

Introduction

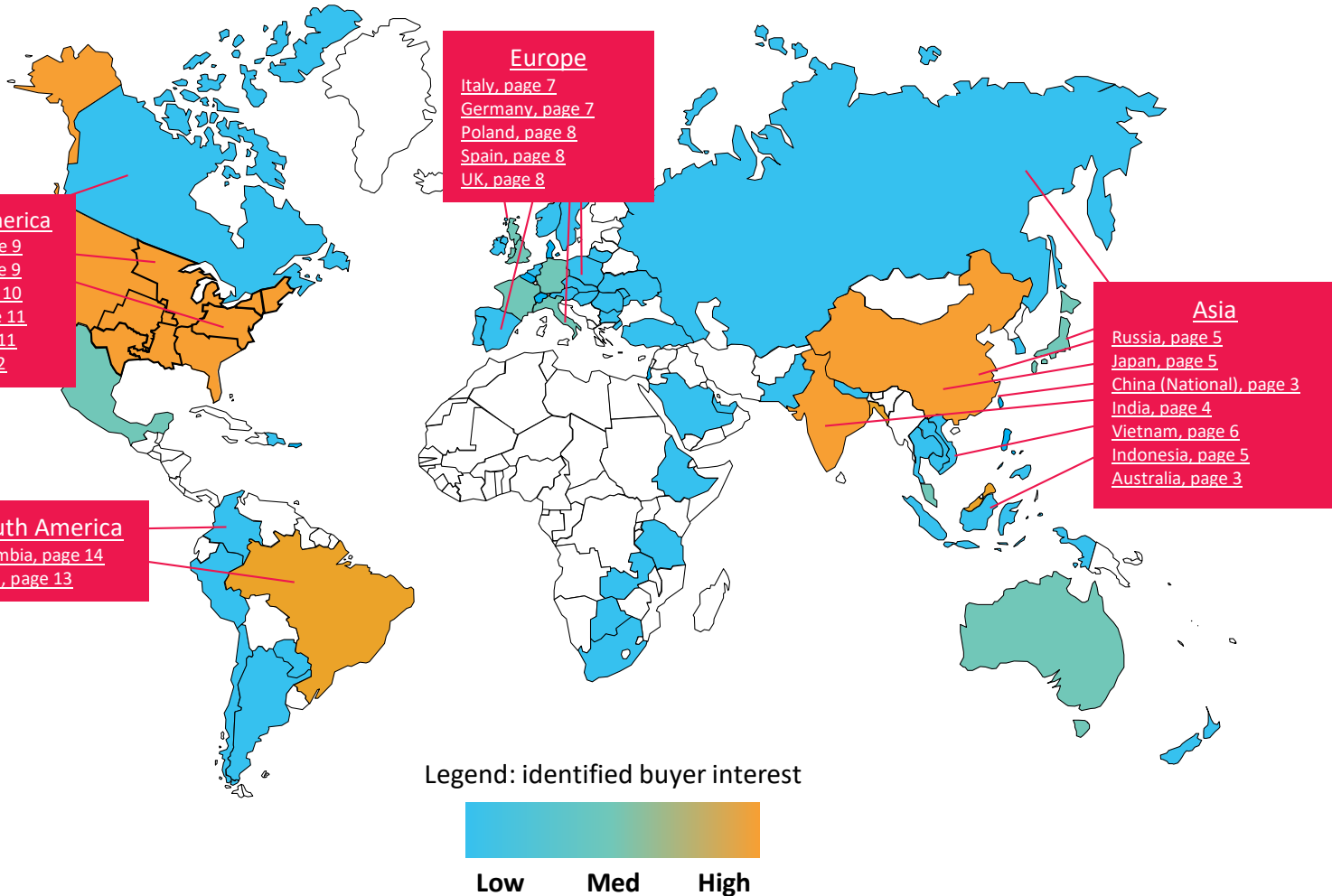
Large-scale energy buyers continue to drive the expansion of international clean energy markets as they look to reduce the energy impact of their operations and supply chain worldwide. The tri-annual **C&I Procurement Update** highlights international energy market updates, connects you with international 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.



