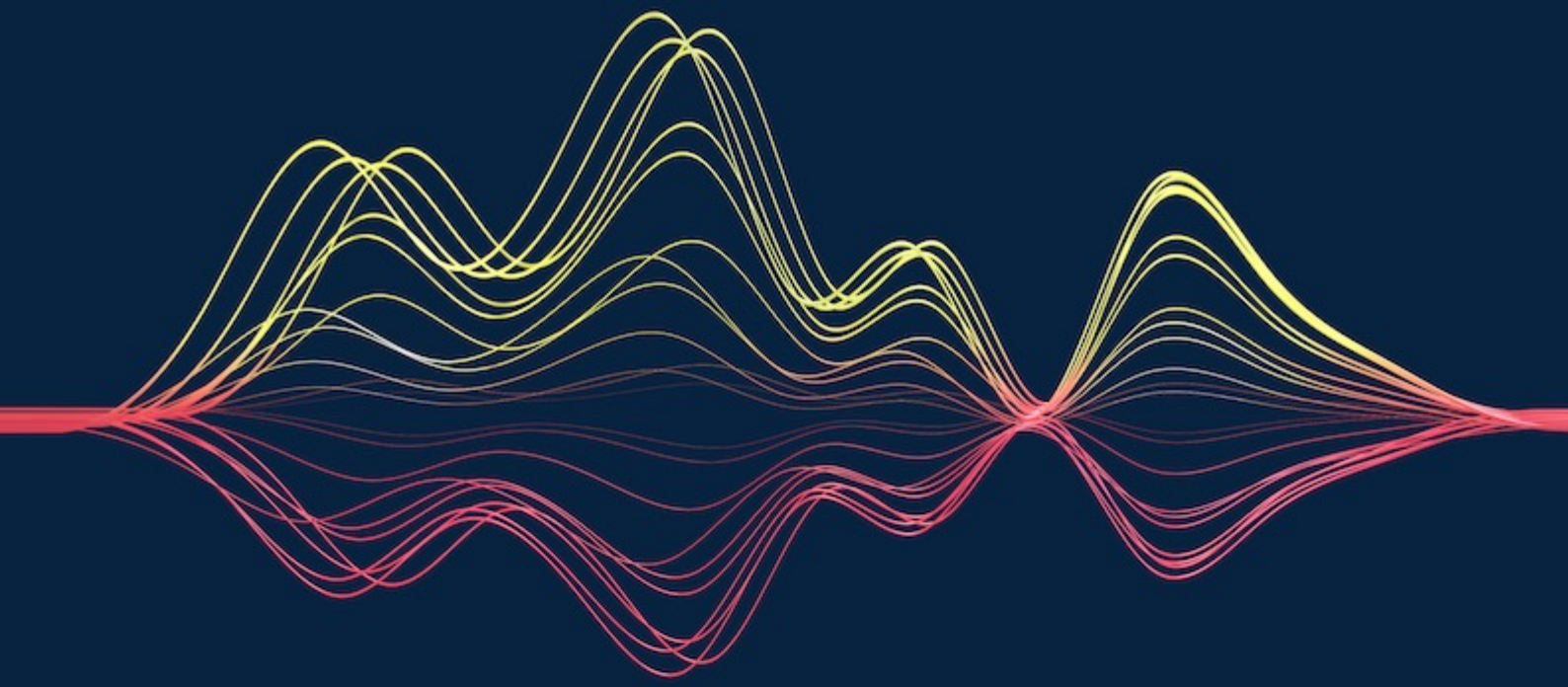
UNITED KINGDOM

Corporate Power Purchase Agreements



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PPA structures and parties involved

To what extent are corporate PPAs presently deployed and what sort of structure do they take?

Corporate PPAs have become more prominent in recent years due to the rise of wind and solar in GB and the convergence of a number of market conditions. The closure of the Renewables Obligation (RO) scheme to new participants from 31 March 2017 has meant that generators are seeking alternative financing options. Corporate PPA prices are increasingly beating wholesale electricity prices. cPPAs have become an attractive prospect for corporate buyers who increasingly want to be seen to be acting sustainably. cPPAs offer corporates a hedge against future volatile power prices by securing a fixed energy price for a fixed period. Major corporates in the GB Corporate PPA market now include Shell, M&S, Unilever, Sainsbury's, Nestle, McDonalds, Lloyds and HSBC. In addition to this, an increasing number of corporates are becoming members of RE100, a group of companies that have pledged to work towards meeting 100% of their energy needs from renewable sources.

