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 will highlight international energy market updates, connect you with international organizations supporting sustainability practitioners, and communicate best practices implemented in the market to accelerate the procurement of renewable energy.

If you are interested in providing input, please contact the REBA’s Supply Chain and International Collaboration team.

Table of Contents

The map below showcases the international energy markets attracting large-energy buyers 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.
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 the 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 Supply Chain and International Collaboration team.

Future Updates

The Renewable Energy Buyers Alliance (REBA) is proud to collaborate on the C&I Procurement Update with seven peer NGOs to support large-scale energy buyers 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 the C&I Procurement Update based on key areas of interest and activity. Please note, not all NGOs active in the energy sector were able to contribute.

**Contributor Acknowledgements**

- **CDP**: Global
- **Clean Energy Investment Accelerator**: Colombia, Indonesia, Vietnam
- **RE100**: Global; Australia, India, Japan, Korea, Malaysia, Taiwan, South Africa, Russia, Singapore
- **Renewable Energy Buyers Alliance (REBA)**: USA
- **RE-Source**: Europe
- **Rocky Mountain Institute (RMI)**: China
- **World Business Council for Sustainable Development (WBCSD)**: Global; Argentina, Brazil, India
- **World Wildlife Fund (WWF)**: Australia, China, Mexico, India

REBA extends the sincerest gratitude to all of the NGOs that agreed to contribute and a special thanks to We Mean Business, the organization funding this collaborative effort.
Asia

Australia

With thanks to BRC Australia

Corporate renewable power purchase agreements have rapidly emerged in Australia as a key source of investment and driver in clean energy transition. Seventy leading Australian organizations have signed Corporate PPAs in the past two years and procured around 2.3 GW of electricity, with 70% sourced from new solar and wind farms (30% from operational projects). Recently, investment stimulated by corporate PPAs and government auctions has generally outstripped utility PPAs and merchant projects.

One of the striking features of corporate PPAs in Australia is the diversity of buyers. The market has quickly diversified from the large corporates into a range of mid-sized users across the Australian economy including manufacturers, farmers, councils, banks, universities, schools, vineyards and even the iconic Sydney Opera House. To meet this interest and demand, there has been strong growth in retail PPAs (where the retailer holds the agreement with the project and on-sells to the buyer). Larger deals have generally been wholesale PPAs (under a contract for differences structure) however retail PPAs are the most prolific by volume.

400MW of transactions were announced in 2019 being driven by the growing number of corporate sustainability targets, companies seeking to minimize exposure to an extremely volatile wholesale electricity market, and opportunities for cost savings.

Going forward in 2020, the major challenges are the policy uncertainty, as Australia does not have an effective integration of energy and climate policy, and grid connection and transmission issues. There have been extensive delays in grid connection with additional requirements placed on developers, e.g. installation of synthetic condensers, and the marginal loss factors applied to projects to reflect transmission losses to regional nodes have dramatically reduced expected revenues for some projects (by 15-20%). While changes to the MLF regime are currently under consideration, these have not been formalized.

The growth in firming products and storage to complement renewable energy generation should be watched in 2020. There are a range of products emerging on the project side, for example: 'solar shape' products to enable solar farms to meet firm commitments, and the buyer side, for example: retailer products and PPAs, and the demand response market is also developing rapidly. These are important developments in the context of highly volatile electricity markets and the growing 'duck curve' impact on daytime prices.

Author: Chris Briggs
Organization: BRC Australia
Email: chrisb@businessrenewables.org.au
China (National)
We would like to call attention to a recent report from Center for Resource Solutions, with funding provided by Google, LLC., which reviews the Chinese voluntary renewable energy market and explores existing and emerging procurement mechanisms including retail electric providers. Also, in Chinese.

China (Jiangsu)

With thanks to Rocky Mountain Institute
As a province with strong economic development, Jiangsu has a large electricity load. Renewable energy generated is fully purchased by the grid without any curtailment, unlike many northern and eastern provinces. Jiangsu’s power market transaction is very active and the scope of power users participating in the market are also continuously expanding.