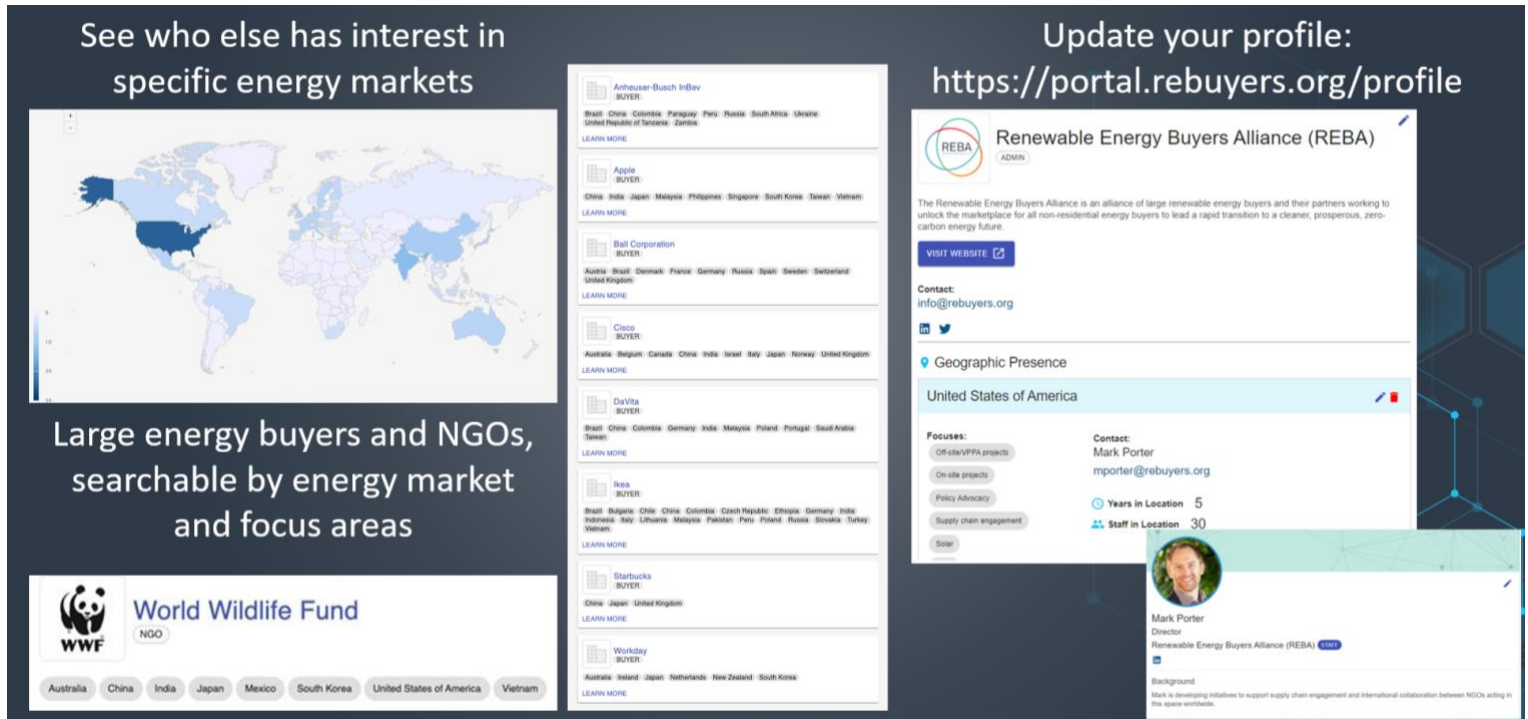
Advanced news: all buyer companies can connect with peers worldwide

The International Connection Platform has launched – be among the first to register

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/>



See who else has interest in specific energy markets

Large energy buyers and NGOs, searchable by energy market and focus areas

Update your profile:
<https://portal.rebuyers.org/profile>

World Wildlife Fund (WWF) NGO

- Australia
- China
- India
- Japan
- Mexico
- South Korea
- United States of America
- Vietnam

Energy Buyers List:

- Anheuser-Busch InBev BUYER**
Brazil, China, Colombia, Paraguay, Peru, Russia, South Africa, Ukraine, United Kingdom of Great Britain, Jamaica
- Apple BUYER**
China, India, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Vietnam
- Bell Corporation BUYER**
Austria, Brazil, Denmark, France, Germany, Russia, Spain, Sweden, Switzerland, United Kingdom
- Cisco BUYER**
Australia, Belgium, Canada, China, India, Israel, Italy, Japan, Norway, United Kingdom
- DaVita BUYER**
Brazil, China, Colombia, Germany, India, Malaysia, Poland, Portugal, South Korea, Taiwan
- Ikea BUYER**
Brazil, Belgium, China, China, Colombia, Czech Republic, Estonia, Germany, India, Indonesia, Italy, Lithuania, Malaysia, Pakistan, Peru, Poland, Russia, Slovakia, Turkey, Vietnam
- Starbucks BUYER**
China, Japan, United Kingdom
- Workday BUYER**
Australia, Ireland, Japan, Netherlands, New Zealand, South Korea

