DLA PIPER

2016

THE YEAR OF PPAS AND THE CORPORATE GREEN AGENDA

CONTENTS

1. EXECUTIVE SUMMARY

With unprecedented and record temperatures, El Nino and the Paris Agreement, 2015 came to a close with the issue of climate change firmly back at the top of the agenda for organisations the world over, not least large corporates. So, is 2016 going to be the year of the world fighting back against climate change?

In this short paper, we discuss the rise of the corporate green agenda in the context of the outcomes of the Paris Agreement; increasing interest in renewable energy; and the rise of corporate power purchase agreements ("**Corporate PPAs**").

December's annual UN Climate Change Conference, COP21, also known as the 2015 Paris Climate Conference, has put climate change back under the spotlight, primarily at governmental level. Bringing together 195 nations, the EU approved the Paris Agreement, an unprecedented climate change accord that provides a broad framework for reducing global warming through international cooperation, adapting to environmental changes already expected, and addressing expected losses by vulnerable nations and people.

There is no doubt that today, climate change is also high on, if not at the heart of, the corporate agenda. For many corporates, furthering the green agenda is a vital component of business strategy. Whether driven by ethics or economics, certainly a sustainable and clean business is critical to reputation.

Walmart, the world's largest retailer, is a good example. It has made a public commitment to deriving 100% of its energy from renewable sources.[1] There has also been a large increase in the number of global organisations and household names signing up to the The Climate Group's RE100 programme, committing to 100% renewable energy, currently totalling at 65 companies including Adobe, BMW Group, Coca-Cola Enterprises, Goldman Sachs, IKEA Group, Johnson & Johnson, Nike, Starbucks and Unilever. The list goes on with recent additions including Tetra Pak, TD Bank Group and Dentsu Aegis Network.[2] Most recently, MGM Resorts International and Wynn Resorts have opted to bypass their local provider, NV Energy, and rely instead on out-of-state providers and distributed resources.

Indeed renewable energy capacity continues to grow. A new report, the Global Status Report by REN21,[3] has highlighted a record level of renewables capacity installed around the world, with around 147GWh of renewables power capacity added in 2015, while renewables heat capacity rose by 38GWh. Global renewables investment also climbed to a new record level.

Corporate PPAs provide an opportunity for businesses to commit to using renewable energy, thereby reducing their carbon footprint, improving business sustainability and providing greater energy security and price certainty. For generators and funders in markets where subsidies are being withdrawn, they can be seen as the anchor for projects to be "bankable".

[1] http://blog.walmart.com/sustainability/20140821/what-walmart-needs-to-go-100-renewable
"Starbucks, Nike and other Top Firms Switch to Renewable Energy," International Business Times September 24, 2015;
"Starbucks, Wal-Mart, Nike take on 100% Renewable Energy Pledge" reported on CNBC on September 23, 2015.

[2] https://www.environmentalleader.com/2016/06/06/corporate-renewable-energy-purchasing-gets-a-boost/

[3] Global Status Report by REN21, 1 June 2016
"Utilities Suffer Fear and Loathing in Las Vegas" reported on The Washington Post on June 14, 2016.

2. THE RISE OF THE CORPORATE GREEN AGENDA

WHY SHOULD BUSINESSES GO GREEN?

Commercial Sense

Reducing cost is a key objective of large corporates. Put simply, green investment can make commercial sense when used to improve energy efficiency and waste management. Companies have found that adopting energy-efficiency targets have helped to save a lot of money.

Over recent years we have also seen an increasing amount of disclosure requirements in relation to greenhouse gas emissions globally, putting big business in the spotlight and drawing attention to the reputational risks of not being particularly 'green'.[4]

Efficient Use of Resources

Cutting costs is only part of the story. In an ever-growing world of scarce and finite resources, developing products and undertaking operations that use fewer of these resources will become increasingly valuable. Equally, large corporates are getting better at using energy and resources more efficiently, taking advantage of real estate square footage and locally abundant natural resources. Many businesses in sunny climates, for example, opt for roof top solar panels on large manufacturing plants, or ground mounted panels on adjacent land.

