REBA
Renewable Energy Buyers Alliance

C&I Procurement Update

Issue 3: November 2020

Introduction

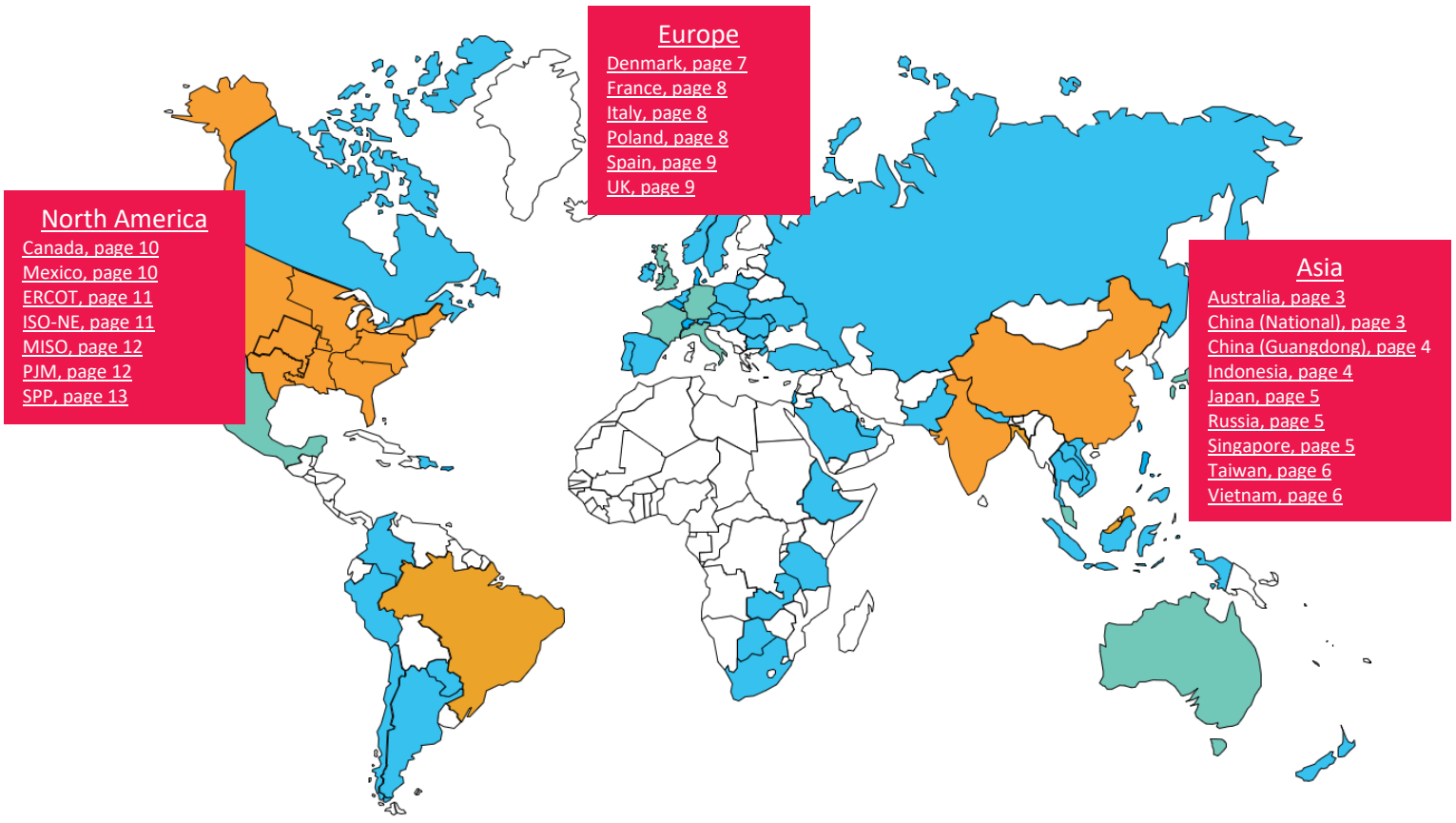
Large-scale energy buyers continue to drive the expansion of international clean energy markets as they look to reduce the energy impact of their operations and supply chain worldwide. The tri-annual **C&I Procurement Update** highlights international energy market updates, connects you with international organizations supporting sustainability practitioners, and communicates best practices implemented in the market to accelerate the procurement of renewable energy.

If you are interested in providing input, please contact the REBA team: supplychain@rebuyers.org

Table of Contents

The map below highlights the energy markets large energy buyers are interested in procuring renewable energy. Each issue of the C&I Procurement Update will reflect relevant market updates.

You have the option to read through the update in its entirety *or* use the map to jump to the specific market of interest.



