



The Rise of Corporate PPAs 2.0 an Update

In 2015 Baker McKenzie released one of the first thought leadership reports about corporate PPAs: *The rise of corporate PPAs, a new driver for renewables*. Since the issuance of that report there has been an almost 20% increase in the number of gigawatts of clean energy provided via corporate PPAs, with 5.4 GW of clean energy purchased by corporations in 2017 compared to the previous record of 4.4 GW in 2015, according to Bloomberg New Energy Finance's ("BNEF") Corporate Energy Market Outlook. Baker McKenzie has advised on many corporate PPAs throughout the world, some of which are highlighted in the following map.

According to the Climate Group's RE100 Progress and Insights Report released in January 2018, direct procurement from offsite grid-connected generators has grown fourfold from 3% to 13% of RE100 members' (corporations pledging to source 100% of their electricity from renewables at some date in the future) total renewable power consumption between 2015 and 2016. Most of the corporate PPAs in 2017 were for wind power.

The majority of renewable corporate PPAs are occurring in the US, which had 2.8 GW in corporate PPA volumes in 2017, which exceeded the 2016 rate by 19% according to BNEF's Corporate Energy Market Outlook. Europe, the Middle East and Africa was the second-largest market for renewable corporate PPAs in 2017, with corporates there buying 1.1 GW of clean power per BNEF. Corporate PPA volumes are increasing in Latin America and Asia Pacific due in part to increasing corporate demand for sustainable and economical energy solutions and because of regulatory changes.

■ Trending

Economic, green and reliability advantages sought, and by more entities

Corporates continue to look to corporate PPAs for economic advantages such as long-term price predictability and the ability to hedge against future price increases from the grid, as well as for green and sustainable reasons. Corporate PPAs are increasingly being used in emerging markets to provide reliability and resilience by counteracting grid outages.

Large multinationals are beginning to apply their sustainability pledges to their global supply chains and data centers, leading to an uptick in Asian and European corporate PPAs. Universities are becoming particularly active in this space due to their large energy consumption and socially conscious procurement teams. For example, in Australia, Monash University, the University of Sydney and the University of Technology in Sydney have each run corporate PPA tenders; in the US, Georgetown University entered into a power purchase agreement to develop a 32.5 MW offsite solar power system to provide almost half of the campus' electricity. More industrials are entering the space; for example, some mining companies in Africa and Latin America now use corporate PPAs to source clean energy and reduce costs.



Terms shortening and lender confidence growing

In terms of market dynamics, developers prefer to sign 20 to 25 year PPAs on fixed tariffs but in the right markets will consider shortening the term to 10 years and floating tariffs. For example, in the Netherlands, it is increasingly accepted by financiers that the term of corporate PPAs has become shorter than the lifetime of the project loan (but this may gradually disappear if merchant risk increases due to decreasing subsidies). Numerous corporate PPAs have involved projects which were project financed, giving developers confidence that a corporate PPA is bankable.

New deal structures gaining popularity



Buyer consortia

Aggregate buyer groups and consortia by which companies within the same industry or government entities within the same jurisdiction aggregate their power demand and jointly negotiate PPAs are gaining favor as a deal structure. For example, in November 2017, the Melbourne Renewable Energy Buying Group of 14 organizations, including government entities, cultural institutions, universities and corporations, became the first buying group in Australia to contract "firm supply" of electricity and green rights (large scale generations certificates (LGCs)) from a renewable energy project via a 10 year PPA. In Europe, Royal Philips, AkzoNobel, DSM and Google formed a partnership to jointly buy renewable electricity to power part of their operations in the Netherlands by entering into agreements to source electricity from the Krammer and Bouwdokken Wind Parks.

Issues to watch for in these arrangements include governance structures and risk sharing. Additionally, where consortia are purchasing power capacity together, consortium members have an increasing desire to agree that they are able to transfer all or part of their capacity share to one or more other consortium members; given the impact on the credit risk of the project company, such arrangements are key to any bankability assessment of such arrangements.



Portfolio structuring

Smaller-scale PPA projects are increasingly being grouped within a fund or other investment structure in order to create a portfolio attractive to lenders. For example, in Asia, developers have created portfolios of rooftop solar projects, aggregating to achieve the necessary scale of at least 30-50 MW to attract finance. In this structure, the developer covers all capital costs including design, installation, full-life operation and maintenance as a turnkey project.