Public Recognition

Going green and becoming environmentally-friendly has become more than just a trend. It is increasingly engrained into the DNA and culture of large business, important to employee and customer commitment. Customers not only expect businesses to follow the green agenda, but also share knowledge of and discuss environmental issues via the internet and the media, and put immediate and widespread pressure on organisations to be environmentally-friendly using various social media platforms. Companies therefore have the opportunity to build rapport with their customer base through green initiatives and investments. For many corporates this means setting internal renewable energy or greenhouse gas mitigation targets, which in turn is driving the uptake of PPAs as they are more efficient to reach internally mandated targets.

Environmental Benefits

It is an obvious point, but one worth making. Beyond the purely economic reasons to go green, corporates can help to cut emissions and other gases to reduce global climate change and protect natural habitats. It is something that can make shareholders happy and create opportunities for employees of and suppliers to the organisation.

The Paris Agreement[5] is a political landmark. Its mechanisms are prescribed at a high level (with much detail yet to be worked out) and with limited enforceability. Nevertheless, the agreement has symbolic significance. Notably, 196 nations have agreed to its language, and in doing so have acknowledged that controlling climate change requires a global mitigation plan. It includes mechanisms and legal obligations which are specifically designed to support low emission and emission neutral investments (particularly through the finance provisions for developing countries and the non-developed countries (NDCs) review mechanism. Significantly, it draws a pathway for the mitigation of global emissions – a pathway that will shape the demand and the relative support for various energy operations, including big corporates ever conscious of their carbon footprint, and therefore the uptake of Corporate PPAs.

[4] https://www.globalreporting.org/resourcelibrary/Carrots-and-Sticks.pdf

[5] https://www.dlapiper.com/en/uk/insights/publications/2015/12/the-unfccc-paris-agreement/

3. CORPORATE PPAS

WHAT ARE THEY?

A Corporate PPA is a long-term contract under which a business agrees to purchase electricity directly from an energy generator. This differs from the traditional approach of simply buying electricity from licensed electricity suppliers, often known as utility PPAs.

Such structured agreements provide financial certainty for the utility companies and the developers, which removes a significant roadblock to financing and building new renewable facilities; PPAs are therefore helping to deliver more renewable energy on the grid. In a world where some countries are reducing or withdrawing subsidises for renewable energy, the Corporate PPA with a financially strong counterparty is seen by many developers, equity investors and funders as an essential component for achieving a "bankable" project.

PPA structures

The corporate off-taker will enter into a long term PPA (commonly with a term in excess of 10 to 15 years) with renewable energy generator to take all of the energy generated by its plant (or portfolio of plants), commonly for a fixed price per kWh (subject to some form of indexation). The PPA will contain provisions for the sale and purchase of electricity and the benefit in any renewable energy subsidies, and all of the provisions governing that sale and purchase. The delivery of renewable energy is notional and not physical in most cases.

In the UK and some other European countries, these provisions will also include obligations on the corporate off-taker to provide or procure certain metering and regulatory activities that can only be undertaken by licensed electricity suppliers. As such, the corporate off-taker will need to enter into a back-to-back agreement with a licensed supplier under which the licensed supplier commits to undertake these obligations. The licensed supplier will also commit to purchase the electricity and renewable energy benefits from the corporate off-taker on the same terms with some margin built in.

In parallel to this arrangement, in the UK and some other European countries, the corporate off-taker will have an electricity supply agreement with that licensed supplier under which electricity will be supplied to the meet the corporate off-taker's energy demands from time to time. The terms of supply under this supply agreement will take into account the electricity purchased under the PPA and passed through to the licensed supplier under the licensed supplier agreement. This ensures that the corporate has the benefit of the fixed pricing for renewable energy under the PPA but the reliability of a supply agreement with a licensed electricity supplier to meet its day-to-day energy demands.

Global Relevance: Who's doing them and where?

PPAs are not new. Although we can see an emerging trend, which we are sure will be emphasised by the outcomes of the Paris Agreement, in the increasing number of large corporates committing to PPAs of an unprecedented size. Whilst PPAs are well accepted in the US, the European and Scandinavian markets are catching up and we expect to see a surge in Corporate PPAs over the next 12 to 18 months in the Asia Pacific region. The increasing frequency with which large, well-known corporates have entered into PPAs and invested in generation assets of their own, stems from both the economic and environmental benefits they provide.

Although the original instigators of the Corporate PPAs were the high energy using data centres, the desire to enter into PPAs has not been limited to particular types of companies or geographical areas. Large banks, retailers, restaurant chains and IT and telco companies have all widely published details of their PPAs – all sorts of companies are concerned about their carbon footprints.