Legend: identified buyer interest

Low **Med** **High**

C&I Procurement Update

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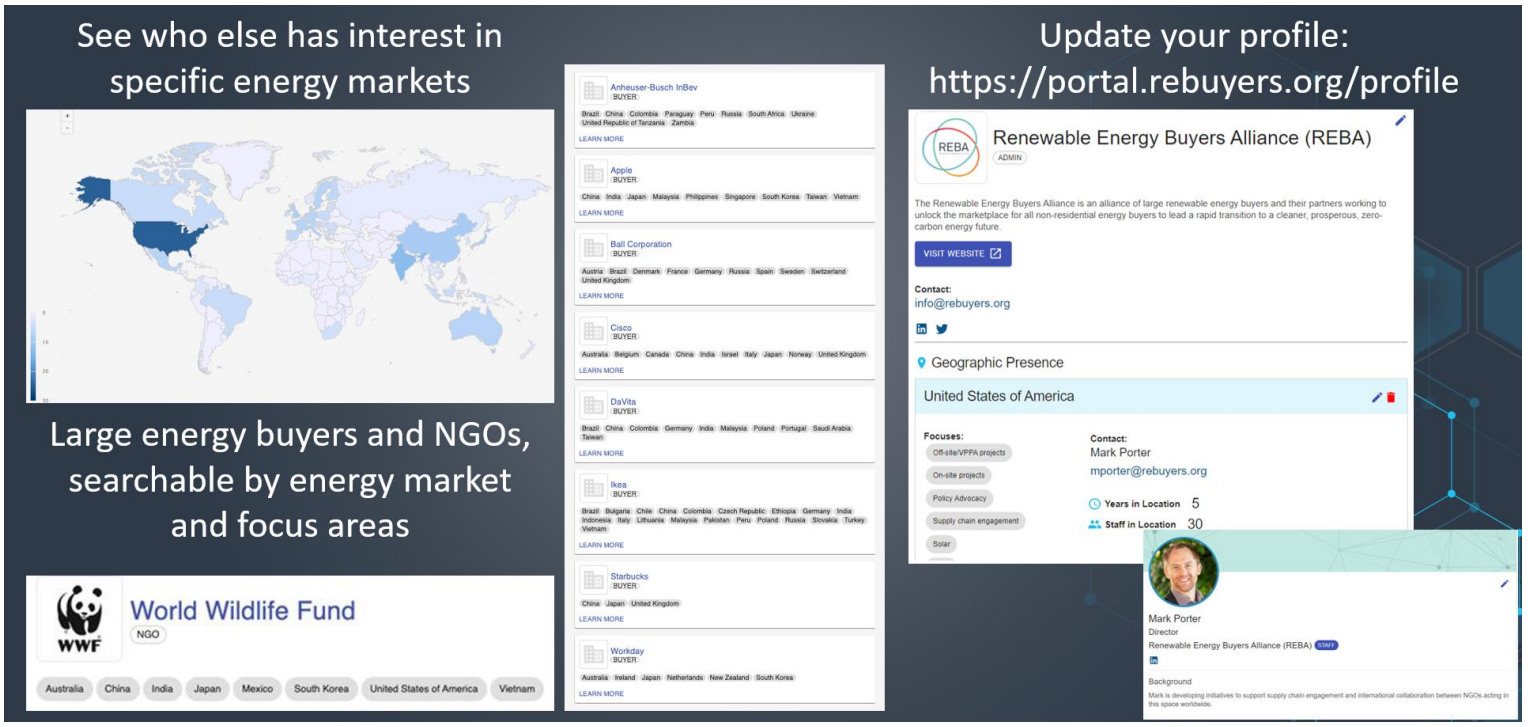
All buyer companies can connect with peers, worldwide

The International Connection Platform

The International Connection Platform (the Platform) has been built to enable connections and relationships among buyers and NGOs to accelerate sustainable energy goals in any energy market worldwide.

Through the Platform, you can see who else has interest and experience in specific energy markets, create company profiles, and connect with others working in markets of interest.

The Platform is free to any energy buyer and NGO acting to accelerate corporate procurement of renewable energy. To register and use the Platform yourself, visit: https://rebuyers.org/international-connection-platform/



We would like to thank the We Mean Business Coalition for investing in this unique connection tool and the many partners and members that have been involved in feedback and development of the Platform.

Worldwide Wednesdays- a new international connection discussion series

Worldwide Wednesday is a monthly virtual discussion series to share the latest developments and opportunities in renewable energy procurement in international markets of interest. Sessions will be co-hosted by energy buyers and NGOs with interest or experience in specific global energy markets. If your organization is interested in co-leading a session, please contact supplychain@rebuyers.org.