Distributed market transaction is a major focus and innovation in Jiangsu. After months of stagnant market progress of distributed market transaction nationwide, Jiangsu province issued the first provincial level distributed market transaction rule (peer-to-peer) in draft version on December 9, 2019. This policy allows companies to sign a year-long contract with an approved distributed renewable project in adjacent areas – effectively offtake with a distributed renewable energy project in the same area. Six pilot projects were approved prior to this legislation being enacted.

The official release of the Jiangsu policy signals a positive change to activate China’s distributed market transaction segment, which has long been promoted by the central government but with little provincial implementation and could provide guidance for other provincial policy makers. Challenges remain, such as the current limited scope of eligible project and disputed network tariff mechanism, however Jiangsu is indicating it seeks to open this market segment for transactions.

Author
Cheng Zhang
Organization Rocky Mountain Institute
Email czhang@rmi.org

China (Sichuan)

With thanks to World Wildlife Fund
Sichuan provides one of the cleanest grids in China being one of the most hydropower-rich provinces with 77.5% of power consumption in Sichuan coming from hydro generation (2018) and 4.4% from other renewable energy sources, already exceeding the province’s 2020 RPS target of 3.5% non-hydro renewable generation.

In Q1 2019 the Sichuan government has released the provincial power market reform implementation workplan to further remove market entrance restrictions for commercial and industrial end-users, added retail options, including for industrial park resident companies, and new direct power purchase (DPP) options for otherwise curtailed hydro generation. DPP options for non-hydro renewable generation sources are not yet available for corporate buyers. However, the market and policy framework is moving in the right direction as market liberalization is expected to reduce renewable energy generation cost and create a stronger case for the province to enable bilateral transactions with grid integration. Opportunity exists right now for companies to work together, especially those located in the same industrial parks, and actively engage in conversations with provincial stakeholders to shape the course of the ongoing market reform.

Author Cihang Yuan
India

India emerged as the second largest corporate PPA market globally behind the US and since 2018 annual corporate PPA capacity has exceeded 1 GW per annum. India’s strong corporate PPA sector growth is due to the large number of engaged corporates with load in-country seeking sustainability and the economic strength of Indian renewable energy, as wind and solar energy are cost competitive with thermal generation in most states of India. Corporate renewable energy buyers include global technology providers, automotive manufacturers, food and beverage companies and airports.

Solar energy has the largest share of corporate renewables in India due to its economic feasibility, its scalability and its relatively low dependence on locational factors. Corporate solar procurement can take the form of either rooftop solar which is available in all states, and utility-scale solar which is state-dependent. Rooftop solar can be deployed onsite with the use of net metering. A key downside to this approach is that there are limits to the capacity each consumer can install, and it can only meet about 10-15% of industrial facility demand. Utility-scale solar is an offsite project which uses the public grid under an open access mechanism. This type can meet about 50-80% of industrial facility demand.

For more information, see:

Corporate Renewable PPAs in India: a market & policy update (December 2019)
Global Corporate Renewable Power Procurement Models: Lessons for India (December 2019)

A new corporate renewable sourcing work programme is being developed in India by CDP, REBA, The Climate Group, WBCSD, WRI and WWF. These partners will include a deep-dive case study with more information on how to get involved in a future issue of this newsletter.

Indonesia

With thanks to Clean Energy Investment Accelerator (CEIA)

Opportunities for corporate procurement of renewable energy are changing significantly in Indonesia. In recent years, the environment has limited corporate renewable procurement options primarily to onsite solar for self-consumption, which until very recently was uneconomical for industrial consumers. The national utility, PLN, operates as a monopoly and the sole off-taker of electricity, and actively hinders involvement of independent power producers to directly sell electricity to end users. Off-site power wheeling for corporate customers has not been implemented due to a lack of regulatory clarity and details.

In late 2019, new regulations and PLN product offerings began opening procurement options for companies. A recent regulatory change for rooftop solar projects reduced the capacity charge for industrial consumers to one-eighth of its previous level, dramatically improving the economic viability of onsite solar. Also, PLN recently announced a new green pricing product, however, the proposed “special service” currently lacks clear tracking mechanisms, standards, and details to ensure credible, verifiable claims. Interested readers are invited to contact CEIA for more information or to collaborate with PLN to improve the green pricing product offering and ensure it meets the renewable energy objectives of corporate buyers and aligns with international best practices while also assisting the utility to create the energy attribute market under the electricity landscape in Indonesia.