At DLA Piper, we have first-hand experience of the win-win scenario these PPAs offer, having advised a number of organisations on their PPAs – from generators and their funders to the corporate end users and their licensed electricity suppliers.

USA

The first significant PPAs came out of the US, where Google set a precedent in 2010 in buying the majority of the power produced by a wind farm in Iowa. In fact, Google has gone on to commit to investing a total of $2.5 billion in multiple renewable energy projects.[6]

Since then, other major US corporations have followed suit, such as Microsoft's 20 year PPA with RES Americas, buying 100% of the energy generated by a Texas wind farm;[7] Apple's PPA with First Solar which will supply its HQ, Silicon Valley offices and stores with solar energy from a 130 MW solar park;[8] and Walmart's recent commitment to buy 50% of the energy produced by the Pattern Energy Group's Logan's Gap Wind farm in Texas, powering 350 of its stores.[9] The list of large US corporates engaging in large scale PPAs goes on.

In our experience, we historically saw 20 year PPAs in the USA, where longer-term commitments are typically required to allow for the amortization of the debt that is incurred by the energy supplier to build the energy plant. We have seen more recently a push back on this long-term nature by generators with 10 or 15 years being achieved. US projects are still very much tax driven with accelerated depreciation and energy tax credits.

At the date of this paper, DLA Piper was working with a leading sponsor on a 200 MW wind generation project involving a PPA with Google. Google will use the PPA to support operations at a new data center it is opening in Oklahoma. Google may well have decided on a location where green power is abundantly available. This is part of a declared effort by Google to utilize renewable energy sources. Thanks to this project and a number of others, Google recently reported last year that it now uses renewable energy for 35% of its energy needs.[10] Due to this project and a number of others, that percentage will continue to improve.

DLA Piper is assisting, again at the date of this paper, in initial negotiations regarding a long-term PPA with one of the largest retailers in the US. The PPA supports the construction of a 100 MW wind generation project in the Midwest. This is one in a series of negotiations involving a large US company seeking to purchase renewable energy directly from generators. Although not always successful, such negotiations reflect the dedication of material resources by a number of US companies to sourcing power from renewable resources.

In the USA, the structure of, and commitment to, purchase electricity triggers numerous questions on both a national/federal and state/provincial basis that may govern the sale and delivery of electrical power by a non-regulated utility. These limitations and potentially greater corporate oversight by governmental entities need to be considered in the structure of a PPA and related agreements.

Further, most renewable power plants have inconsistent deliveries of energy due to the nature of the resource, such as solar or wind. The corporate off taker must consider both its energy demand and the ability to resell excess power. In addition, local jurisdictions may change laws governing how excess power will be transferred and paid for. The possibility of regulatory change must be accounted for in the PPA, but there are few easy solutions.

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[6] https://www.google.co.uk/green/energy/
"Google's Latest Steps to Increase Use of Its Renewable Energy," reported on New York Times on December 3, 2015.

[7] http://www.sustainablebusiness.com/index.cfm/go/news.display/id/25330

[8] http://investor.firstsolar.com/releasedetail.cfm?ReleaseID=895716

[9] http://patternenergy.com/en/operations/facilities/logans-gap-wind/

[10] https://www.google.co.uk/about/datacenters/renewable/index.html
"Google Transforms Old Coal Power Plan into Renewable Powered Data Center," reported on CNN Money June 25, 2015;
"Google Buys Altamount Wind Energy to power Googleplex," reported on Mercury New February 11, 2015.

We have also seen a significant rise in the US in distributed generation for industrial or corporate end-users. We recently assisted a leading developer of generation in developing a form targeting such customers. In addition, we have assisted with a financing which involves the installation of on-site fuel cell systems by customers such as Walmart, AT&T, Home Depot and Federal Express, among others.

For a number of years, we have assisted with transactions involving the direct purchase of renewable power by municipalities, cooperatives as well as universities and hospitals. US companies have now adopted this strategy and are supporting the continued and increasingly rapid development of renewable power generation throughout the US.

Related directly to the rise in Corporate PPAs, the fluid and improving nature of battery/energy storage technology is propelling consideration of on-site generation alternatives. With increased battery capacity and constantly improving reliability, it is no longer just utilities like Southern California Edison and Long Island Power Authority that are recognizing renewable generation and energy storage as a much more complete system, but commercial and industrial ventures as well. DLA Piper has more than seven years of extensive experience in the energy storage sector and marries its renewable energy expertise, helping clients to evaluate integrated system solutions.