Future Updates

The C&I Procurement Update is meant to supplement existing information and research on international markets for large-scale energy buyers and should not be seen as a comprehensive product covering all aspects of an energy market.

REBA and its peer NGOs welcome feedback on the content and will endeavor to expand market coverage and contributors pending interest from intended stakeholders.

To provide direct feedback, please contact the REBA team: supplychain@rebuyers.org

Contributor Acknowledgements

REBA is proud to collaborate on the C&I Procurement Update with 7 peer NGOs and 11 for profits to support large-scale energy buyers' journeys towards emissions reductions through the implementation of renewable energy and to accelerate the transition to a zero-carbon energy system.

The following collaborators supported the development of this C&I Procurement Update issue based on areas of interest and activity as identified by corporate buyers. Please note, not all NGOs active in the energy sector were able to contribute.

Contributors: NGOs

BRC Australia
BRC Canada
BRC China
Clean Energy Investment Accelerator
EKOenergy ecolabel
Institute of Global Environmental Strategies
RE-Source
RE-Source Poland
Rocky Mountain Institute

REBA extends sincere gratitude to the NGOs that contributed and a special thanks to The We Mean Business coalition for supporting greater collaboration among the NGO group and the International Connection Platform.

Contributors: For profits

3Degrees
CustomerFirst Renewables
Edison Energy
Eversheds Sutherland
EY
Google
LevelTen Energy
Mt. Stonegate
Novo Nordisk
Orsted
Schneider Electric

Asia

Australia

Previous issues with content: 1 | 2

With thanks to BRC Australia

The International Energy Agency (2020) has declared that 'the COVID-19 pandemic has caused more disruption to the energy sector than any other event in recent history.' In Australia, there has been a modest reduction in electricity demand even as the economy entered COIVD-19-induced recession, however, the global impact on natural gas prices have led to major reductions in wholesale electricity prices. |

Amidst the tumult, Australia's Corporate PPA market has been impressively resilient. 2020 has already been a record year for Corporate PPAs with more than 1,000MW of deals finalized. A two-stream market has developed with large corporates signing wholesale PPAs directly with solar and wind farms, for example, brands such as Aldi, Coles, and Transurban, and mid-sized buyers signing retail PPAs through an intermediating retailer, such as capital city local governments and universities.

In the context of Covid-19 and depressed markets, state and local governments are taking a leading role as intermediators, anchor buyers and aggregators:

- A new public retailer in the state of Queensland signed a 400 MW PPA with a 1 GW wind farm and 320 MW PPA with another solar farm, and then on-sold additional capacity as retail PPAs
- In the state of Victoria, the Government has announced it will sign a PPA for its own consumption and leverage the purchase to support businesses to also sign PPAs with the projects
- In the City of Melbourne, the local government aggregated its second group of businesses (Melbourne Renewable Energy Group)
- In the state of New South Wales, the government is supporting the coordinated development of transmission and generation for renewable energy zones in regional areas, although the PPA model is not yet determined

Corporate PPAs have constituted over 40% of market volumes in most quarters this year, with the remainder of PPAs being signed with public utilities, and as private retailers and merchant investment has receded, corporate PPAs and the public sector have stepped in and maintained renewable energy project growth.

The expected 2021 impact of COVID-19 on PPA volumes appear modest at this stage, a survey of BRC Australia members found less than 30% of project developers and service providers agreed there had been a negative impact on buyer demand and a similar proportion felt there had been no impact. While depressed wholesale electricity prices reduces the short-term financial incentive to sign PPAs, and core business focus may become a greater priority, the combination of large corporates and other organizations with sustainability mandates (often public sector) is at this point still generating demand for corporate PPAs.

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China (National)

Previous issues with content: 1 | 2

With thanks to Rocky Mountain Institute's BRC China

President Xi Jinping called for a "green revolution" and said that China will scale up its targets under the Paris Climate Accord, seeks to peak carbon emissions by the end of the decade, and achieve carbon neutrality by 2060. While details are scant, the announcement provides hope that corporate actors will be able to play a stronger role in the energy transition.

Off the international stage and prior to President Xi's announcement, China released mid-to-long term power market transaction rules that stated all C&I users are allowed to participate in the power market, however, based on NDRC's comment in the end of 2019, it is likely that provincial government will establish a list of disallowed users, and no qualification details have been provided to date.

China's Ministry of Finance provided the calculation basis for "reasonable utilization hours," a concept introduced in legislation in January 2020, that determines how much power attracts subsidy payment (different from guarantee hours, that determines how much power will be procured by the grid companies and participate in power market transaction). This change could allow corporates to procure generation that exceeds the reasonable utilization hours to avoid curtailment, although access to provinces where DPP transactions allow access to surplus generation from renewable energy projects.