Similarly, in South Africa, with recent revisions to the licensing regime for IPPs and exemption from certain license requirements in respect of projects under 1MW, many developers and lenders are looking to follow a portfolio approach where a number of smaller-scale PPA projects are potentially grouped within a fund or other investment structure.

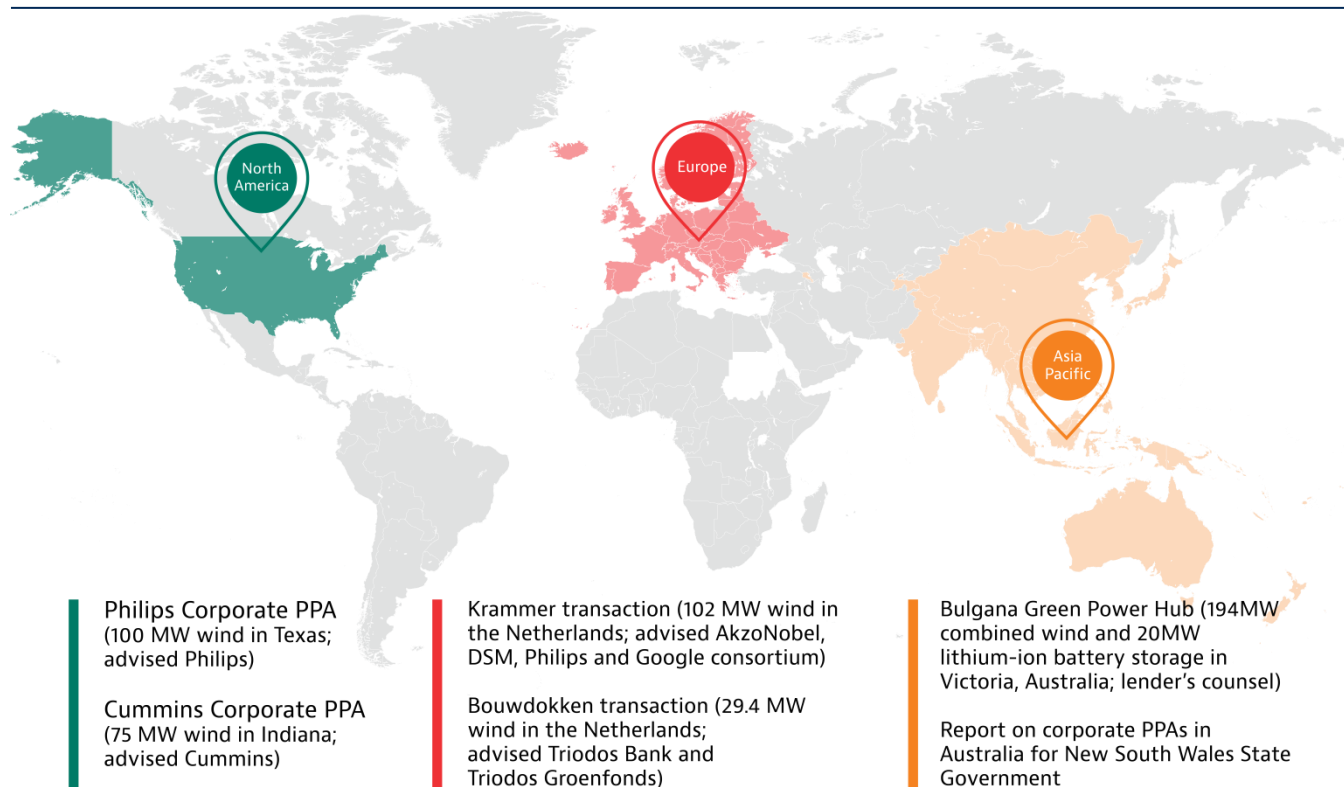
Technology's impact

The reducing costs of storage, price uncertainty and a need for efficient off-grid options (particularly in the heavy industry or mining industries) has resulted in an increase of entities considering and pursuing hybrid solutions (i.e. solutions including multiple technologies such as solar PV with battery storage together with some additional gas or diesel back-up to enhance the electricity price offering and customer load profile) to meet their demand requirements while simultaneously achieving their green energy ambitions. This could promote the development of projects that become available for entering into corporate PPAs.