THE UK AND EUROPE

As Europe moves, on the whole, to an auction based regime for renewable generation assets and the government subsidies do not flow like they once did, having a PPA underpinning renewable energy projects with corporates with substantial balance sheets is certainly going to help the bankability of such projects.

Meanwhile, as oil and gas prices have become more volatile over recent years, corporates have simultaneously sought to improve their carbon footprint, and so PPAs have provided a good solution to these issues with price certainty and their environmental benefits. Fixed electricity prices helps corporates avoid the fluctuations of the open market, and the increased commitment to renewable energy projects supports the business case for the development and financing of new clean energy facilities.

In 2012, DLA Piper acted for OX2, the renewable energy company, in respect of Google's first Corporate PPA in Europe and Scandinavia. It was a 10 year PPA for the total output from a 72 MW on-shore wind farm subsequently bought by Allianz. The PPA benefits from the Nordic region's shared electricity market and grid system, Nord Pool, which lets Google buy the wind farm's output in Sweden and consume the same amount of power at its data centre in Finland. This was a significant milestone in the European market waking up to Corporate PPAs, so much so, it made front page news of the Financial Times in the UK.

Since then, Corporate PPAs have become increasingly common across Europe with the active corporates being discussed in more detail below.

We have advised EnergieKontor, the German group that develops and manages wind farms and solar parks in a number of European countries, on a number of Corporate PPAs in the UK with different corporate counterparties, including with a telco giant. For EnergieKontor, the benefit came from having fixed electricity income from a large corporate with a substantial balance sheet. Meanwhile our client, who committed to buying all of the energy produced by an onshore wind farm for 15 years, can power five per cent of its network with pure renewable energy, reducing

its exposure to energy market volatility and reducing its energy bills, thereby freeing up cash to reinvest in its business.

Lloyds Banking Group retained DLA Piper for the negotiation and completion of the agreement for purchasing electricity and associated benefits from Infinis plc, a leading renewable energy generator operating a portfolio of landfill gas plants in the UK. Signed at the end of January 2015, the deal ensures 20 per cent of the bank's energy is sourced from fully renewable sources. Under this unique arrangement, the Bank will purchase around 115,000MWh per year of renewable power from Infinis – enough to power approximately 1,700 branches for the next ten years. Supporting the generation of low-carbon electricity in the UK, the agreement enables Lloyds Banking Group to displace CO_2 emissions of around 56,000 tonnes from the National Grid.

In early 2016, we acted for a Credit Suisse led consortium on the 1000MW onshore wind farm cluster, Fosen Vind, in Norway – Euorpe's largest on-shore wind farm. This was a project that had previously stalled, but Norsk Hydro, a large Norwegian aluminium producer, subsequently confirmed it would enter into a 20 year off-take for a substantial amount of the output, which was paramount to the business case and thus the investment decision.

2016 has got off to a strong start with a number of Corporate PPAs being entered into, most notably the Corporate PPA between Brookfield Renewable Energy and Facebook for 150 MW of wind power to generate Facebook's data centre has garnered a lot of press.[11]

ASIA PACIFIC

There has been some uptake of Corporate PPAs in Australia. Although slow compared to the US market and EU markets, it is a space which DLA Piper continues to monitor as PPAs themselves are not foreign to Australia. Historically, many energy intensive facilities have contracted directly under PPAs with a generator for the supply of electricity.

Australia has national legislation, known as the Renewable Energy Target, which requires that more than 20% of electricity generation to be provided through renewable sources by 2020. This is to be achieved in part through a requirement on large energy generators to meet this target.

Although we see some PPAs with a term of 10 – 12 years in Australia (which is an improvement from terms of 5 years prior to the renegotiation of the Renewable Energy Target in 2015), one of the remaining challenges is the lack of more long-term renewable energy PPAs to underpin the financing of the required renewable projects. This gap leaves a space for potential negotiation of renewable energy PPAs by corporate and government entities.

In 2015, it was estimated that around 200kWs of renewable energy was signed in Australia using Corporate PPAs between 2008 and 2015. The purchaser was the University of Technology Sydney and the energy is generated at a solar farm more than 150kms away. More recently, the City of Melbourne has also been working with a group of different corporate entities to collectively purchase 110 GWh of renewable energy. This will be done through PPAs which will involve a corporate group purchasing model for energy generated from wave and/or wind technologies. Although just a small market at the moment, the latest market analysis predicts that the Corporate PPA market is just around the corner for Australia.