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China (Guangdong)

Previous issues with content: -

With thanks to Rocky Mountain Institute's BRC China

Guangdong, one of the leading provinces in power market liberalization, released draft policy for comment that if enacted would allow corporates registered for Guangdong's existing direct power purchase (DPP) market with voltage level above 10 kV contract with utility scale solar or wind projects (also feeding into a voltage level above 10 kV).

Should the official transaction policy in Guangdong be approved, it should be possible for qualifying businesses to cover 100% of their provincial-load with renewable energy from direct power purchase agreements.

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Indonesia

Previous issues with content: 1 | 2

With thanks to Clean Energy Investment Accelerator (CEIA)

PLN, Indonesia's national utility, has launched a pilot Renewable Energy Certificate (REC) program and corresponding regulations for REC implementation. The REC system has incorporated perspectives from large energy consumers worldwide and local corporate buyers from the CEIA Indonesia Working Group, including REC pricing expectations and mechanism requirements from private sector input.

The CEIA team's learnings from the Indonesian market supported the development of a primer covering REC-based procurement programs in regulated utility markets, provides a basic understanding of how RECs work, the steps a utility must take to establish REC-based renewable energy products to expand procurement options, and provide a mechanism for incentivizing clean energy development.

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Japan

Previous issues with content: 1 | 2

With thanks to Institute of Global Environmental Strategies

Two recent and important policy developments are expected to be key to market expansion over the long-term:

1. Japan's government started a three-year Strategic Energy Plan review process which outlines the main policies regarding the development of the energy supply structure. A focal point of the discussion is Japan's renewable energy target, being 22-24% by 2030, that was achieved in September. The review will focus on a new target and help set the future of the market, it will be important that renewable energy buyers and suppliers call for an ambitious target in the next several months
2. Ministry of Economy, Trade and Industry launched the 'Public-Private Council on Enhancement of Industrial Competitiveness for Offshore Wind Power Generation' to reduce market barriers, Japan Wind Power Association has suggested a capacity target of 10GW by 2030, 30 - 40GW by 2040, and 90 GW by 2050, and a LCOE target of ¥8-9/kWh (no price timeline provided)

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Russia

Previous issues with content: 1 | 2

With thanks to EKOenergy ecolabel

Following the long-awaited approval of Russian RECs to be issued in adherence to the I-REC Standard earlier this year, the first Russian origin I-REC certificates are issued from a solar installation, thanks to the work of Goal Number Seven as the local issuer. This is expected to be followed by a hydropower installation as the necessary checks are being finalized this month.

Concurrently, the Market Council, the regulator of electric power markets in Russia, continues to work on a national system of 'Low Carbon Certificates', but has yet to fix a launch date. The I-REC standard's goal is to continue to work closely with the Russian authorities to ensure that demand for renewable energy in the country is met.

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Singapore

Previous issues with content: -

With thanks to Google

In September of 2020, Google announced its first renewable energy procurement deal in Singapore. Google signed a multi-year deal with Sembcorp to provide locally-sourced renewable power to support Google's Singapore operations.

The deal includes surplus energy generated from close to 500 public housing flats with rooftop solar installations. The solar power generated is integrated seamlessly into the electricity supply of our operations, thanks to a unique three-party collaboration with both the power retailer (Sembcorp Power) and the solar developer (Sembcorp Solar). Google and Sembcorp hope that this arrangement will contribute towards making renewable energy more widely accessible for Singapore energy users in the future. For Google, this clean energy supply deal in Singapore is a step toward Google's long-term goal, also announced in September, to source 24/7 carbon-free energy for all of its data centers around the world by 2030, including in Singapore and across the Asia Pacific region.

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Taiwan

Previous issues with content: 1

With thanks to Ørsted

Access to renewable energy is developing and market precedents are beginning to show: Google was the first with a 10MW solar PPA, a number of consortium-PPAs have been signed in 2020, as well as the world's largest corporate PPA for 920MW between TSMC Ltd and Ørsted. The PPA will see TSMC offtake the full output of the Greater Changhua 2b & 4 Offshore Wind Farm for 20 years once the project becomes operational.

Recent reforms allow renewable energy projects to switch from the Feed-in Tariff (FIT) regime to a corporate PPA, with switching projects eligible to issue Taiwan Renewable Energy Certificates (T-RECs) that provide traceability of each MWh in compliance with reporting requirements. If a generator plans to wheel power to customer two additional agreements with Taipower will be needed, (1) A power wheeling agreement for gaining access to the grid to ensure the power is delivered to the end customer, and (2) A surplus PPA agreement which provides a route-to-market for any excess power generated more than the contracted amount in the corporate PPA.