Author
Bethany Speer
Japan

With thanks to Renewable Energy Institute (REI)

Japan operates three different environmental attribute certificates, which for clarity are:

1. Green Electricity Certificate (GEC): Certifies output from older power plants and currently costs more than JPY3.0/kWh
2. J-Credit: Issued only for self-consumed electricity by renewable sources, mostly household solar, and currently costs less than JPY1.0/kWh
3. Non-Fossil Certificate (NFC): Issued for renewable electricity from power plants qualifying for Japan’s feed-in-tariff (FIT) system and are only purchasable by registered retailers, which forces corporates to procure NFCs bundled with electricity from these retailers. NFCs cost JPY1.3/kWh for retailers. Showing the demand, NFCs began being issued in 2018 with now have an annual volume of circa 80 TWh, approximately 9% of the annual electricity consumption in Japan

This year the NFC system will be bifurcated into “Non-FIT NFC Renewable” and “Non-FIT NFC Non-Renewable,” to clarify:

- Non-FIT NFC Renewable certificates will be issued for renewable power plants, including large hydro (>30MW), which are not part of the FIT system
- Non-FIT NFC Non-Renewable certificates will be predominately issued from nuclear power plants and cannot be claimed as renewable electricity but used for reducing scope 2 GHG emissions
  - Note: NFCs do not carry tracking information from generation to retail, although retailers can add tracking information to NFCs by making an additional agreement with the generator or through power purchase agreement. For reference the RE100 initiative recommends member companies secure NFCs with tracking information

Looking further forward, in 2021 the FIT system will also bifurcate to a (1) Feed-in-Premium (FIP) system for large scale projects (except geothermal) and (2) the existing FIT system for small scale projects and all geothermal projects. The FIP system will employ a reverse auction mechanism where project subsidies will be provided based on wholesale market price. The FIT system will require developers to focus on local benefit criteria such as providing electricity in the area in case of blackout, with the full list to be specified by the Japanese government.

The upcoming changes to the NFC and FIT systems are expected to increase the accessibility to corporate PPAs although the 3-way contract approach, between developer, retailer and buyer, will still be required (as the Electricity Business Act in Japan specifies that only registered retailers can sell electricity to consumers and as a consequence must be part of the transaction).

For further reading please see this market briefing report.

Author: Masaya Ishida
Organization: Renewable Energy Institute (REI)
Email: m.ishida@renewable-ei.org
Russia
With thanks to Commodity Risk Solution

Decree 449 on the Mechanism for the Promotion of Renewable Energy on the Wholesale Electricity and Capacity Market has provided the framework for developers and investors to complete competitive renewable energy projects in support of Resolution No. 1-r to meet the 4.5% renewable energy target by 2020 (and more ambitious goals thereafter). With dedicated support for renewable electricity sources through Decree 449 and a well-designed wholesale electricity market, a Renewable Electricity Free Contract (local equivalent of a PPA) allows corporates to transact. With renewable electricity integrated directly into the wholesale market buyers can capitalize on the financial benefit in transitioning to the wholesale market while simultaneously transitioning to 100% exclusive renewable electricity supply through the local grid.

Russia provides an exciting opportunity for renewable electricity procurement pioneers to capture an early mover’s advantage while paving the way for greater deployment of renewable electricity sources across the largest country in the world. The leading renewable electricity developers have available capacities for ‘direct access supply’ in the traded Price Zones depicted below in the graph. The market has a fully functioning day-ahead, intra-day, and capacity market across 8,500 price nodes. Given policy support in the Price Zones, these areas offer the best economics with Ulyanovsk as the target for many existing and planned wind farms given good wind resource and Altai as the target for solar farms with strong solar resource. The renewable energy asset base and associated ecosystem of providers has steadily grown since renewable electricity legislation was introduced in 2013 and offers procurement opportunities for the early mover in renewable electricity procurement.