The electricity and gas markets in GB are regulated by the Gas and Electricity Markets Authority (GEMA), operating through the Office of Gas and Electricity Markets (Ofgem). Ofgem makes decisions on a wide range of regulatory matters, including price controls and enforcement. The regulatory framework and the aggregated nature of the electricity grid meant that the large majority of cPPAs in GB have been concluded using the "sleeved" structure or so-called "physical" PPAs, where electricity is physically settled. Although GB has seen synthetic PPAs, where no electricity is physically delivered, but the price differential between an agreed price and the wholesale electricity price is paid (i.e. financial settlement) (e.g. M&S), this approach has not yet been widely adopted.

The structure of sleeved cPPAs is intended to mitigate risk for the corporate buyer by passing through balancing obligations and liability to a utility. A sleeved cPPA involves a direct agreement between the corporate buyer and the generator to purchase all or some of the electricity generated at a pre-determined price. All too often, the corporate does not have the capability to manage the actual power offtake, including necessary balancing services. The corporate buyer, therefore, additionally enters into a bilateral agreement with a utility, who will then act as the corporate's agent in managing the offtake as well as taking care of all balancing services and grid access. This cPPA offtake will be credited by the utility against the corporate's electricity requirements, and the utility will then top it off during any periods where the corporate's demand is higher than the generator's actual output. The utility will charge a management fee for its services in relation to the cPPA called the "sleeving fee".

Do the country's regulators allow corporate owners to purchase (1) directly from a facility, or (2) from a choice of suppliers?

Ofgem allows both direct and sleeved PPAs as well as synthetic PPAs. Direct PPAs have evolved as a way for corporates to contract directly with power generators for the power produced from one or more specific facilities. A variety of suppliers are active in the GB market, and consumers are free to change supplier with minimal disruption. Under the current regulatory structure, end consumers can only buy electricity from a single supplier. Nevertheless, Ofgem has recently performed a consultation on the option of allowing a single consumer to have multiple suppliers.

Other than the generator and the off-taker, are any third parties commonly party to the PPA structure (e.g. a utility or other market agent)?

Agreements involving third parties are possible. In such PPAs, the third party typically acts as an intermediary between the generator and the buyer (also referred to as an offtaker). The renewable power produced by the generation site is not directly delivered to the corporate's demand or consumption location, but through the third party (typically a utility company) on the existing power grid. Since renewable generators (especially wind and solar) cannot guarantee output as it fluctuates with weather conditions, corporates require a "sleeving" arrangement with an energy utility company whereby the supply from the renewable generator is topped up with other energy. This structure provides a stable energy supply and is, therefore, commonly used in GB.

Is a generator permitted to sell electricity directly to an end user? If so, do they require a licence or other form of authorization?

Direct selling is in principle permitted in GB. The activities of generation and supply of electricity, however, require a licence, although *de minimis* exemptions for both are available which may apply to small scale generators.

All licenced generators are subject to the Electricity Generation Standard Licence Conditions (SLC). Exemptions can be granted for on a class or individual basis. Individual exemptions may be granted by the Secretary of State (acting through BEIS) under s 5(1)(a) of the Electricity Act 1989.

Schedule 2 to the Electricity (Class Exemptions from the Requirement for a Licence) Order 2001 sets out four licence exemption classes for generation:

- Class A applies to persons who operate small generators which provide less than (i) 10 MW capacity or (ii) 50 MW where a generation has a declared net capacity of 100 MW;
- Class B applies to persons who generate power from offshore generators, provided that these only supply electricity to offshore installations;
- Class C applies to persons who provide power from generators connected to the grid on 30 September 2000 and are not normally capable of exporting more than 100 MW; and
- Class D applies to persons who do not provide power except from generators connected to the grid on 30 September 2000, provided that the generators are not subject to central despatch.

Challenges

What are some of the technical, political, financial or regulatory challenges to corporations adopting green energy in the short/medium term in your country and how have these challenges been overcome (or how can they be overcome)?