Concurrently, the Renewable Energy Development Act Article 12 regulation (known as the 'large energy users' regulation) is under development with current drafts proposing a renewable energy target of 10% for all sites with a demand of more than 5MW. For some areas of Taiwan, the incentive to use renewable energy has already been in place via local government regulations and many corporates sought to address with self-generation, e.g. rooftop solar. On-site measures can provide 10% of a building's load, however, with many energy intensive businesses in Taiwan, on-site is expected to be insufficient and off-site solutions will be required. Demand from Article 12 compliance is expected to be around 1GW in capacity, and the Article proposes a potentially large fee for non-compliance to incentivize corporate participation.

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Vietnam

Previous issues with content: 1 | 2

With thanks to Clean Energy Investment Accelerator (CEIA)

Rooftop solar installed capacity in Vietnam surpassed 1,700 MW by mid-October 2020, a growth of over 1,300 MW in 2020, driven in part by cost-competitiveness at commercial and industrial facilities. However, the feed-in-tariff of 8.38 USc/kWh, used for the remuneration of excess rooftop solar exported to the grid, is set to expire at year-end. As at time of this issue, no extension or "FIT-3" for 2021 has been announced by the Government.

Regarding off-site renewable energy procurement, the Direct Power Purchase Agreement (DPPA) Pilot Program is expected to reach final GVN approval and officially launch in the coming months. When launched, the pilot program will enable corporate energy users to contract 400-1000 MW of solar and wind projects with IPPs through financial PPAs (contracts for differences).

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Europe

Changes in the European market

With thanks to 3Degrees

Renewable energy and GHG reporting rules in Europe are constantly evolving due to new countries joining the Association of Issuing Bodies (AIB), ongoing trade negotiations between EU member states and non-EU countries, and persisting administrative barriers to cancelling GOs in the country of consumption. Multinational corporate buyers considering the use of a single cross-border PPA to cover their electricity consumption across Europe must first examine the nuances of Guarantee of Origin (GO) market boundaries.

Specifically, on 1 January 2021, the UK will officially leave the EU single market, which puts recognition of REGO certificates from the UK for renewable claims made in continental Europe in jeopardy because the UK has not yet joined the AIB. At a minimum, this will increase the reporting risks associated with PPAs from UK-sited projects and complicate the use of EU GOs for claims in the UK.

While UK's OFGEM has stated that it will continue to recognise EU GOs for UK fuel mix disclosure following the UK's exit from the EU, CDP's 2020 scope 2 reporting guidance defines the regional European market as consisting solely of those countries that have joined the AIB, which does not currently include the UK. CDP is allowing qualified exemptions to this market boundary restriction for PPAs signed before 31 December 2021, but the guidance does not definitively indicate whether grandfathering will apply to UK REGOs for claims in Europe. As for RE100, it has not yet updated its guidance to reflect these revised reporting rules for Europe; however, it has informally indicated that while the AIB market boundary restriction will likely apply, the exemption for PPAs signed before 2022 will likely not be applicable to RE100 reporting.

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Denmark

Previous issues with content: -

With thanks to Novo Nordisk

The liberalisation of the power sector was a key ingredient in the Danish green power transition, allowing ever-larger shares of renewable energy to compete against traditional fossil fuels hour by hour in the spot market, and a key component of the successful Danish liberalisation has been to divide the transmission and production activities in separate entities. Last year, Danish consumption of coal fell by almost 43% and now accounts for just 5% of the observed energy consumption, while the generation from wind farms reached a record high of over 16 TWh of annual production, renewable energy as a whole contributed 50% share of demand.

Offshore wind, supported by public subsidies, is driving Denmark's renewable journey, and the government plans to add 6 GW of offshore wind capacity, indeed, the government recently unveiled plans to build the world's first offshore wind "energy islands" to help meet the 6 GW goal and show offshore wind leadership in Europe. Denmark also undertakes technology neutral public tenders to enable wind, solar PV, wave power, and hydropower plants compete to supply as much green electricity, as cost-effectively as possible.

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France

Previous issues with content: -

With thanks to Mt. Stonegate

The shutdown of France's oldest nuclear power plant in February 2020 clears the way for France's transition into a renewable energy powered economy. Over the next few years, 5 GW of production capacity is expected to close: 1.8 GW with the shutdown of the two nuclear reactors at Fessenheim and 3 GW on coal-fired power plants.

On that note, demand for corporate PPA is expected to grow, driven by hedging needs to manage volatility in power prices surrounding with changes in the grid energy mix. Renewable energy generation is anticipated to achieve a compound annual growth rate of 11%, complimentary to a reduction in nuclear power.