[11] https://www.brookfieldrenewable.com/content/2016/brookfield_and_facebook_to_enter_longterm_renewab-43947.html

More broadly across in the Asian market, Singapore has seen a number of Corporate PPAs signed in recent months. For example, in late 2015, Apple – in line with its stated global goal to power all its facilities around the world with renewable power – announced it had entered into a Corporate PPA for the supply of clean energy for its Singapore headquarters from a local renewable energy-focussed licensed wholesaler and retailer.[12] Around the same time, Asia Pacific Breweries Singapore (APBS) signed a Corporate PPA with Renewable Energy Corporation (REC) for REC to provide clean energy sourced from solar panels.[13] This PPA is scheduled to run for the next 25 years and will see APBS generate approximately 2.3 million kilowatt-hours (kWh) of clean energy annually, with the supplier, REC, absorbing the investment and maintenance costs of installing solar systems on APBS' rooftops, whilst APBS only pay for the consumed solar energy generated from their roofs at an agreed rate.[14]

In China, whilst traditionally all power has been bought and sold via the common electricity grid, in 2014, the National Energy Administration set a target for 3% of China's total electricity consumption to be sold through direct sales agreements.[15] Whilst such electricity is generally restricted to power from thermal plants, this has been relaxed in certain provinces. For example in recent years in the province of Inner Mongolia, a metal refinery entered into a Corporate PPA to purchase 100 GWh of wind power sourced from a farm operated by the China Huaneng Group;[16] whilst in Yunnan certain hydropower plants have sold surplus hydroelectric power directly to surrounding industrial consumers.[17] More recently, in addition to Yunnan Province and Inner Mongolia, an increasing number of provinces have relaxed the restrictions on the direct sales of electricity to end-users from renewable energy power generation companies. For example, in 2016, the province of Xinjiang included renewable energy such as wind power and PV solar in the scope of permitted direct power sales agreements,[18] and a large number of electricity consumers in Gansu Province have also signed direct sales agreements with renewable energy power generation companies this year.[19]

Countries across the region (including India and China, among others) have been unrelenting in their push for renewable energy uptake, and support this via a host of policies and regulations. As a result, it is likely that Corporate PPAs will become a growing feature of the region's approach to tackling climate change.

LATIN AMERICA

In Mexico, the electricity market is undergoing a structural reform. It is moving from a state-owned integrated monopoly to an open market. Before the reform, generation of electricity was reserved to the State. As an exception, private parties could generate electricity for self-supply purposes. Under this regime, developers could enter into long term PPAs with large corporations. Many of these self-supply projects are using renewable sources. Lawyers in the DLA Piper Mexico City office have participated in the development of renewable self-supply projects and negotiation of bankable long term PPAs, both for developers and consumers.

With the reform, the market will move to an auction based regime. However, there are many renewable projects under development looking to enter into long term PPAs with corporations. Also, the reform provides incentives to promote the use of renewable sources by creating clean energy certificates market and minimum clean energy source consumption obligation for users, which currently is at 5% of the yearly consumption.

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[12] "Innovating on rooftops in Singapore" (on webpage "Environment: Climate Change") available at <http://www.apple.com/uk/environment/climate-change/>. See also "Sunseap Group to provide Clean Energy to power 100% of Apple's operations in Singapore – a landmark arrangement in Southeast Asia" (News Release, dated 16 November 2015) available at: <https://sunseap.com/sunseap-group-to-provide-clean-energy-to-power-100-of-apples-operations-in-singapore-a-landmark-arrangement-in-southeast-asia/>.

[13] Asia Pacific Breweries Singapore partners REC for solar installation project, paving the way for clean energy adoption in Singapore" (News Release, dated 19 November 2015) available at:

[14] <http://www.recgroup.com/en/asia-pacific-breweries-singapore-partners-rec-solar-installation-project-paving-way-clean-energy>.