Brexit sheds legal and contractual uncertainties on the future of PPAs in GB. It remains unclear whether the EU Clean Energy Package will be implemented or whether GB will adopt a new regulatory framework. In the case of a hard Brexit, where GB leaves both the EU and EEA, GB would be released from its renewable energy targets under the Renewable Energy Directive (Directive 2009/28/EC and Directive (EU) 2018/2001) and from EU state aid restrictions.

Nevertheless, the Government has indicated that it will transpose existing EU state aid law into domestic law upon withdrawal by virtue of an implementing act under the European Union (Withdrawal) Act 2018. Under the current draft State Aid (EU Exit) Regulations 2019, laid before Parliament on 21 January 2019, the Competition and Markets Authority (CMA) will be the responsible authority for EU state aid provisions and decisions implemented into UK law. The CMA will generally continue the role of the Commission in its authorization and investigation powers, and state aid approved by the Commission or given under a block exemption prior to Brexit will not need to be approved again by the CMA.

The Government has prepared the Electricity (Guarantees of Origin of Electricity Produced from Renewable Energy Sources) (Amendment) (EU Exit) Regulations 2018, which upon a no-deal withdrawal will ensure that GoOs issued in EU Member States continue to be recognised in GB. Furthermore, GB will continue to issue GoOs to eligible GB renewable generators (REGOs).

A notice issued by the Commission dated 7 March 2018, however, states that following a no-deal withdrawal, GoOs issued in GB will cease to be recognised in the EU-27 Member States.

More generally, EU energy law will cease to apply to GB and its electricity markets will be decoupled from the Internal Energy Market (IEM), which means that cross-border flows of electricity will no longer be governed by EU legislation. GB has sought to mitigate this

impact by enacting the European Union (Withdrawal) Act 2018, which will transpose all EU law into UK national law. In the case of a no-deal withdrawal, however, the inability to enforce any necessary cooperation with EU institutions may render these laws ineffective to an extent.

In summary, there may be some scope for GB to diverge from the current EU renewables regime over time, however, GB may be expected to voluntarily align with this, and such development may be covered by a future cooperation or trade agreement.

Regulatory changes

Are there any anticipated regulatory changes which will alter the regulatory landscape for corporate green energy and corporate PPAs?

The EU Clean Energy Package introduces recast legislation, including the Energy Efficiency Directive (Directive (EU) 2018/2002), the Renewable Energy Directive (Directive (EU) 2018/2001) and Energy Union Governance Regulation (Regulation (EU) 2018/1999), which are designed to cover the electricity and renewables markets from 2021 to 2030. The Energy Efficiency Directive sets an indicative target for energy efficiency of 32.5% by 2030. The Renewable Energy Directive increases the consumption target from renewables to 32% by 2030, and the target to at least 14% of transport fuel originating from renewable sources by 2030. GB has not yet consulted on the implementation of this, and it remains unclear whether GB will voluntary adopt the Renewable Energy Directive.

In January 2019, BEIS published GB's draft National Energy and Climate Plan (NECP) for 2021 to 2030. This does not contain new policy announcements, however, it acknowledges that despite GB's plans to leave the EU, it is still seeking cooperation with the EU to support the delivery of clean, cost-efficient and secure energy supplies.

Whilst the EU is a party to the Paris Agreement, the UK (as other EU member states) is itself a signatory and as such will continue to be bound by its own decarbonization commitments under its Nationally Determined Contributions post-Brexit. Material changes to the UK's commitment to addressing climate change are, therefore, not expected.

Incentives and benefits

What is the corporate appetite for green energy, including any political or financial incentives available to corporates to adopt green energy?

Corporates in GB are developing a growing appetite for green PPAs, in recognition that investing in clean energy will help to improve green credentials, cut operational costs and contribute significantly to future-proofing their organizations in competitive markets. Rapid cost reductions in wind and solar power have made it less expensive to generate electricity from these technologies than from new coal or gas plants. As a result, there has been a great increase in wind and solar projects and this trend is expected to continue to grow.

Corporates in GB are increasingly joining voluntary renewable certification schemes, such as the RE100, an initiative of companies committed to consuming 100% renewable energy. Notable UK members of the RE100 include Burberry, Gatwick Airport, Heathrow Airport, H&M, and Tesco.