Due to COVID-19, power consumption was down 15% compared to consumption observed at the same time last year, causing the electricity pricing on the wholesale markets to revise downwards, from EUR50-55/MWh at the beginning of 2020 to around EUR20/MWh at the end of March. Several power traders are out of the money in long-term contracts with EDF, however, renewable energy has proven resilience throughout the pandemic.

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Italy

Previous issues with content: 1 | 2

With thanks to EY

While still having an impact on the market, the effects of the COVID 19 pandemic are leaving room for a progressive recovery of the pipeline of renewable projects. PPAs continue to be an attractive mechanism, however corporates interested in signing PPAs are still few due to the fear of price volatility in the market and utilities are more active and able to better manage risk with their large and differentiated portfolios. To date, 18 PPAs have been registered in Italy, most of them with a duration of 3 to 10 years and 10 – 50 MW contract capacity.

On the supply-side, renewable energy project developers are now able to propose PPAs with fixed price offers over 10-year tenure. However, the authorization procedures for the construction of new plants remains long, maintaining a market constraint on corporate transaction where most corporates seek projects with the authorization process already completed.

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Poland

Previous issues with content: 1 | 2

With thanks to RE-Source and RE-Source Poland

Corporate PPA activity continues to grow in Poland. BayWa r.e. started construction in July on a 64 MW solar project in western Poland, with plans to sell power to an unnamed industrial client under a pending PPA. Earlier in May, telecommunications company, Orange, announced a 15 MW PPA with two wind farms in central Poland. In Poland, renewable energy procurement is partially driven by concerns over high prices of the country's coal-based energy mix.

Regulatory barriers still exist to limit corporate sourcing potential, including restrictions to behind-the-meter connections. However, the COVID-19 pandemic and its economic consequences seem to be pushing Poland to take necessary action for the future energy transition.

In macro-level news, the "Baltic Sea Offshore Wind Declaration," signed in September by Poland, Denmark, Estonia, Finland, Lithuania, Latvia, Germany and Sweden, inaugurates close cooperation between the countries to develop offshore wind in the Baltic Sea. In the first quarter of 2021, regulations will also take effect to relax the 10H rule under the Wind Turbine Act, which currently does not allow wind turbines to be located at a distance smaller than 10 times the wind turbine tip height.

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Spain

Previous issues with content: 1 | 2

With thanks to Schneider Electric

Spain remains, arguably, the hottest market for corporate renewable energy purchasing, where activity relates to PPAs for in-country load and as a source of renewables for pan-European VPPA approaches. Several deals have been concluded, with counterparts including DSM, Nike, and Ball Corporation, and the level of activity remains high. The market has been helped by the recent Royal Decree which enables more seamless interconnection processes, including for hybrid solar and wind projects, providing more certainty and choice for corporate buyers.

While wind deals have dominated in the past, solar is competing strongly is expected to play a significant role in the future energy mix. However, a potential risk is the potential for grid congestion in certain areas as the build-out of these projects takes effect, and should be watched.

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UK

Previous issues with content: 1 | 2

With thanks to Eversheds Sutherland

Corporate PPAs are very active in the UK, with water utilities and large retailers leading the charge, and an influx of large international and US companies seeking corporate PPAs for their European operations. As it is still difficult for developers to take merchant risk in the UK due to market volatility and climatic conditions, the main avenues for developers in the UK for new projects lies with corporate PPAs and Contracts for Difference (CfD).

The CfD auctions are scheduled for 2021 with onshore wind and solar PV being able to participate and floating wind having a distinct administrative strike price. It is anticipated to be very competitive auction with reportedly over 10GW projects in contention.

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North America

Canada

Previous issues with content: 1 | 2

With thanks to BRC Canada

Two deals have been announced since the last issue, a new long-term agreement between RWE Renewables and Direct Energy Business underpinning a new 25MW solar plant in Alberta, and three of BRC Canada's founding members — BluEarth Renewables, Royal Bank of Canada and Bullfrog Power — announced a virtual power purchase agreement for a 39MW solar project in southern Alberta, will be operational in 2021.

As part of the economic recovery, the Canadian federal government announced CAD 10 billion of new infrastructure initiatives that will be led by the Canada Infrastructure Bank. Among five main initiatives, the Growth Plan includes: "$2.5 billion for clean power to support renewable generation and storage and to transmit clean electricity between provinces, territories, and regions, including to northern and Indigenous communities." The new investment should help enhance the already strong renewable energy ecosystem in Canada.

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Mexico

Previous issues with content: 2

With thanks to Edison Energy

Generators and Commercial and Industrial consumers in Mexico are faced with huge uncertainty, and the chance of a constitutional amendment is sending shockwaves through the market; some of the new proposed market rules (see previous issues) have been successfully challenged through amparos, a form of injunction in Mexican law, have been granted pending final resolution, but some other rules have been implemented, for example: limiting self-supply projects from adding new users.