User Profile: Mark Porter
Director, Renewable Energy Buyers Alliance (REBA)

Geographic Presence: United States of America

Focuses: Off-site/VPPA projects, On-site projects, Policy Advocacy, Supply chain engagement

Contact: Mark Porter, mporter@rebuyers.org

Years in Location: 5
Staff in Location: 30

Background: Mark is developing initiatives to support supply chain engagement and international collaboration between NGOs acting in this space worldwide.

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.

Introducing Worldwide Wednesdays- a new international connection discussion series

REBA is also launching Worldwide Wednesdays, 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

The Renewable Energy Buyers Alliance (REBA) is proud to collaborate on the C&I Procurement Update with 13 peer NGOs and five service providers 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](#)
[CDP](#)
[Clean Energy Investment Accelerator](#)
[EKOenergy ecolabel](#)
[Forum for the Future](#)
[Polish Wind Energy Association](#)
[RE100](#)
[Renewable Energy Institute](#)
[RE-Source](#)
[Rocky Mountain Institute](#)
[Solar Trade Association](#)
[World Business Council for Sustainable Development](#)

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

[EY](#)
[Edison Energy](#)
[Ernst & Young](#)
[LevelTen Energy](#)
[CustomerFirst Renewables](#)
[Schneider Electric](#)

Asia

Australia

Previous issues with content: [1](#)

With thanks to BRC Australia

Following the expiration of the National Renewable Energy Target scheme, corporate PPAs are now likely to be the major driver of new renewable energy capacity in Australia, where a significant pipeline of deals are in development. However, the business case for many transactions – built on cost savings – has weakened and we expect a market contraction while wholesale prices recover post-COVID-19 pandemic.

Sustainability motivations continue to hold up the market, as seen through 10 corporate PPAs signed by major corporates in 2020. These include Aldi supermarkets, Amazon, Shell, Transurban (tollway operator) and a range of local councils, and take the number of organizations that have signed corporate PPAs in the past three years to 80.

The Australian market has recently seen growth in retail PPAs, wherein an energy retailer holds the agreement with a renewable energy project and sells to the buyer. The retail PPA model has supported the expansion of the market to include mid-sized buyers such as local governments, universities, and smaller industrials. In the past 12 months a range of models have emerged, for example: fixed-price models wherein the retailer provides a fixed price for periods when there is a mis-match between load and generation, and wholesale pricing models wherein the buyer has exposure to spot prices. [Business Renewables Centre-Australia has published a guide](#) for parties interested in understanding how retail PPAs work and the developments in the Australian market.

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China (National)

Previous issues with content: [1](#)

With thanks to Rocky Mountain Institute

May 2020 saw the release of the “Guidelines for Establishing and Improving Long-term Mechanisms to Promote Clean Energy Consumption” (referred to as “the Mechanisms Draft” in this update) which promoted local sources as one of the major ways to boost consumption. Local consumption pilots have been seen in Sichuan with hydropower, and Jilin province with wind, where corporates with large loads receive access to favorable power prices. Should this model expand, corporates could leverage discounted electricity tariffs while making material impact by consuming the otherwise-curtailed-renewable power in resource-rich regions. The Mechanisms Draft also established a more stringent accounting system of Green Electricity Certificate (GEC) and renewable electricity consumption, pointing to a trend towards establishing a credible and connected information system which might provide more open-source data and ease double counting concerns for corporate environmental attributes offtakers, and stating the RPS and GEC market shall be enforced and act in coordination with evolving spot markets.

Starting in 2021, solar projects and onshore wind projects will not receive national subsidies, though some provincial and municipal subsidies might remain. The first subsidy-free projects are expected to come online soon and once legislation changes to allow the issuance of GECs from subsidy-free projects, with a stronger GEC system as mentioned above, could provide genuine options for corporates in China. Buyers are suggested to follow the development status of subsidy-free projects with provincial energy administrations.

The “2019 National Monitoring Report on Renewable Power Development” also released in May provides the renewable utilization and consumption of the previous year. Specific provincial commentary includes:

- **Guangdong, Shanghai** – Guangdong and Shanghai stood out with renewable energy (with hydro included) accounting for 30% of their local energy consumption. Much of this progress is due to the imported hydro

power from the southwest. Guangdong is the most advanced province on power market liberalization and Shanghai has continued to broaden the base of power users eligible to participate in the market. BRC believes that as the market liberalizes, more corporate buyers could access renewable power.

