Updated report sees massive ongoing growth for the Corporate PPA market

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[Company] LLP are experienced international advisers on Corporate Power Purchase Agreements (CPPAs) and were involved in some of the very earliest such agreements in Europe.

The 2019 edition of their Corporate PPA report has now been published and, to mark the event, we have once again been talking to its co-lead authors, lawyers [Name & Name], co-heads of [Company's] international Renewables Group.

The new report highlights the ongoing worldwide growth of the CPPA , with 2018 seeing 121 corporations purchase 13.4 GW of renewable energy directly from generators, a figure more than double 2017's record 6.1 GW.

As a general introduction to the subject, the authors explain that there are essentially two main advantages a CPPA has over the traditional transaction. Firstly, it enables corporates to develop a direct relationship with the renewable energy generator, facilitating the build of the plant and adding green energy to the grid, while helping them hit their sustainability targets, an increasingly important for all businesses.

Secondly, CPPAs provide greater price certainty over a longer period than is usually available in the traditional utility model. Fixed or capped/floor price arrangements enable businesses to 'lock in' energy prices and buffer themselves from the volatility of the energy markets. This, in turn, enables them to produce accurate financial forecasts and commit to future projects. A longer CPPA term is also important to the generator, as the decline in or ending of fiscal incentives for renewable power has driven the need to seek a long term fix/floor revenue stream from offtakers.

Corporate PPA terms vary, usually falling somewhere between 10 and 20 years, with the longest ever Corporate PPA signed in March of this year by the Dubai Electricity and Water Authority who signed a 35-year agreement with Noor Energy.

Ongoing rapid growth

The relentless rapid growth in the use of CPPAs, explains [Company], is due to a 'perfect storm' of factors driving both corporates and generators to the market.

For corporates the drivers are coming from two directions:

“The first is pressure being applied upwards - from consumers,” explain the lawyers. “2019 has borne witness to a surge of public sentiment demanding action on climate change. Corporates have responded to this by updating and renewing their pledges to be more sustainable and minimise their impacts on the environment. This is most prevalent in consumer-facing corporates such as in the retail and tech sectors.

“As a result, in August of this year Gap signed a 12-year 90MW CPPA with Enel Green Power North America. The deal was signed less than a year after Gap and 43 other fashion retailers signed the UN's Fashion Industry Charter for Climate Change.

“In June of this year, 20 major companies including Apple, Sony and Fujitsu called on the Japanese government to up its renewables targets and requested that CPPAs be encouraged in order to ensure renewable energy is price-competitive.”

The second driver of corporate demand results from pressure being applied from 'above and within' - by directors and shareholders.

“The 2008 financial crash and ensuing recessions forced firms to find new and innovative ways of achieving financial security,” say the lawyers. “Corporate PPAs are long-term agreements (sometimes 15+ years) and provide price certainty for both the corporate and the generator by using fixed or cap/floor pricing structures.

“Straining under the weight of these two pressures, Corporate PPAs offer a pressure release valve for corporates to achieve their green energy goals and achieve some financial certainty.”

In the case of the generating companies, the key driver behind CPPA uptake has been the decline or ending of fiscal incentives for renewable power, resulting in the loss of a floor price for power.

“Lenders and investors to projects are usually reluctant to take 'merchant risk' on a project, meaning generators need to seek a long term fix/floor revenue stream from an offtaker,” explain the lawyers. “Utilities are usually not willing to give a long term fix or floor price (they are not set up to hedge risk in this way), so generators are approaching corporates directly for this.”

And finally come the regulatory sweeteners, such as the recast Renewable Energy Directive (RED II) in Europe. RED II includes ambitious drivers for the uptake of CPPAs in Europe, including a binding EU-wide 32% renewables target for 2030 and an enabling framework for CPPA uptake. RED II also requires member states to assess the regulatory and administrative barriers to Corporate PPAs, remove unjustified barriers, and facilitate their uptake.

CPPAs around the globe

With CPPAs becoming increasingly popular in many geographic regions, we asked [Company] to identify the biggest markets around the world and highlight any regions where notable growth is now taking place.

“The US boasts the world's largest Corporate PPA market,” observed the lawyers. “The catalyst for this growth has been a combination of green tariffs for larger energy consumers and adoption of aggregation models for smaller energy consumers..

“Aggregation models allow smaller corporates to club together to pool their offtake requirements and 'aggregate' their demand. The result is an 'economies of scale' approach which empowers smaller corporates to gain a foothold in the market.

“This approach, in part, saw new market entrants be responsible for 31% of the total Corporate PPA activity in the USA in 2018.”

Beyond the USA, the lawyers note that the European CPPA market has continued to blossom and has seen impressive growth, particularly in the Nordics.

“Norway and Sweden in particular have spearheaded use of Corporate PPAs, underpinned by their robust wind power industries,” they observe. “For example, in Sweden, wind energy production is expected to double in the next four years to 40TWh. CPPAs have tapped into this market with Norsk Hydro signing a ground-breaking 29-year CPPA including 1.65 TWh wind power per year with Green Investment Group in 2018. “

Western Europe

In Western Europe, market and regulatory barriers have slowed the uptake of CPPAs, but as these begin to fade [Company] are seeing growth in countries like Spain, Italy, Germany and France.

“For example, in Germany, “ say the lawyers, “amendments to the Federal Renewable Energy Act in 2017 resulted in lower reference prices being set for wind/solar generators, whilst market prices for energy continued to rise.