Author
Luke Marriott
Organization
Commodity Risk Solution
Email
luke@crisksolution.com
Taiwan

With thanks to Chung-Hua Institution for Economic Research

From non-government entities selling power being illegal two years ago, the Taiwanese government is refining the still fresh renewable energy law to enhance opportunities, specifically to encourage project developers to transact with corporate buyers. The most recent change enabled renewable electricity providers (generators) to apply to receive FIT payments despite having already contracted the project to a corporate buyer via a PPA. We assume, although have not seen, that a change from a PPA to the FIT system would void the PPA contract to avoid projects ‘double-dipping’ and therefore corporate buyers are strongly recommended to add contract language to cover this scenario. This legislative change is intended to reduce project developers’ transaction risk perceptions of corporate buyers and introduce greater project supply.

The relatively swift change of pace in Taiwan is no accident, with the RE100 campaign having a strong effect – indeed, Tsai Ing-wen, president of Taiwan, recently mentioned this point during a speech and highlighted RE100 specifically. Additionally, the government mandated a requirement that large power users either buy renewable energy, pay a fee, or invest in renewable power projects. We foresee an opportunity for collaborative dialogue among corporate buyers and the government to develop or allow additional practical transaction tools for mandated companies to meet their obligations, and/or create a level playing field through reduction or elimination of fossil fuel subsidies.

Author Nate Maynard (馬耐德)
Organization Chung Hua Institution for Economic Research
Email nate@nier.edu.tw

Vietnam

With thanks to Clean Energy Investment Accelerator (CEIA)

Onsite rooftop solar emerged as a cost-competitive solution for commercial and industrial users and their supply chain partners seeking renewable procurement in 2019. While offsite solar and wind could become a new corporate renewable energy procurement option in 2020 through a direct power purchase agreement (DPPA) pilot program that enables private independent power purchasers and industrial power users to transact.

While over 5GW of utility-scale solar was added to the country’s energy mix in 2019 barriers to corporate procurement remain and key policy changes are expected to drive further market shifts in the coming year. Interested readers are invited to contact CEIA for more information and to collaborate to demonstrate aggregated corporate renewable procurements and communicate policy priorities to the Government of Vietnam.

Author Bethany Speer
Organization Clean Energy Investment Accelerator (CEIA)
Email Bethany.Speer@nrel.gov
Europe

Italy

With thanks to Ernst & Young LLP
The Italian market is somewhat less mature than the revived Spanish market, but it is certainly likely to grow strongly in coming years, as many large companies have operations here. Relatively high wholesale power prices and strong solar and wind resources enable renewables to be more cost-competitive than in many other European countries. PPAs are possible however bureaucratic challenges and recent Government-run auctions have slowed growth for corporates compared to Spain. Again, traders and utilities are the dominant off-takers, but a few corporates have recently signed PPAs, such as steel producer Fabbrica Energie Rinnovabili Alternative (FERA) and brick / tile provider Weinerberger.

Author
Phil Dominy
Organization
EY (Ernst & Young LLP)
Email
pdominy@uk.ey.com

Poland

With thanks to Polish Wind Energy Association
Two recent transactions, by Signify and Kompania Piwowarska, a company of Asahi Breweries Europe, demonstrate that corporate PPAs in Poland are possible, however potential remains untapped. Administrative barriers prevent localisation of new onshore wind farms, which could use modern, highly efficient wind turbines and provide emission-free electricity at a very competitive price. The provisions of the energy law, tailored to the power market model with the dominating role of the big state-owned utilities which generate with coal, are blocking the development of the sector of onsite corporate PPAs which could take advantage of the falling costs of PV. If these restrictions were abolished the Polish corporate PPAs market would boost and new renewable capacities would be deployed, although timing of any changes is uncertain.

Author
Irena Gajewska
Organization
Polish Wind Energy Association
Email
i.gajewska@psew.pl

Spain

With thanks to Ernst & Young LLP
The Spanish renewables market is now booming again after a decade of recovering from the loss of subsidies and retroactive measures in 2009/10. In fact, the solar market looks to be the largest in Europe in 2019 with a total of 482 MW contracted in Spain between 2018 and 2019 and now a growing pipeline. Low levelized cost of electricity compared to wholesale prices together with a supply chain and skills still present since the previous decade’s boom have enabled cost competitive PPAs to be struck for new-build projects. Most of these are with traders/aggregators/utilities but an increasing minority are with corporate off-takers. Spain could be Europe’s ‘ERCOT’ for corporate PPAs, with several recent corporates selecting this market, such as Amazon, Heineken, AB-InBev and Nike and a growing trend for cross-border virtual PPAs to offset consumption in other parts of Europe.