- **Beijing** – Opportunity exists to coordinate with the Tianjin and Hebei grids for joint-consumption (the Jing-Jin-Ji region) to boost renewable energy consumption. A Jing-Jin-Ji regional renewable energy market has already been formed with an intent to allow buyers to purchase renewable energy across provincial boundaries; however, actual regional transactions have not occurred. Given pressure to further boost renewable energy consumption from the Mechanisms Draft, corporate buyers in this region could actively contact their local NEA, explore regional renewable energy DPP opportunities with renewable energy developers, and/or leverage renewable energy DPP experience held by local retail companies.
- **Hubei, Hunan** – Previously, both provinces had a relatively large 2020 RPS target deficit. While a new RPS policy reduced both provinces’ RPS targets, long-term pressure is expected as RPS targets rise over time and neither province wants to be seen with negative renewable energy growth. Therefore, we expect a push towards intra-provincial renewable energy consumption in 2021 as a compensation strategy. For corporate buyers, renewable energy DPP transactions are allowed in these two provinces. Though developers still lack incentive to transact because power is fully procured by the grid, the increasing provincial pressure could bring about change.

Extract from a BRC China-member Policy Update.

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India

Previous issues with content: [1](#)

With thanks to Forum for the Future

India’s Power System Operation Corporation (POSOCO) reported that daily power consumption fell 26% in the first 10 days of COVID-19 lockdown, reducing power prices in certain states and forcing the Ministry of New and Renewable Energy to assign a “must-run” status to renewable energy generation systems and make assurances that the payments will be made on time irrespective of the costs. Despite this status, states including Punjab and Uttar Pradesh have stated that they are unable to procure renewable energy. Madhya Pradesh and Andhra Pradesh have mentioned their inability to pay the generators as they are unable to collect dues from the consumers. The changes in market due to COVID-19 are placing additional financial pressure on already ailing distribution companies (“discoms”) and it is expected that project owners could see cash flow issues due to delayed payments from the discoms.

Different COVID-impact mitigation measures have been introduced at a state level, including: Andhra Pradesh, Karnataka and Tamil Nadu permitting rollover of banked electricity from open access generation systems and rooftop solar installations which are either under captive or contracted systems; Chhattisgarh, Goa, West Bengal and Union Territories reducing late payment surcharges for its discoms to 0.75%; and Punjab deciding to lower renewable purchase obligations in terms of units procured, for a few months.

The renewable energy sector has not come to a complete halt, as some states are still floating tenders for renewable projects, including Mizoram, Gujarat and Chhattisgarh. Loans are being approved for rural electrification infrastructure in Maharashtra and mini-grids have been considered essential services in remote areas, meaning that they can be maintained throughout lockdown conditions.

For more information and developments regarding the impacts of the global pandemic and measures taken to mitigate them, [see Mercom India's live page](#) and [Bridge to India's webinars](#).

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Indonesia

Previous issues with content: [1](#)

With thanks to Clean Energy Investment Accelerator (CEIA)

Following extensive work ongoing behind the scenes with a plethora of stakeholders, corporates are invited to email info@cleanenergyinvest.org to receive a digital copy of a Renewable Energy Corporate Procurement Guidebook for Indonesia in the coming months. The guidebook will provide international and local companies with an in-depth description of the key renewable energy purchasing options and policies in Indonesia, and seeks to help companies explore and navigate existing procurement opportunities in the country.

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Japan

Previous issues with content: [1](#)

With thanks to Renewable Energy Institute (REI)

The Japanese government is introducing new laws and rules for increasing available procurement options:

1. From April 2020 environmental attributes of all renewable electricity distributed through the grid network, including large scale hydro, are registered in the accounts of JEPX (Japan Electric Power eXchange), providing environmental attributes from generators with or without Feed-In-Tariff (FIT) subsidies. The registered environmental attributes are tradable as "Non-Fossil Certificates" (NFCs) between generators and electricity retailers through bilateral contracts or JEPX-auctions, where the NFC price is currently at JPY1.3/kWh and expected to reduce over the next couple of years. All green products will include NFCs. Energy users cannot purchase unbundled NFCs.
2. The Japanese FIT system will change in April 2022 and help grow the number of corporate renewable electricity PPAs. New solar and wind projects, excluding small-scale solar less than 50kW, will be eligible to receive a market-based Feed-In-Premium (FIP) and retain environmental attributes instead of a FIT at fixed subsidies. In several countries in Europe, the number of corporate PPAs has been increasing as the subsidy system changed from FIT to FIP, providing more renewable electricity to corporate buyers.