The uncertainty in the markets is mostly self-inflicted: shortly after Issue 2 in July, a memo leaked outlining additional changes that would affect merit order plant dispatch, blocking IPP participation in the market, and others. The memo received swift reactions, implementation of policies outlined in the memo would likely have a negative effect on commercial and residential users, developers, and generators. The memo also resulted in a letter from several members of the US Congress to President Trump; US IPPs/developers/C&I welcomed this letter as a counterbalancing element in what seems to be one-sided battle in Mexico to establish new rules in the power, and oil and gas industries.

While the outlook is uncertain, with most changes affecting the operation of the Wholesale Electricity Market, C&I participants now are considering shorter-term Qualified Supply options, looking at behind-the-meter options for generation and energy optimization (on-site generation or "generacion local", implementation of energy conservation measures, distributed generation).

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United States (ERCOT)

Previous issues with content: 2

With thanks to CustomerFirst Renewables

ERCOT continues to see significant buyer interest for a variety of reasons: attractive PPA pricing, large and growing demand, and high wholesale prices in the summer combine to create high-value PPA opportunities. The biggest risks in ERCOT are that

1) Summer price spikes do not continue at their current levels, removing some upside potential, driven by increased natural gas peaking generation or transmission capacity and load becoming more responsive to high-priced hours, and
2) Increased renewable and storage build puts downward pressure on wholesale prices.

Also of note, PPA prices trends have begun to flatten or increase slightly in recent months which is serving to increase competition between buyers for the most attractive projects.

The ERCOT interconnection queue shows significant renewable capacity in the pipeline, but the expected load growth in ERCOT should help to offset downward pressure on wholesale prices that this may cause. In the same vein, solar projects should be less exposed to the impacts of increased renewable capacity because their generation profile lines up well with peak demand on the grid.

For PPA buyers with load in ERCOT, renewables can create a strong hedge if retail supply strategies take advantage of purchasing electricity with some wholesale market exposure. In hours with high wholesale prices, increased PPA revenue offsets higher retail spend. Similarly, in low priced hours, lower PPA revenue is offset by lower grid spend. It is also possible to have renewable generation delivered to a buyer's load, enabling the PPA price to replace retail supply charges and creating additional savings opportunities. Understanding the volatility and market risks, in conjunction with opportunities, is key to ensuring a successful procurement in ERCOT.

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United States (ISO-NE)

Previous issues with content: 1

With thanks to LevelTen Energy

ISO-NE is one of the least active markets for corporate procurement, especially compared to other ISOs like PJM and ERCOT, for two primary reasons:

1) Renewable energy supply options are limited as it is difficult to find available land for large projects with sufficiently strong resource areas (compared to other ISOs), and
2) Utility- and state-run procurements have driven up the price of RECs and SRECs to the point that PPAs in the region become uneconomical for corporate buyers compared to other ISOs.

As a result, C&I buyers have either participated in retail-based, community scale (2 – 5 MW) projects in states within ISO-NE that have programs open to larger buyers or have procured from projects located in other ISOs. One emerging market development to look out for is offshore wind, which will be a future opportunity for corporate buyers, and will likely require long-term utility offtake.

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United States (MISO)

Previous issues with content: 1 | 2

With thanks to LevelTen Energy

While historically corporate procurement in MISO has lagged that of other markets, over the past six months there has been growing interest from renewable energy buyers, due in part to the attractive projected values of solar projects located in MISO south.

Corporations are also attracted to the market due to the positive emissions impact that a PPA can have. Parts of MISO are heavily reliant on coal generation, driving greater impact from renewable projects sited in the region.

According to LevelTen's Q3 PPA Price Index report, solar PPA offer prices in MISO have been trending downward for the past year, dropping more than $3.00 in 2019, but have been on the rise over the last two quarters (rises in the previous two quarters is in line with most ISOs in the US). And in Q3 2020, the 25th percentile of hub offer prices for solar was $31.20, up from a record low of $30.00 in Q4 2019. While wind PPA offer prices have been slowly rising in MISO over the last two years, and spiked from Q2 to Q3 2020, increasing over $5.00 to $30.00. Please see the latest LevelTen Blog for additional information on corporate procurement in the region.

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United States (PJM)

Previous issues with content: 1 | 2

With thanks to Edison Energy

Corporate interest in PJM continues to be strong, but procurement is nuanced due to the regulatory uncertainty surrounding PJM's capacity market rules. As detailed on the Edison Energy Blog, PJM's capacity market rules that subject state-subsidized, new-build renewable projects to a "minimum offer price rule" (MOPR) may prevent new renewable resources from earning capacity revenues. These rule changes have driven up PJM solar prices in particular as project developers have evaluated the impact of lost revenues.