Author
Phil Dominy
UK

With thanks to Solar Trade Association

The UK was the first major economy to legislate for all its GHG emissions to be brought to net zero by 2050. Future procurement will therefore be driven by the need to decarbonize the network; a quadrupling of green power to over 640TWH will be required in the next thirty years. Corporates have already begun to play an increasing role through sourcing renewables directly or through PPAs and 2019 has proven itself to be a turning point. The value of demonstrable additionality in tandem to the benefits accrued by technological improvements, cost reductions, contract standardization (such as through the European Federation of Energy Traders’ standard corporate PPA, which was drafted with Re-Source members and partners) and the potential avoidance of wholesale price volatility and many ‘non-commodity’ electricity costs makes corporate sourcing in the UK look increasingly attractive. However, similarly to other regions, grid connections can be problematic for those looking to source renewable PPAs and the UK faces barriers from network charging reforms, political uncertainty and business rates.

However, opportunities are diversifying, and large energy buyers are capitalizing using multiple technologies and project sizes, 2019 saw: Amazon signed ostensibly the largest corporate wind PPA, providing 50MW of capacity through the new Amazon Wind Farm located in Scotland, the UK brick industry through Ibstock Brick’s also stepped into the PPA arena for the first time, with the signed 25-year 4.9MW PPA, Anglian Water signing a 30MW PPA with Next Energy Capital for a mix of ground mount and rooftop solar projects to be delivered in 2020. In the UK, public sector procurement remains important to the PPA market and a potential corporate partnership opportunity.

Going forward, bifacial solar panels are improving competitiveness by increasing yield 5-10%. These panels are being installed in the UK for the first time this year on a 60MW PPA solar and battery storage project for a council, highlighting how the public sector is getting behind sizable renewable energy investments to manage their energy costs and benefit from extra revenue streams.

Author
Gemma Stanley
Organization
Solar Trade Association
Email
gstanley@solar-trade.org.uk
North America

Canada

With thanks to BRC Canada

Corporate procurement of renewable energy has now been tried, tested, and has delivered - recently completed transactions proving the concept. While corporate PPA prices remain confidential, recent government-led price discoveries in the province of Alberta revealed the Canadian market can produce renewable energy economically, adjusting the common misconception that price is a barrier.

Buyer interest continues to build as domestic and international-leading brands seek to meet their Canadian load in-country. Carbon pricing in Canada and Alberta creates the potential for a second market type for corporate procurement to develop. While a challenge remains that Alberta is the only province truly open to procurement, creating a basis risk concern, and ongoing work is required to open other provinces and/or build green tariffs across the country.

Author Julia-Maria Becker
Organization BRC Canada
Email juliab@pembina.org

United States (ISO-NE)

With thanks to CustomerFirst Renewables

ISO-NE – which spans Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont – continues to be a challenging market for C&I buyers due to relatively high renewable prices and low wholesale revenues due to cheap legacy hydro generation. While the status quo is likely to continue for the next few years, various dynamics are at play in ISO-NE particularly with significant offshore wind build-out and associated PPA prices falling steadily (the same is true for solar, which has seen significant price reductions in line with the broader market) and could provide corporates seeking to transact in ISO-NE a route to cost effective environmental attributes.

In the near-term, Renewable Energy Certificates (RECs) are expected to maintain their high value and the region’s grid will remain cleaner than most, sustaining ISO-NE as a difficult market to maximize the environmental impact of renewables and making corporate off-takers struggle to see projects penciling out. Buyers with loads in New England are expected to continue seeking projects outside ISO-NE for stronger economics and greater environmental impact while the status-quo persists.