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Russia

Previous issues with content: [1](#)

With thanks to EKOenergy ecolabel

Following supply agreements with [AB InBev, Unilever and Fortum](#) for renewable energy in Russia, the International REC standard [announced I-REC issuance in Russia](#) and Thailand. This long-awaited development is a huge step forwards for energy consumers looking for opportunities to contribute to the energy transition in Russia.

The issuance of I-RECs in Russia will enable renewable energy trade and consumption aligned with international standards and reporting initiatives, offer a tool to prove the use of 100% renewable energy, and help companies to display their commitment in Russia.

See [EKOenergy's complete blog post](#) on this development in Russia (also available in Russian).

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Vietnam

Previous issues with content: [1](#)

With thanks to Clean Energy Investment Accelerator (CEIA)

The Vietnam market continues to see progress in terms of improvements to its enabling environment. In April 2020, a new solar regulation was finalized after multiple drafts over the last year. Key outcomes include:

- An extension and update to the feed-in tariff payment for both buy-all-sell-all projects as well as net billing projects for rooftop, floating solar, and ground-mounted systems. Rooftop systems that reach commercial operation by December 31, 2020 will be eligible for a 20-year power purchase agreement at USD \$0.0838/kWh.
- Clarity around the ability to use third-party onsite PPAs which should be catalytic for Vietnam's rooftop solar market. Previously, operating leases had been utilized with some legal ambiguity.

As a result of the April 2020 regulation, Vietnam is adding an average of 55MWp of new rooftop solar projects a month, putting the country on track to reach approximately 1,000MW of installed rooftop solar capacity by year-end, and importantly developing a strong renewable energy ecosystem that corporate buyers can tap.

The Vietnam government is also making important headway with piloting a regulatory mechanism to facilitate offsite PPAs. This regulation, referred to locally as the "Direct Power Purchase Agreement" pilot program is a financial PPA structure to enable industrial energy users to procure renewables directly from private solar and wind power producers through a contract for differences arrangement.

Following extensive work ongoing behind the scenes with a plethora of stakeholders, corporates are invited to email info@cleanenergyinvest.org to receive a digital copy of a Renewable Energy Corporate Procurement Guidebook for Vietnam in the coming months. The guidebook will provide international and local companies with an in-depth description of the key renewable energy purchasing options and policies in Vietnam, and seeks to help companies explore and navigate existing procurement opportunities in the country.

Additionally, CEIA has developed a Vietnam-focused, [rooftop solar procurement toolkit](#), which includes Request for Proposal templates, proposal evaluation guidelines, score sheets, and proposal evaluation data summaries for both third-party PPAs and turnkey purchases. Feedback on the documents can be provided to CEIA.

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Europe

Germany

Previous issues with content: -

With thanks to RE-Source

Corporate PPAs have not been widely used in Germany due to the historically attractive support scheme available to renewable generators; however, due to the expiry of the EEG feed-in tariffs for old plants from 2021 onwards and the country's target of generating 65% of its electricity from renewable sources by 2030, corporate PPAs are expected to be an important contributor to the country's energy transition. However, the COVID-19 pandemic is jeopardizing deadlines for new solar and wind plants due to the disruption of supply chains and a lack of installation workers. To address this, the German government announced it will grant extensions to construction deadlines for onshore wind plants, while solar PV plants may request the remuneration confirmation before the commissioning of the plant – if the plant is registered in the market data registry – and avoid FIT award expiry. Extension of projects' deadlines under Germany's tender scheme is also being debated as the usual 24-month connection window may be too short.

The construction situation is more relaxed for subsidy-free PPA projects. If a project is delayed, the developers and buyers can re-negotiate the contract, although this is not expected given current low electricity prices.

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Italy

Previous issues with content: [1](#)

With thanks to EY

Interest in renewables in the Italian market is experiencing a new flourishing phase, mainly due to the grid parity that has been reached in Italy. Several new projects are in the development phase, with an increasing average size (after a phase in which incentives were pushing for projects with limited capacity).

The latest tenders arranged in Italy reached an impressive result, with some projects getting a price below the pre-COVID wholesale price, which brought a natural boost to PPAs and agreements between project developers and off-takers (mainly utilities and traders, but with some corporates). The recent drastic drop in commodity prices and wholesale power prices due to the COVID-19 pandemic has destabilized the market: new agreements are in stand-by mode, waiting for more clarity on short-term price projections. In the medium and long term, the market looks set to return to its flourishing state of grid parity and competitive PPAs.