“Corporates responded with a renewed interest in CPPAs and in January 2019 Mercedes-Benz signed Germany's first Corporate PPA. Whilst Germany was late to the party, they are now, it seems, global advocates of CPPAs. A report released today by the German energy agency (Dena) recommended to China that it harness CPPAs in order to hit its renewable targets.”

Eastern Europe

Eastern Europe is another area primed for an increase in use of CPPAs says [Company]:

“In Hungary, for example, the KÁT system required renewable energy generators to sell energy exclusively to the Transmission System Operator (TSO). On the corporate side, companies were able to buy certificates of origin to prove their use of and commitment to renewable energy.

“However, in January 2017 a new system - METÁR - was introduced. The new system requires new renewable energy projects above 0.5MW to conclude CPPAs with offtakers. As the KÁT system begins to fade out, renewable generators will be exposed to market volatility and we expect them to turn to CPPAs to mitigate their risk.”

Asia-Pacific

In the Asia-Pacific region, [Company] have seen the corporate PPA market continue to mature, with Australia in particular witnessing a boom in renewables investment in recent years thanks to its recently implemented Renewable Energy Target.

“Out of this fertile regulatory ground, a number of CPPAs have sprouted,” note the lawyers. “However, not satisfied with playing catch up, news emerged last week of a plan for the world's first industry-wide CPPA:

“French energy company Engie has entered into an agreement with the Australian Hotels Association (AHA), Tourism Accommodation Australia (TAA) and brewing giant Lion to supply renewable energy to participating pubs and hotels for 10 years. This innovative transaction functions as an industry-wide aggregation model and it is something that we may see more of in coming years.”

Evolution in the CPPA market

Clearly the wind and solar energy markets have been the bread and butter of CPPAs in recent years. However we asked [Company] if there were now signs of their uptake across a wider spectrum of renewable energy businesses. Their answer provides some interesting insight.

“We have seen a rise in energy from waste plants across the UK and Europe,” say the lawyers. “Most recently in the news was the opening of a Copenhagen EfW plant designed with a ski slope on the roof.

“Whilst not all EfW plants are as glamorous as this, they all hold massive potential and there have been increasing numbers of CPPAs signed to draw energy from these plants such as the recent deal between Atlantic Power and BC Hydro for power generated from a biomass plant in British Columbia, Canada. “

The major league

The big players in the global CPPA market to-date have, and continue to be the tech companies and data centre owners such as Google, Apple, Amazon and Microsoft. For example, in September 2019, Microsoft entered into a long term CPPA with Engie to buy 230MW of wind and solar, bringing Microsoft's total renewables portfolio to 1.9GW.

But are there any new players moving into the market, and how might they benefit from the CPPA contract model?

“Chemical companies have also been active in 2018 through the likes of aluminium manufacturers Norsk Hydro (235 MW onshore wind project in Sweden) and Alcoa (330 MW and 197.4 MW onshore wind projects, both in Norway), both of whom are using sustainability credentials to sell aluminium at a premium in some markets,” the legal team reply.

“Telecom companies are now also making their presence known in the market. Two weeks ago T-Mobile signed five new CPPA agreements for wind and solar power, which will see T-Mobile sourcing 95% of its power from renewables by 2021. Since announcing its 20201 100% renewables goal it has signed CPPAs for 3,017,000MWh.“

And the debutants

“In recent weeks several interesting CPPA deals have got over the line,” continue [Company]. “Deutsche Bahn (DB) - Germany's largest railway company - signed the country's first offshore wind CPPA. The deal sees DB commit to buy the power from Innogy until 2024 as part of its plan to hit its 100% clean energy target.

“We are already seeing shifts in the market, with CPPAs being taken up by a more diverse range of corporates. As renewable energy technology continues to develop, and aggregation models become more streamlined, we expect CPPAs to become a viable method of sourcing power for any corporate. “

New technologies

And finally, with new technologies being developed and brought to market at a seemingly ever-increasing pace, we asked [Company] to comment on the effect some might be having on the uptake of CPPAs. For example, developments in renewable energy storage and the blockchain.

“Energy storage technology is an interesting area and one which could compliment the use of CPPAs,” observe the lawyers. “The chink in the armour of renewable energy (for the moment) is that it is intermittent. Solar power, for instance, is not in abundance in England during the winter months!

“CPPAs provide that, whenever possible, energy will be drawn from a renewable source, such as a specific solar farm. However, when unable to draw on this source, the corporate must have a source of power on standby in order to continue operations. This is achieved by drawing on non-renewable, more reliable power sources.

“With increasing capacity and capability of energy storage systems, corporates could rely on on-site battery grids as a fall-back to their primary, renewable source of energy, which would decrease still their dependence on non-renewable energy. “

Microgrids

“More fascinating still is the use of micro grids with CPPAs,” the lawyers enthuse, citing the example of Palau, a small island nation in the Western Pacific. “A project is currently underway there to install the world's largest microgrid. A 30 year CPPA was signed with Engie (one party to the industry-wide CPPA in Australia), although the CPPA offer has now been re-sent to the market for bids. The microgrid - named Armonia – will consist of solar power generation and 45MWh of battery energy storage that will meet almost half of the island's demand for electricity. “

The blockchain

“Blockchain is another technology that is seeking to penetrate the market,” say the [Company] lawyers. “Several companies are working on blockchain-based smart contracts that would enable users to enter into CPPAs with energy producers quickly and transparently. “