On the other hand, technology will allow the current renewables infrastructure to be used in different ways, which could lead to fewer projects that can be structured as a corporate PPA. For example, in the Netherlands, wind turbine manufacturer Lagerwey is developing a wind turbine that converts electricity into hydrogen. This hydrogen will, in first instance, be used for powering lorries. It is currently still a pilot, but if successful, given the scarcity of renewable energy projects in the Netherlands, it could affect the number of projects that become available for entering into corporate PPAs. In the longer term however, hydrogen could in the future be stored for long periods and transported via new, upgraded or existing pipelines to be converted back to electricity at the point of delivery, which will broaden the market for power. If regulatory rules are aligned across Europe to allow for cross-border corporate PPAs, this could increase the number of corporate PPAs entered into.



■ Landmark Corporate PPA Deals Baker McKenzie Advised



■ Regional Updates

Americas

There has been significant growth in corporate PPAs in the US over the past few years, with offtake agreements signed with corporates in 2017 approximately equal to all other offtakers, including utilities. This growth is coming from industrial companies and tech companies, in addition to universities and large hospital complexes. It is being driven in part by the desire of corporates to achieve their sustainability goals to satisfy the demand of their constituents – both shareholders and customers

Corporate renewable PPAs could be impacted by the US tax reform and tariffs on solar equipment, steel and aluminum made outside of the US, with the tariffs deemed more unfavorable to the renewables industry than the tax reform. Despite President Trump's intended withdrawal from Paris Agreement, many corporates continue to take it upon themselves to reduce their carbon impact, often in the form of corporate PPAs.

Latin American countries such as Argentina have undergone regulatory reform to allow large consumers to sign bilateral contracts with generators that, combined with the institution of clean energy targets for corporates, is predicted to promote corporate PPA activity in the region.

Asia Pacific

There is great potential for further growth in the corporate PPA market in Asia Pacific. Corporate procurement should continue to rise in South East Asia, with the regulatory regime under review in the Philippines and Vietnam, according to Inframation News. The Duterte Government in the Philippines is currently formulating a Green Energy Option Program, under which larger power users can contract with suppliers, distribution utilities or electric cooperatives to have their electricity sourced from renewables; the utilities and co-operatives will then aggregate the demand for each renewable energy source and contract directly with renewables developers. USAID's Vietnam Low Emission Energy Program is investigating options for direct PPAs for the Electricity Regulatory Authority of Vietnam. In the last decade, the majority of the 3.2 GW of Asian corporate PPAs have been signed in India according to BNEF. An unreliable grid and access to relatively cheap renewable energy made India a focus for developers, which has led to competitive



auctions and a dynamic sector.

In Japan, the feed in tariff for PV projects which have started commercial operation is higher than the market electricity price, so corporates are not interested in signing PPAs for those projects. However, the feed in tariff for new PV projects is now the same level as the market electricity price, so when those projects start commercial operation in two years, we expect corporate PPAs to start in Japan. Five Japanese companies including Ricoh, Sekisui House and Daiwa House have already joined RE100 initiatives; the numbers will increase due to the rising demand for renewable power, which is illustrated by Apple's participation in rooftop solar power projects in Japan where the project special purpose company, managed by Daini Denryoku Co., Ltd., operates 304 rooftop solar PV systems totaling 17 MW. Additionally, the bill for the use of Japan's general waters for offshore wind projects, which was officially approved by the Japanese Cabinet on March 9, 2018, will likely precipitate an additional source of wind for corporate PPAs in Japan.

In Australia, a number of corporate PPAs have been signed within the last year, whereas prior to that corporate PPAs were generally just a theoretical concept. For instance, telecommunications and media company Telstra signed two corporate PPAs in 2017: it agreed to buy the output of a new 70MW solar farm near Emerald in Queensland May, and then led a consortium comprising ANZ, Coca-Cola Amatil, Telstra and the University of Melbourne to enter into a PPA for the 226MW first stage of the Murra Warra Wind Farm in western Victoria. New players who are seeking to corner the corporate PPA market are also emerging. For example, Flow Power, a wholesale retailer, has created an innovative model to support corporate PPAs under which it plays a role as intermediary.

Multinational corporations with sustainability pledges are beginning to apply the same environmental standards to their Asian supply chains, often across multiple jurisdictions, but many are stalled by a lack of regulatory alignment. For instance, restrictions on transmitting power across the grid mostly restrict corporate buyers in South East Asia (with the exception of Singapore) to solar rooftops physically onsite. Nonetheless, PPAs continue to gather momentum in the region: in February 2018 Microsoft signed its first clean energy deal in Asia, a 20 year PPA with the Sunseap Group's solar project in Singapore. The project will be the largest rooftop solar project in Singapore to date, with panels spread across hundreds of rooftops around the island.