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Poland

Previous issues with content: [1](#)

With thanks to Polish Wind Energy Association

Domestic and international industrial interest in corporate PPAs is rising following the five publicly announced corporate PPAs (representing buyers in the steel, brewing, automotive, and lightning industries), driven by international competitiveness concerns from the high price of Poland's coal-based energy mix. Regulatory barriers persist to limit the execution ability of interested corporates, such as no behind-the-meter connections, and a ban on building onshore wind turbines closer to housing than ten times their height; however, the COVID-19 pandemic and its economic consequences seem to bring Poland closer to taking steps necessary for energy transition and industry decarbonization.

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Spain

Previous issues with content: [1](#)

With thanks to RE-Source

Spain continues to be the dominant destination in Europe for corporate transactions, with [Royal DSM signing a 59MW onshore wind transaction with EDPR](#) in April being one of the latest, driven by a strong economic case.

Grid access remains the primary bottleneck and creates significant uncertainty during the project development process. The Spanish Ministry for the Ecologic Transition has proposed a reform of the network access capacity granting procedure in 2020 to address grid access challenges.

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UK

Previous issues with content: [1](#)

With thanks to Solar Trade Association

As with most countries worldwide, the UK energy, renewable, and corporate PPA market has been significantly impacted by the COVID-19 pandemic. However, developers and investors have maintained their appetite for solar PV corporate PPAs, with interest levels returning to pre-pandemic levels (ground mounted project interest remained stable while rooftop project interest dropped and only recently recovered).

The UK Government recently announced a firm commitment to open Contract for Difference (CfD) auctions to onshore wind and solar after several years of blocking their involvement. While yet to be finalized, the inclusion of solar in the CfD auctions will introduce new buy-side competition and could alter corporate PPA attractiveness from the perspective of project developers.

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North America

Canada

Previous issues with content: [1](#)

With thanks to BRC Canada

Interest abounds in Canada where a growing number of companies have issued, and are planning on issuing, RFPs to procure renewable energy. Such interest follows national telecommunications company, Telus, signing their second PPA in 2019 to procure renewable wind energy from a grid-scale wind farm, with no government subsidies, after having been the first corporation in Canada to do so in 2017. The 117.6 MW Rattlesnake Ridge wind farm in Alberta is scheduled to begin generating energy in December 2021. See this link to [Telus' sustainability report](#).

TC Energy, a major North American energy company, also signed a PPA in 2019 to procure 74.25 MW of renewable energy from the 130-MW Claresholm Solar project in Southern Alberta.

And while activity centers on projects in the one deregulated energy market, Alberta, an RFI issued by the Canadian Government and the [Green Choice program of Nova Scotia](#) highlights the interest and potential market expansion across Canada to enable more market driven renewable energy choice, and many companies seek to expand procurement options to more locally meet their loads.

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Mexico

Previous issues with content: -

With thanks to Edison Energy

Mexico's Ministry of Energy issued an order on Friday, May 15, 2020 to maintain "Reliability, Security, Continuity and Quality, in the National Electricity System" and bypassed the review/comment processes that are in place with the National Regulation Improvement Commission (COFEMER). Hernandez Ochoa, COFEMER head, attempted to block the order on Wednesday, May 13, 2020 and resigned on May 15 after failing to stop the order. The 38-page order instructs Mexico's Centro Nacional de Control de Energia and the Energy Regulatory Commission (CRE) in many aspects of the wholesale electricity market operation that will directly and adversely affect renewable integration, interconnection, and plant dispatch. The May 15 order is seen by many to be a protectionist measure to halt the energy transition, the impacts of which may apply to existing and new contracts. Suspensions against the order have been granted, but the matter is still in dispute.