Author Win Sheffield
Organization CustomerFirst Renewables
Email wsheffield@customerfirstrenewables.com

United States (MISO)

With thanks to Schneider Electric

The MISO interconnection region is home to many corporate headquarters and business operations, driving strong corporate interest in renewable energy procurement in the region. It has been a challenge for corporates to transact in MISO, primarily due to delays in the interconnection queue managed by the ISO. Any new energy generators wanting to connect in MISO need to pay for the costs of the transmission and system upgrades through a process called the Decision Point Planning Process. The Decision Point Planning Process requires developers enter a queue for MISO to study the implications of
interconnecting the project and provide cost guidance. MISO’s attempt to speed up or reform the Decision Point Planning Process have been continuously delayed for several years, with serious negative implications for developers and therefore corporates seeking to connect.

Developers consequently have significant uncertainty with corporate PPA pricing due to a lack of interconnection costs clarity (these costs can be significant) and (for example) posting credit in support of project timelines to corporates becomes challenging, as do construction deadlines. This has been especially tough for wind developers, the primary utility scale assets in northern MISO, who in some cases will miss the 2020 deadline to receive the full value of the production tax credit due to these delays, and may continue to miss the step-down timing requirements. Project availability will likely be limited (outside of southern MISO solar projects), pricing offers from developers may not be firm, and obtaining some market contract terms from developers may be challenging. In general, any corporate trying to procure in MISO should pay attention to diligence around risks associated with connection.

Author Erin Decker
Organization Schneider Electric
Email erin.decker@se.com

United States (PJM)

With thanks to LevelTen Energy

In the LevelTen Energy Q4 PPA Price Index report, utility-scale renewable energy project developers named PJM as the most competitive market in Q4 2019. PPA offer prices in PJM have bucked the national trend. LevelTen’s report shows PJM was the only region to see a rise in solar pricing over the last quarter and the rise was significant, with a 2.6% or $0.88 increase in the P25 Index to $35 per MWh. The PJM wind market was the only major market with a decline in P25 wind prices from Q3 2019. Prices fell by 17 cents, or 0.6%, to $27.95 per MWh. This is the third consecutive quarter the LevelTen Marketplace has seen falling wind prices in PJM, continuing the countervailing trend.

Author Chris Watmore
Organization LevelTen Energy
Email Chris@LevelTenEnergy.com

REBA insight: Building on LevelTen Energy’s summary we see clouds on the horizon for a currently strong market. PJM has strong drivers for growth, with many corporations have facilities in the region and would like to procure locally, and project economics are favorable, particularly for solar projects, however a FERC ruling passed in December 2019 establishing a Minimum Offer Price Rule (MOPR) requires new-build renewables that receive state-level subsidies (e.g., compliance REC market revenues, tax exemptions/credits) to bid into the capacity market as such high prices that they are not likely to realize any revenue. As the rule stands, if a project doesn’t receive any state incentives (Federal tax credits do not invoke MOPR rules) then the project will be able to operate as in the past, however, the PPA strike price will be the variable to offset state-exemptions previously employed to reduce costs to corporate buyers, effectively increasing PPA strike prices for projects expecting to take advantage of state incentives. This is an unfortunate turn for, as LevelTen Energy say, the most competitive market especially considering the potential for impact as highlighted in this recent Utility Dive article. We expect re-hearings and possibly even lawsuits to surround the MOPR, 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.

Supplemental REBA insight provided by Mark Porter, please reach out for comments.
South America

Brazil

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

Brazil has become more of a buyers’ market following the economic recession and the subsequent reduction in the energy volume contracted at the last government auctions, creating a favorable environment for corporate buyers in Brazil to manage energy costs and reduce their carbon footprint by negotiating and signing renewable PPAs. The market is expected to move further as Brazilian electricity regulation is currently under review and on the buy-side companies gain comfort with PPAs and explore innovative contract structures such as dollar-indexed PPAs, decreasing price curves and multi-technology PPAs.

Click here to access a bilingual executive guide to corporate renewable PPAs developed by the Brazil Corporate Renewable PPA Forum. The Brazil Corporate Renewable PPA Forum is led by 23 large corporate buyers and renewable energy project developers. Watch for a detailed guide to PPAs for practitioners being released shortly addressing key drivers and risks for developers and corporate buyers, regulatory issues and expected trends for corporate renewable PPAs in Brazil for the coming years.