According to "Energy Trends March 2019" published by BEIS [1], renewable electricity generation in 2018 was 111.1 TWh, a record high and increase of 11.8% compared to the previous year. The share of renewables in electricity generation increased by 3.9% from 2017 to 33.3% and renewable electricity capacity was 44.4 GW at the end of 2018, a 9.7% increase compared to the previous year. According to energy market analysts EnAppSys, based on recent trends, renewables are expected to be the most dominant source of power in GB in 2020. With UK offshore wind farms now providing a relatively low-cost source of power compared to historic levels, wind is set to continue to be the primary source of renewable energy generation. These statistics suggest the significant potential of cPPAs in the near future.

In GB, there are no political incentives for corporates to enter into cPPAs, which are generally being concluded on a voluntary basis in GB. Whilst not a financial incentive per se, the ability for corporates to hedge against market price fluctuations over the long term is a key driver for many corporates to enter into cPPAs. Furthermore, subject to negotiation, corporates may secure long-term electricity prices at below-market levels.

[1] Energy Trends March 2019

What are the key local advantages of the corporate PPA model which can benefit our clients?

All EU Member States are obliged to have a Guarantee of Origin scheme for renewable source electricity, which has been implemented in GB as the Renewable Energy Guarantee of Origin (REGO), of which Ofgem is the system administrator.

Unlike some Member States, GB allows for the issuance of REGOs to supported generators. This has ensured a liquid REGO market in GB, and many cPPAs use REGOs/GoOs as evidence of the transfer of renewable benefit from the generator. GB is, however, reducing support offered to generators, most recently closing its Renewables Obligation scheme to new capacity on 31 March 2017.

What subsidies are applicable to the generation and sale of renewable energy?

The primary subsidy for generators with capacity above 5 MW is the Renewable Obligation, however, this was closed to new participants on 31 March 2017 applies. To continue the support of low-carbon electricity generation, the Government introduced contracts for difference (CfDs) for eligible generators, with the fixed "strike" price being set by auction. The successful bidder enters into a contract with the Low Carbon Contracts Company (LCCC) for a 15 year period.

Does your country implement a national support scheme with tradable green certificates (such as guarantees of origins)?

In GB, the Government has gradually cut back support schemes for onshore renewables as development costs for renewable generators sink, allowing for the first subsidy-free renewable projects.

The Renewables Obligation scheme detailed above set an obligation on electricity suppliers to source a proportion of the electricity that they supply to costumers from renewable sources. Suppliers evidence this through the purchase of Renewable Obligation Certificates (ROCs) from eligible generators. The scheme has been closed to new participants on 31 March 2017, and projects that already receive support under the ROC scheme will continue to do so until either (i) the end of a particular project's lifetime or (ii) in 2037 when the scheme fully closes.

Typical PPA terms and risk allocation

To the extent corporate PPAs are deployed, how are prices, terms and risks affected?

Topic	Details
Do prices tend to be floating or fixed?	With regards to pricing agreements, there are several possible options: fixed prices, step prices adjusted over the term, and price indexation. Hybrid forms of these variants are possible. Given the private nature of contracts, it is difficult to generalise on commonly used pricing arrangements across GB market. Corporates have, however, been prepared to offer higher fixed prices which can be attractive to generators. As cPPAs can offer an option to hedge against electricity market prices, a fixed price element is a common feature of a synthetic cPPA.
What term is typically agreed for the PPAs?	The typical term of PPAs is from 10 - 15 years, however, this may vary depending on the interests of the parties.
Are the PPAs take-or-pay or limited volume?	PPAs have generally been based on the take-or-pay principle.

Are there any other typical risks?	Businesses that trade internationally or have operations overseas are likely to be exposed to foreign exchange risk arising from volatility in the currency markets. One of the typical cPPA risks is, therefore, currency exposure, with EU cPPAs being commonly priced in Euros. Concerns about currency fluctuations between sterling and the Euro as a result of Brexit are, therefore, key considerations for parties to UK-EU27 cPPAs. Change in law is a common risk, resulting from the legal nature of GoOs. Any legislative change, binding court judgment or changes to network codes which changes either the legal nature of the GoO or more broadly changes cost sources, including changes to the balancing regime or transmission and distribution costs, pose a risk of changing the commercial benefit of the transaction for the parties. The implications of Brexit will need to be carefully considered for change in law provisions.