Other current topics and specific challenges faced by clean energy power buyers in Mexico include:

1. Changes in legacy contracts – new postage stamp transmission rates have been published, the increases are between 500% - 900% (depending on interconnection voltage)
2. Proposed modifications to Clean Energy Certificate (CEL) issuance - changes proposed by Comisión Federal de Electricidad (CFE), the state utility, to CRE, the regulator, increase regulatory uncertainty. These measures have been suspended by federal economic competition judges but a final outcome is still pending (including application of fines for CEL shortages of obligated entities)
3. Weakness in new renewable project development landscape – attractiveness fizzled after CFE Basic Supply renewable auctions were cancelled last year, mid- and long-term contract auctions were also cancelled, slowing the pipeline of new projects
4. Private Auctions running into delays – auctions being organized by Vitol, a Dutch energy and commodity trading company, and Bravos Energia, energy management services founded by a former director from the Ministry of Energy. Designed as an alternative to the CFE Basic Supply auctions, these private auctions are delayed due to the regulatory changes that are being put forward by CENACE, SENER, and CRE

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REBA addition: We understand that letters of representation and other action to repeal the recent legislative change are being organized by local NGO groups. Please contact us if you are interested in being connected.

United States (CAISO)

Previous issues with content: -

With thanks to LevelTen Energy

CAISO has been a challenging market for corporate renewable energy procurement for many reasons. Foremost is the nature of the regulated retail electricity market, which limits companies' ability to enter into physical supply agreements with renewable energy projects or choose a supplier that will offer them a renewable energy product. While the Direct Access program does provide an opportunity to procure renewable energy for some companies, enrollment into the program is very limited and many applicants are left on the waiting list. In addition to limited retail options, the CAISO duck curve also presents a financial risk for companies considering virtual power purchase agreements, one which dissuades many potential buyers from transacting in the state.

All that said, two recent developments could increase corporate transactions in CAISO:

1. First, the rapid development of new storage projects in the region and decreasing capital costs associated with storage could open the door to corporate investment. Storage paired with a solar project could allow renewable energy to be sold during more hours of the day, and-- if structured correctly-- could add value to the VPPA for offtakers. Market data shows solar and solar-plus-storage projects are widely available in California, while the number of wind projects offering PPAs has diminished. Over 75% of CAISO projects on the LevelTen Marketplace are solar, with many of those offering storage solutions. The decline of wind availability in CAISO could be attributed to the sunset of the federal Production Tax Credit (PTC), competition from increasingly cost-competitive solar projects, and development challenges.
2. Secondly, on April 1, 2020, Seattle City Light and Salt River Project announced their participation in the Western Energy Imbalance Market (EIM), which has served as an avenue for utilities outside of California to participate in the CAISO wholesale electricity markets. The expansion of the EIM will allow for the further integration of renewable generation across the West and may provide new opportunities for companies in the Southwest and Pacific Northwest to source renewable energy there.

Additionally, the LevelTen Q1 2020 PPA Price Index indicated the CAISO market was the only ISO to see a drop in solar pricing over Q4 2019, and the drop was significant, with an 8.3% or \$2.0 decrease in the P25 index to \$22 per MWh. Significant wholesale market price declines in this market over the last year have perhaps put pricing pressure on developers to remain competitive.

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United States (ERCOT)

Previous issues with content: [1](#)

With thanks to CustomerFirst Renewables

Buyers interested in procuring renewable energy in the largest C&I procurement market in the world should note three trends when assessing project options:

1. In the past several months, the best PPA pricing has increased by \$0.50-\$1.00/MWh, driven by the competitive pressures of a growing number of active PPA buyers and bank hedges from financial institutions
2. Significant market penetration of low-cost renewable energy continues to alter the locational and market risks, and care should be taken to understand project specifics
3. Due to the geographic distribution of new RE generation relative to load centers, “blowout” events have become more frequent in ERCOT. A basis “blowout” event occurs when the VPPA settlement hub price is significantly higher than the locational marginal price where project generation is sold into the grid. To avoid losses from basis “blowout” events, project owners often rely on economic curtailment at the expense of buyer revenues. When pursuing an ERCOT VPPA, it is crucial that buyers understand and negotiate how a project will treat basis “blowout” events.

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United States (MISO)

Previous issues with content: [1](#)

With thanks to Edison Energy

MISO is a market with diverse geography and varied project development regulations. The ISO spans eleven U.S. states and one Canadian province, giving it one of the largest footprints of the U.S. wholesale markets. Buyers seeking renewable energy projects in MISO should be aware of how geographic differences can affect PPA pricing and forecasted project economics. As reported in the [Edison Energy Renewables Market Update Q2 2020](#), MISO project inventory is growing fastest in the southern region. New-build solar projects located in southern MISO states, such as Arkansas, Louisiana, and Mississippi, were able to leverage stronger solar resources and fewer permitting hurdles to price at a discount to solar projects in Illinois or Indiana.