[15] State Grid, "National Energy Bureau will not set a development target for 2015 hydro and wind power" (published 8 January 2016), available at <http://www.bj.sgcc.com.cn/html/main/col12/2015-01/08/20150108100809969418578_1.html>

[16] "Direct power purchase in Northeast China reduced 100 million kwh waste of wind power in 2014." (published 14 November 2014) available at <http://www.cpnn.com.cn/dljg/201411/t20141104_764203.html>

[17] "Survey in Yunnan: What are the difficulties in electric power reform " (published 17 December 2014), Phonex Financial News available at <http://finance.ifeng.com/a/20141217/13360937_0.shtml>

[18] "Renewable energy is included in the scope of permitted direct power sales in province of Xinjiang" (published 1 April 2016), Beijixing Electricity Sales Web, available at <http://news.bjx.com.cn/html/20160401/721668.shtml>

[19] "Electricity consumers in Gansu sign direct sales agreement with renewable energy power generation companies" (published 22 March 2016), available at Beijixing Electricity Sales Web <http://shoudian.bjx.com.cn/html/20160322/718385.shtml>

In Brazil, since the reform of its main regulatory framework in the mid-90s, the country has been stimulating the growth of renewable power generation and long-term renewable PPAs. Not only has such reform decentralised power generation activities from the state-owned companies or public concessionaires, but also introduced several benefits to independent renewable generation projects in its core rules.

As one of the key incentives that the current core energy regulation in Brazil has granted to renewable PPA market, there is the institution of a whole class of consumers, who, when purchasing in the non-regulated market, may only purchase energy from small hydroelectric plants or renewable energy plants (wind, solar and biomass). Additionally, Brazilian ground energy law sets forth that renewable energy plants with a capacity of up to 30MW benefit from a discount ranging from 50% to 100% in distribution and transmission tariffs.

Another recent key factor, as it is also known, in view of the issues and crisis involving poor performance of the Brazilian regulated energy market and public concessionaires, independent producers, traders and the Brazilian Chamber of Energy Trading ("CCEE") have been reporting growing figures regarding long-term PPAs, especially when arising out of alternative and renewable sources of energy.

Finally, the most recent regulation has detailed and provided a whole new scenario for renewable self-generation and net metering systems, which has triggered an equally new range of long-term equipment and service supply structures, aiming at energetic efficiency.

THE MIDDLE EAST

The Middle East has been slow to develop renewable energy capacity although progress has been made in recent years. The business case for renewable energy projects is well known. Middle Eastern countries rank among the world's highest for solar irradiation, making the conversion of solar energy relatively efficient. They also burn huge volumes of oil in their conventional power generation facilities. At a macroeconomic level, renewable energy offsets the use of oil, allowing Middle East countries to use that resource elsewhere.

Significant barriers limit the roll-out of renewable energy projects, whether on a distributed or centralized basis. Firstly, national electricity markets are typically structured around a vertically integrated utility power company that owns a large fleet of conventional power plants, and in many cases has long term utility PPAs with independent power generators. Introducing large amounts of renewable power would require them to reduce the dispatch of these facilities, directly affecting their bottom line. Secondly, the electricity prices charged by national utility power companies are heavily subsidised by their governments – both upstream, through subsidised fuel, and downstream, through end user subsidies. Accordingly the potential for the growth of distributed power generation is limited because at a practical level, utility power companies control the sector. Interfacing distributed power generation with the vertically integrated monopoly is difficult to achieve and economically difficult to justify against the artificially low electricity prices.

Despite structural issues, renewable energy projects are gaining a foothold. However their position in the market is being secured through long term utility PPAs that broadly mirror the forms used in conventional projects. The Emirate of Dubai is the only Middle East jurisdiction to publish regulations for the connection of distributed solar power generation facilities to the grid. The aim of the regulations is to allow utility customers to generate solar power on their rooftops and net the fed-in electricity against electricity consumed at other times. The regulations do not expressly prevent Corporate PPAs. However the net metering basis does not provide for the sale of excess power so the incentive to structure a Corporate PPA and associated airspace lease is very limited and uptake has been slow.

AFRICA

With the success of South Africa's Renewable Energy Independent Power Producer Procurement Program (REIPPPP), the development and financing of privately-sponsored renewable energy projects has become a model for Sub-Saharan African countries seeking sustainable energy solutions to systemic power shortages. With more than $15 billion of private sector investment committed and more than 4,000 megawatts of renewable power to be generated, the REIPPPP has shown that a well thought out program can bring expertise and investment to grid connected power systems. The pricing for renewable energy has declined since the first wave of renewable energy projects were awarded in 2011 and this trend is likely to continue.