To the extent corporate PPAs are deployed, in whose favour will the risks typically be balanced?

Type of risk	Details
Volume risk	Where a PPA is based on a fixed volume delivery to the offtaker, the generator bears the risk. With a pay-as-produced PPA, the offtaker bears the risk, however, this may be mitigated through the use of a sleeving agreement with an electricity supplier which may then cover any shortfall.
Change in law	The PPA will usually include change in law provisions, as this will usually prevent the PPA from being frustrated in the event of a significant legislative or network code change or court judgment. The risk of such a change in law is balanced against the party receiving the GoOs or renewable benefit, however, a change in law clause seeks to reopen the agreement in order to rebalance the original economic intentions of the parties.
Increase / reduction of benefits	Given the private nature of contracts, it is difficult to generalise on this across GB market, however, where the reduction of benefits is caused by a change in law, this may be covered by a change in law clause.
Market liberalisation (if applicable)	GB liberalised its electricity market through the Electricity Act 1989. As such, this is not a risk for cPPA parties.
Credit risk	Given the private nature of contracts, it is difficult to generalise on this across GB market, however depending on the relative strength of the parties, one party may wish to seek performance security from a party with lower creditworthiness. As low creditworthiness most strongly affects the party obliged to pay, the risk is balanced against the party expecting payment.
Imbalance power risk	Balancing in GB is done by Elexon in accordance with the

	Balancing and Settlement Code (BSC). There is, however, no restriction on either party to a cPPA acting as balancing party. As the costs of balancing energy following under or over delivery may be high and may, therefore, significantly increase the costs of the party bearing that risk, a party which is better placed to bear this risk should be selected. This may be the case if, for example, it has existing energy sources which can be used for correcting the imbalance in its portfolio.
Production profile risk	The consumption profile is usually more stable than the production profile. Usually this risk is allocated to the offtaker under a cPPA and the offtaker acquires any missing volume from the market. Under the cPPA, a third party may also take responsibility for providing the missing electricity in order to manage this risk.

Balancing

Does your country operate a balancing responsibility scheme?

Yes.

If your country operates a balancing responsibility scheme, who is the balancing authority and do the generator and offtaker typically undertake balancing themselves?

As noted above, balancing is done by Elexon in accordance with industry code BSC. The BSC sets out that individual generation and demand assets (BM Units) may balance themselves or act through a "Lead Party". It leaves open whether a Lead Party or BM Unit must be a generator or supplier, and as such it would be prudent to expressly designate the function in the cPPA. Regulation (EU) 2017/2195 establishing a guideline on electricity balancing applies directly to the GB energy market, however, this is largely implemented in the BSC.

Significant transactions

What significant transactions/deals have taken place in the last 12-18 months?

GB's first offshore wind corporate PPA was signed by Danish wind giant Ørsted with Northumbrian Water for 30% of the electricity generated from the 573 megawatt (MW) Race Bank Offshore Wind Farm. It was announced at the end of February 2019 that a 10-year long-term PPA had been signed between the two parties. This is the first of its kind corporate PPA ever signed in GB and is an expansion of an existing renewable electricity supply agreement between the two companies which began in April of 2018. From 1 March 2019, Northumbrian Water started sourcing 30% of its electricity needs from the offshore project. Ørsted said it would also provide balancing services in respect of the wind output so that the electricity can be delivered to Northumbrian Water under their existing supply agreement signed in 2018.

Danske Commodities (DC) has signed an offtake deal with its parent Equinor ASA (EQNR) for the output of the latter's 30 MW Hywind Scotland floating wind farm. The Danish energy trader said that the 20-year PPA will make it the sole offtaker, taking over the balancing and trading of the wind farms' output. Additionally, DC has signed a PPA for the output of a 126 MW portion of the Sheringham Shoal offshore wind farm in UK waters. This 15-year PPA is effective as of 12 July 2019. Furthermore, DC has signed a 15-year PPA with the Dungeon offshore wind farm in GB. Effective 16 July 2019, DC will take over balancing and trading of 281 MW, equivalent to 70% of the wind farm's production. This is the company's fourth long-term PPA in GB market and the third offshore wind PPA in less than a month, following the 20-year PPA with Hywind Scotland wind farm and a 15-year PPA with GB offshore wind farm Sheringham Shoal.

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