Author: Lucy Hunt
Organization: World Business Council for Sustainable Development (WBCSD)
Email: Hunt@wbcsd.org

Colombia

With thanks to Clean Energy Investment Accelerator (CEIA)

Over the last year, cost-competitive renewables have become easier for corporates to procure in Colombia due to declining solar PV system costs, increasing government support, strong renewable energy resources, and availability of experienced developers and service providers in the market.

The CEIA initiative facilitated two pilot project pools aggregating rooftop solar demand for industrial and commercial energy consumers in Colombia, which proved PPA offerings are competitive with utility electricity rates. However, Colombia’s current net-metering policy restricts the portion of energy demand covered to 100 kW and limits electricity bill savings for corporate buyers.

Larger-scale off-site procurement of renewables may be an appropriate option for a select group of non-regulated electricity buyers that participate in the ‘contracts’ market and negotiate their generation costs directly with electricity suppliers, but in practice, this offsite mechanism has not yet been widely utilized for renewables procurement in Colombia.

Author: Bethany Speer
Organization: Clean Energy Investment Accelerator (CEIA)
Email: Bethany.Speer@nrel.gov
### Contact us
To provide feedback and/or questions, please contact: info@rebuyers.org

### 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

<table>
<thead>
<tr>
<th>Dates</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 26, 2020</td>
<td>Renewable Electricity Market Overview – Japan</td>
<td>Webinar</td>
</tr>
<tr>
<td>February 27, 2020</td>
<td><a href="#">Midwest Buyers Workshop</a></td>
<td>Hopkins, MN, US</td>
</tr>
<tr>
<td>March 2020</td>
<td><a href="#">Buyers boot camp: Australia</a></td>
<td>Brisbane, Australia</td>
</tr>
<tr>
<td>March 4, 2020</td>
<td><a href="#">REvision2020: Renewables to Realize a Decarbonized Society</a></td>
<td>Tokyo, Japan</td>
</tr>
<tr>
<td>March 11, 2020</td>
<td><a href="#">CDP reporting – preparing for 2020</a></td>
<td>Webinar</td>
</tr>
<tr>
<td>March 17, 2020</td>
<td><a href="#">REDE: Renewable Energy Policy scenario in India</a></td>
<td>Webinar</td>
</tr>
<tr>
<td>March 26, 2020</td>
<td><a href="#">RE-Source UK 2020</a></td>
<td>London, United Kingdom</td>
</tr>
<tr>
<td>March 31 - April 1, 2020</td>
<td><a href="#">REC Market Meeting 2020</a></td>
<td>Amsterdam, Netherlands</td>
</tr>
<tr>
<td>April 15, 2020</td>
<td><a href="#">REDE: Green Tariffs for Corporate RE Procurement</a></td>
<td>Webinar</td>
</tr>
<tr>
<td>April 28, 2020</td>
<td><a href="#">Renewable Energy Markets Asia</a></td>
<td>Singapore, Singapore</td>
</tr>
<tr>
<td>May 4 – 7, 2020</td>
<td>2020 REBA Spring Summit, <a href="#">click here to submit to host a session</a></td>
<td>Detroit, MI, US</td>
</tr>
<tr>
<td>May 19, 2020</td>
<td><a href="#">REDE: Renewable Energy Financing</a></td>
<td>Webinar</td>
</tr>
<tr>
<td>June 16, 2020</td>
<td><a href="#">REDE: Policy and Regulatory Interventions for greater uptake of Corporate Renewables</a></td>
<td>Webinar</td>
</tr>
<tr>
<td>September 21 - 27, 2020</td>
<td><a href="#">Climate Week NYC and RE100 Global Members Forum</a></td>
<td>New York, NY, US</td>
</tr>
<tr>
<td>October 14 – 17, 2020</td>
<td><a href="#">3rd RE-INVEST to explore innovations for sustainable energy transition</a></td>
<td>New Delhi, India</td>
</tr>
<tr>
<td>October 27 – 29, 2020</td>
<td><a href="#">REBA Fall 2020 and Verge 20</a></td>
<td>San Jose, CA, US</td>
</tr>
<tr>
<td>December 9 -11, 2020</td>
<td><a href="#">RE-Source 2020</a></td>
<td>Amsterdam, Netherlands</td>
</tr>
</tbody>
</table>