Following South Africa, we have seen successful programs developing in Tanzania, Senegal, Guinea, Zambia, Kenya and Ghana in particular. The renewable energy programs in these countries, while somewhat different than REIPPPP also have attracted significant domestic and international investment. Like in South Africa, the preferred financing model in other Sub-Saharan Africa

countries is project finance, although there have been a number of corporate financing structures. To date, much of the renewable energy development has been for grid connected projects, and that is likely to continue for large and utility scale projects. However, with the continued technology advancements, distributed renewable energy, particularly distributive solar power, has become a viable option. Without the need to reinforce transmission grids or to build substantial transmission capacity, distributive solar can be developed successfully in remote, or grid-constrained areas.

In order to achieve a successful renewable energy program, it is important to learn from the South African experience. Among those lessons are well-thought out and politically supported policies, a transparent procurement process, acceptable regulatory structure and tariff levels and, where possible, a single buyer off taker model with acceptable credit quality. The development of market-standard power purchase agreements, tailored to the needs of the particular country, together with the relatively shorter construction period compared with fossil fuelled projects, have been a significant step forward in bringing renewable energy projects on-line quickly. With substantial solar, wind and hydro assets, it is reasonable to expect that renewable energy development will accelerate throughout Sub-Saharan Africa.

Issues to be considered in a Corporate PPA

Initially, there is an innately high barrier to enter the Corporate PPA market, simply due to the complex nature of the document. As referred to earlier, the negotiation of a renewable energy PPA is an intricate skill which requires specialist knowledge and experience. In-house teams of smaller corporates may not have the unique specialist skills required and generally seek advice from more experienced external providers.

Clearly issues will change depending on the geography, but in the most part, we would expect the parties to be mindful and to have considered the following issues:

Duration

There are some examples of the earlier PPAs (particularly in the US) being entered into for 20 years but end users have pushed back on this and we have seen over the last couple of years an average of 10 to 15 years.

Electricity output/contracted capacity

Will the requirement be to sell all the output of the site? Will there be minimum or maximum requirements? What is the consequence of failing to meet these thresholds? On one very large scale PPA, the generator was responsible for procuring any under-supply of electricity for the end user (who needed a certain amount of energy for manufacturing purposes) so the generator entered into a PPA with a utility as well which dealt with under – and over-supply. On other PPAs, we have seen the end user take all output no matter the level but with incentives and penalties around price to ensure that a certain output is provided, or subject to a relatively low minimum performance level below which a termination right arises.

Proof of green energy

There is a move to new standards that the corporates use to account for their carbon neutral position. The Corporate PPA should align to the standard used by the corporate e.g. RE100 have set additional criteria for demonstrating use of electricity from renewable sources (such as IREC on which DLA Piper advised on the creation and implementation of the IREC standard) or Gold Power. Need to match PPAs to relevant GHG auditing standards of the particular company and ensure no double counting.

Change in Law

As these are long-term contracts, provision needs to be made for changes in law. As with utility PPAs, the standard position is that the parties re-negotiate the terms such that the balance of risk and reward is maintained. Some very material changes in law (for example, retrospective changes to subsidy regimes) could undermine the entire commercial basis of the PPA.

Subsidies/new benefits

This depends on renewable energy regimes from country to country. In the UK, for example, the subsidy for above 5 MW has been Renewable Obligation Certificates. These are of no use to corporates so they will sell them onto a licenced supplier. The relevant questions are: what happens if a new subsidy regime is introduced? Who gets the benefit or bears the risk of such changes?

Counterparty credit risk

The credit of the offtaker is a key issue for generators and also for the financing parties extending credit to the generator based on the revenues expected pursuant to the PPA.

Interface with financing parties

Parties providing financing to the generators will require the corporate end-user to enter into a direct agreement preventing the end-user from terminating the Corporate PPA for generator breach without giving the funder an opportunity to remedy the breach, among other things. In addition financing parties may well require the end-user secure its payment obligations to the generator under the PPA with additional security (e.g. PCG or bank guarantee). A financing party will review the PPA terms and the credit of the end-user for Corporate PPAs based on similar standards as those applied to traditional utility PPAs.

Interface with funders of the generators

Funders of the generators may require security from the corporate end-user, either in terms of a direct agreement preventing the end-user from terminating the Corporate PPA for generator breach without giving the funder an opportunity to remedy the breach, and/or (as noted above) indirectly by requiring that the end-user backs up its payment obligations with additional security (e.g. PCG or bank guarantee).