Europe

The strong regional variation in corporate PPA uptake in Europe reflects the diversity of the legislative frameworks across the region. In the UK, the government has been cutting back support schemes for renewables, and subsidy-free renewables is gradually developing, particularly for solar. In Ireland, the current REFIT support schemes are now closed to new entrants. In Germany, the regulatory system does not really support the implementation of corporate PPAs because the regulatory framework for the promotion of renewables provides for higher benefits. And the European Union's Winter Package (i.e., a package of measures to keep the European Union competitive as the clean energy transition changes global energy markets) threatens to "weaken demand" by making it so developers that receive renewable energy subsidies will no longer be eligible to receive certificates and instead will have to acquire them through a mandatory auction. Nevertheless, corporate PPAs are expected to increase in Europe, in part because of demand from US corporates and in part as a new route to market for subsidy-free renewables.

US corporates' desire to power their European data centers with renewables is predicted to drive renewable corporate PPA growth in Europe. For example, Microsoft has entered into a 15-year PPA with General Electric to purchase 100% of the wind energy from its new, 37 MW Tullahennel wind farm in County Kerry, Ireland, which is the first corporate PPA in Ireland, as well as Europe's first deployment of battery integration into wind turbines to store energy. More than 50 companies said that the post-2020 Renewable Energy Directive had a key role to play in "unlocking the potential" of corporate PPAs, which they said "remain largely untapped in Europe." One of the proposals made is to establish a fully functioning Guarantee of Origin system, thus allowing companies to credibly trace where the clean power they are purchasing comes from. Furthermore, such a directive would help renewable energy producers to market their green electricity more effectively.

The key markets for corporate PPAs in Europe have been the UK, Sweden, Norway, Netherlands and Ireland. In Sweden, the costs for building wind parks are amongst the lowest in Europe and there has been recent political decisions with the aim to create further incentives to invest in renewable energy sources. In November 2017 the Green Investment Group and General Electric announced plans to construct and operate a 650 MW onshore wind park in northern Sweden and that they had already entered into a 19-year contract with Norsk Hydro, believed to be the largest corporate wind PPA in the world, although no details on watts or price was disclosed. It is predicted that France and Spain will be the fastest adopters of corporate PPAs in 2018.



Africa

In South Africa (and even in much of the rest of Sub-Saharan Africa), given the delays to the closing of various government renewable energy programs, there has been an increase in the appetite of developers (and customers) to pursue smaller scale renewables projects on a corporate PPA model, and these projects and the market is becoming increasingly competitive.

In Morocco, there is a highly competitive renewables independent power project (IPP) program, where under Law 13-09, privately-financed projects are striving to sign PPAs with large private offtakers. Voltalia, renewable energy producer and service provider, has obtained permits to develop two hydropower plants of 9.8 MW and 7.2 MW in Morocco's Middle-Atlas region; the electricity produced is set to be sold under long-term private PPAs, which are under negotiation with corporate clients.

■ Baker McKenzie corporate PPA experts



Paul H. Curnow
Partner
Sydney
+61 2 8922 5173
paul.curnow
@bakermckenzie.com



David Davies
Consultant
Johannesburg
+27 11 911 4312
david.davies
@bakermckenzie.com



Naoaki Eguchi
Partner
Tokyo
+81 3 6271 9441
naoaki.eguchi
@bakermckenzie.com



Marc Fèvre
Partner
London
+44 20 7919 1041
marc.fevre
@bakermckenzie.com



Zoë Hilson
Partner
Sydney
+61 2 8922 5485
zoe.hilson
@bakermckenzie.com



J. Roberto Martins
Partner
São Paulo
+55 3048-6826
j.roberto.martins
@trenchrossi.com



Skip Rankin
Partner
New York
+1 212 626 4740
clyde.rankin
@bakermckenzie.com



Jason van de Pol
Associate
Amsterdam
+31 20 551 7533
jason.vandepol
@bakermckenzie.com



Kieran Whyte
Partner
Johannesburg
+27 11 911 4302
kieran.whyte
@bakermckenzie.com

 www.bakermckenzie.com

©2018 Baker McKenzie. All rights reserved. Baker & McKenzie International is a global law firm with member law firms around the world. In accordance with the common terminology used in professional service organizations, reference to a "partner" means a person who is a partner or equivalent in such a law firm. Similarly, reference to an "office" means an office of any such law firm. This may qualify as "Attorney Advertising" requiring notice in some jurisdictions. Prior results do not guarantee a similar outcome.