When considering projects marketed in the first half of this year, the forecasted economics of Arkansas and Louisiana solar projects were outcompeting solar and wind projects farther north. While MISO South solar projects have shown an economic advantage, it is critical to also evaluate projects’ remaining development risks, and evolving views of wholesale power markets. Interconnection remains a slow process for renewable energy projects, and depressed market prices are expected in the next few years, as markets recover from decreased demand during stay-at-home orders and economic recession. For corporate buyers willing to navigate these difficulties, southern MISO solar projects present an interesting opportunity for potential buyers.

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United States (PJM)

Previous issues with content: [1](#)

With thanks to Schneider Electric

The historically strong PJM market retains strong corporate demand but faces significant regulatory uncertainty due to the FERC ruling passed in December 2019. The ruling established a Minimum Offer Price Rule (MOPR) that requires new-build renewables that receive state-level subsidies (e.g., compliance REC market revenues, tax exemptions/credits) to bid into the capacity market at such high prices that they are not likely to realize any revenue. In response, developers have had to raise project PPA price bids to cover the loss of the capacity revenue or the subsidies beyond what is economically viable for most corporates' economic risk tolerance. As a result of the MOPR, few projects are available for corporate procurement as most projects are stalled.

In March 2020, PJM submitted its compliance filing to FERC and outlined how it intends to implement the MOPR, which, if approved by FERC, could significantly reduce the blow to new-build renewable projects through a clarification that voluntary transactions (bilateral developer – corporation) are exempted from MOPR.

In April 2020, FERC stated they won't entertain the PJM approach and numerous lawsuits were subsequently filed, including by the public utility commissions of New Jersey, Maryland, and Illinois. In addition, Maryland, New Jersey, and Illinois launched formal investigations into the possibility of exiting PJM's capacity market. The departure of utilities in any of these states would have a profound effect on the market dynamics of PJM's capacity market.

FERC is expected to formally respond to PJM's compliance filing in July or August 2020 and there is immense pressure to resolve the matter and resume PJM's capacity auctions. Buyers are encouraged to stay current on the developments and how this might impact specific projects under consideration and the pool of available projects at large.

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South America

Brazil

Previous issues with content: [1](#)

With thanks to World Business Council for Sustainable Development (WBCSD)

An ongoing review of the Brazil’s electricity regulation aims to introduce improvements such as cost reduction, rationalization of subsidies, robust pricing, and efficient incentives to drive investments in the electricity sector. Key changes that will impact the renewable energy market include hourly pricing, separation of capacity and electricity, and the possible removal of transmission and distribution subsidies for renewable energy sources.

In March 2020, the Brazil Corporate Renewable PPA Forum, led by [WBCSD](#) and [CEBDS](#), published a practitioners guide to corporate renewable PPAs in Brazil: [Guia para Power Purchase Agreements \(PPAs\) corporativos de energia renovável no Brasil](#) (in Portuguese with an English summary). The report provides guidance to corporate buyers on the opportunities and risks that PPAs can offer in Brazil, plus details on regulation (including details on the potential changes outlined above) and trends relating to corporate renewable sourcing.

A list of publicly announced corporate renewable PPAs in Brazil is shown below:

Examples of corporate renewable PPAs in Brazil



Source: [Guia para Power Purchase Agreements \(PPAs\) corporativos de energia renovável no Brasil](#), WBCSD, March 2020.

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Colombia

Previous issues with content: [1](#)

With thanks to Clean Energy Investment Accelerator (CEIA)

Following a recent virtual dialogue and working with a plethora of stakeholders, corporates are invited to email info@cleanenergyinvest.org to receive a digital copy of a Renewable Energy Corporate Procurement Guidebook for Colombia in the coming months. Drawing upon market studies, industry data, and first-hand experience in the Colombian renewable energy procurement sector, the guidebook will be a resource for C&I customers seeking to understand their renewable energy options in Colombia, and will offer an overview of three major procurement models currently available to businesses.

CEIA is currently assessing opportunities to support an off-site, aggregated renewable energy procurement in Colombia. Please contact Bethany Speer at Bethany.speer@nrel.gov if your company is interested in exploring potential participation.

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Contact us

To provide feedback and/or questions, please contact:
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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
September 21 - 27, 2020	Climate Week NYC and RE100 Global Members Forum	Virtual
October 14 – 17, 2020	3rd RE-INVEST to explore innovations for sustainable energy transition	New Delhi, India
October 27 – 29, 2020	REBA Fall 2020 and Verge 20	Virtual
December 9 -11, 2020	RE-Source 2020	Amsterdam, Netherlands

C&I Procurement Update market coverage

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China (Sichuan)	✓	
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