Portfolios

Where a generator is supplying electricity from a portfolio of generation plant, it may want to reserve the ability to introduce new projects or swap-out projects. This should not be a concern for the end-user as long as it falls within any agreed minimum and maximum supply commitments. Portfolios often provide greater certainty for the end-user that the expected metered output will be supplied as shutdown and maintenance risk can be managed more effectively.

Off taker approvals process

The internal approval processes of large corporates is not necessarily aligned with a project financing timetable. It is also generally recognised that the risk of withdrawal is higher as this is not a core part of the large corporate's business. This has historically been a problem but as the corporate green agenda continues to rise and the increased momentum behind RE100 and other such organisations hopefully will mean the problem with the procurement of energy being non-core for most companies will decrease.

Caps on liabilities

Fixed price PPAs are effectively a long term hedge and the break costs can be considerable so this is a key commercial point for both generator and corporate end-user. Depending on the market price of electricity, termination for default by a party could result in a considerable claim for lost revenue or lost savings from the other party. Some end-user PPAs have separate caps for certain default events such as de-energisation, termination of the licensed supply agreement etc.

Ensuring effective co-ordination between the Generator, Off taker and Licensed Supplier

In the UK and Europe, the corporate end-user enters into a back-to-back agreement with a licensed electricity supplier, under which the licensed electricity supplier performs various obligations under the PPA that can only be performed by a licensed electricity supplier, and purchases all of the electricity bought by the end-user then sells it back to the end-user often as part of a larger supply arrangement. The corporate end-user needs to ensure that it backs off all relevant obligations, risks and liabilities to the licensed electricity supplier. Clearly this will need an analysis on a case by case basis for the relevant geography.

There is no such requirement in the US. However, if relying on an existing transmission system, the generator will need to complete an application to interconnect and enter into a standard interconnection agreement.

Termination events

The standard termination triggers are failure to pay, material breach, termination of the Licensed Supplier Agreement and it not being replaced within an agreed period, failure to make available at least a minimum number of turbines or produce a minimum metered output for a continuous period of x months (unless as a result of Force Majeure), failure to maintain the required Credit Support, and any liability caps being reached. However , there could be project specific reasons for others.

Standard terms and conditions

Most large corporates will have standard terms and conditions that they require all of their customers, suppliers and counterparties to sign up to. These may not be palatable, or not seen as "market", to generators or licensed electricity suppliers but sometimes there can be little room for negotiation.

4. OPPORTUNITIES

There are opportunities across the world, particularly for businesses operating in multiple countries or continents, to invest in renewable technologies. With similarly global legal advisers well-positioned to assist with complex international negotiations using sector-specific and local knowledge, green-minded corporates have ideal partners to help to realise their ambitions.

Given the current uncertainty surrounding the global economy, Corporate PPAs can provide some guarantee as to quantities purchased and price paid in order to make projects viable where project revenues would otherwise be uncertain. This clarity and confidence in payments is also important in jurisdictions such as the UK, where varied and significant cuts to subsidies have taken place in recent years. As renewable technologies learn to stand without government subsidies, the Corporate PPA seems like an obvious bedrock.

Despite the relatively demanding and complex nature of Corporate PPAs, smaller companies have the opportunity to form consortia with other similar-sized businesses in order to create a viable economic position to negotiate an agreement. The creation of consortia also helps to spread the credit risk for the generator, as there will be less impact from one of the companies going bankrupt.

2016 will also be the year for the continued rise in distributed generation which, with developments in micro grids and battery storage, will encourage more businesses to generate at site and therefore, further opportunities for the renewable energy market to flourish.

5. KEY CONTACTS

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6. ABOUT DLA PIPER

With more than 30 countries, DLA Piper is positioned to help companies with their legal needs anywhere in the world. Our locally and internationally trained lawyers, operating from offices in the Americas, Asia Pacific, Europe and the Middle East, represent more clients in a broader range of geographies and practice areas than any other law firm.

Our energy lawyers are among the world's most experienced and geographically widespread, offering critical legal skills, industry-specific knowledge and the coverage that your business requires. We apply a distinctly commercial approach to our management of energy transactions and disputes and use our global platform to handle complex, multi-jurisdictional engagements.

We are proud of our ability to work efficiently and effectively across borders and of our track record of operating as one team in such situations.

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