In October 2020, FERC accepted two pathways for new-build renewable projects to be eligible for capacity market revenues and be exempted from MOPR:

- The competitive exemption allows projects to tag their project RECs and certify the RECs are retired by only voluntary buyers. In this case, the power purchaser would need to be comfortable committing to retire the RECs over the contract term.
- The resource-specific exception would allow projects a greater chance of clearing their first capacity auction and, if successful, would guarantee capacity revenue for the project's life. Under this exemption, the project is also able to monetize its RECs, opening the possibility of a lower-priced energy + replacement REC product for corporate buyers. With these two exemption pathways confirmed by FERC, renewable project developers have become more confident in offering a range of PPA prices to prospective corporate offtakers.

Buyers can reduce the regulatory risk on a project by taking a fully bundled product, inclusive of the project's energy, RECs, and capacity rights. PPA prices for a fully bundled solar product are well above current wholesale market prices. On the other hand, buyers willing to take on the regulatory risk of solar projects successfully qualifying for a MOPR exemption will realize the lowest available PPA prices. For instance, a project offering energy and replacement RECs can price around current wholesale market prices, but the offer would come with a Conditions Precedent that the project would clear the capacity auction through the resource-specific exception. Regardless of product type, buyers will want to evaluate PPA prices against forward-looking wholesale energy prices and the alternative cost of purchasing PJM RECs.

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United States (SPP)

Previous issues with content: -

With thanks to Schneider Electric

The Southwest Power Pool (SPP) has been a moderately active location for corporate PPA transactions. Some of the best wind resource in the country is in SPP, which translates historically to very low wind PPA prices. Wind PPA prices have crept up as the PTC reduces, but remain some of the lowest headline prices available in the US market. Wind project availability in the market has declined in the past year as well.

SPP has decent solar resource in the southern sectors, with increasing project availability and low headline PPA pricing. However, SPP's historic and future projected wholesale power prices are lower than other RTO/ISOs, making the forecasted value of Virtual Power Purchase Agreements (the primary corporate deal structure in the market) is potentially worse in comparison. The lower market pricing is driven in part by an abundance of cheap generation, with relatively few large cities or load centers in SPP. Corporates interested in procuring renewable electricity in SPP should pay attention to the forecasted values when deciding to transact in SPP. In addition, SPP is beginning to experience delays in the interconnection process, although the issue is not as extreme as other markets, for example: PJM or MISO.

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About REBA

A community of energy buyers accelerating the zero-carbon energy future—greening the grid for all

Learn more about REBA

Upcoming NGO-hosted events

Dates	Event	Location
November 24, 2020	BCSD Taiwan	Taipei City
November 25, 2020	RE100 Realization Method and the latest case studies in Japan	Online (Japan time zone)
December 2, 2020	REBA Worldwide Wednesday: India	Online (North American time zones)
December 3, 2020	Utilizing Securitization to Help Drive Decarbonization	Online (North American time zones)
December 9-11, 2020	Energy Provider Boot Camp	Online (North American time zones)
December 9 -11, 2020	RE-Source 2020	Online (European time zones)
December 17,	Buyers Call	Online (North American time zones)
January 27, 2021	REBA Worldwide Wednesday: Canada	Online (North American time zones)
February 24, 2021	REBA Worldwide Wednesday: Australia	Online (North American time zones)

C&I Procurement Update market coverage

The following energy markets have been discussed in the C&I Procurement Update series

Energy market	Issue 1	Issue 2	Issue 3
Asia			
Australia	✓	✓	Page 3
China (National)	✓	✓	Page 3
China (Guangdong)			Page 4
China (Jiangsu)	✓		
China (Sichuan)	✓		
India	✓	✓	
Indonesia	✓	✓	Page 4
Japan	✓	✓	Page 5
Russia	✓	✓	Page 5
Singapore			Page 5
Taiwan	✓		Page 6
Vietnam	✓	✓	Page 6
Europe			
Demark			Page 7
Germany		✓	
France			Page 8
Italy	✓	✓	Page 8
Poland	✓	✓	Page 8
Spain	✓	✓	Page 9
UK	✓	✓	Page 9
North America			
Canada	✓	✓	Page 10
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United States (ERCOT)		✓	Page 11
United States (ISO NE)	✓		Page 11
United States (MISO)	✓	✓	Page 12
United States (PJM)	✓	✓	Page 12
United States (SPP)			Page 13
South America			
Brazil	✓	✓	
Colombia	✓	✓	