Renewable VPPAs and ESG: What you need to know before you buy

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With the Canadian federal government targeting net-zero emissions by 2050 and growing evidence indicating the value of environmental, social and governance (ESG) programs,[1] stakeholders have expectations for corporations to green their electricity consumption.

While renewable forms of energy - wind, solar, hydro, geothermal and biomass, - are preferred to achieve these environmental targets, development and operations of a renewable electricity generation facility are not something corporations need to take on.

Enter the renewable virtual power purchase agreement.

What are power purchase agreements?

Traditional (or physical) power purchase agreements (PPAs) are contracts between energy developers and buyers, typically utilities, to purchase and receive power generated from energy assets. In a PPA, there are often numerous physical covenants associated with the development, operations and maintenance of the generation facility. This is because the buyer ultimately takes ownership of the power produced by generation assets.

Because power projects have high upfront capital costs and lower operating costs, project developers and their lenders often rely on financial commitments made in PPAs with creditworthy counterparties prior to financing or building a new power project.

For example, the buyer and developer may agree to a fixed price per megawatt-hour for power generated by new generation assets over the term of the PPA, which may range between 5 to 40 years. Most of these agreements provide a predictable revenue stream over a fixed period as long as the generation asset operates as expected.

What are virtual power purchase agreements (VPPAs)?

Two key attributes differentiate VPPAs from physical PPAs:

- VPPAs are fundamentally financial agreements (usually contracts for differences); and
- They do not require a direct physical electrical interconnection.

Traditional VPPAs differ from PPAs, in that they are a **financial agreement** often serving to act as a hedge against volatile power market prices. Electricity consumers can use VPPAs to fix energy prices and avoid sudden price spikes, such as the surge to $9000/MWh from an average of $50/MWh on the ERCOT grid in February 2021. On the other hand, electricity generators can use VPPAs to fix energy prices and avoid sudden price drops, such as negative pricing arising due to surplus baseload generation (which has been occurring in Ontario from time to time).[2]

The second major difference between traditional PPAs and VPPAs lies in **accessibility** . Because specific physical electrical interconnection infrastructure is not required to convey the electricity directly from producer to buyer, corporations of all sizes and electricity market experience levels are more easily able to fix the price of their power contractually.

> With the advent of utilities, system operators, customers and load serving entities contractually procuring different forms of renewable and traditional generation, *the distinction between traditional (or physical) PPAS and VPPAs has blurred*. Traditional physical elements have found their way into VPPAs and financial elements have found their ways into PPAs. These hybrid power purchase agreements have considerable variation and are often driven by specific regulatory frameworks and the business and policy objectives of the contracting counterparties.

In our experience, while we see quite a few contracts that say they are VPPAs, because they are modelled on traditional utility PPAs, they include a host of physical covenants and obligations, which often do not make sense in the context of a particular transaction. *Buyer beware: not all VPPAs are created equal*.

The **complexity and information asymmetry** in verifying, trading and negotiating VPPAs can pose a sizable risk to organizations without extensive energy market expertise. While electricity generation developers often understand the power markets and risks in detail, corporate buyers who only touch on power markets as a cost of doing business may be at a significant disadvantage. Any corporation interested in entering renewable VPPAs should consult with lawyers who have specific industry expertise as they proceed.

What are renewable VPPAs?

Renewable VPPAs are typically VPPAs that are customarily tied to the output from a specific renewable electricity generating facility. Typically, the price of the electricity from the specified renewable generating facility is stipulated. In jurisdictions where there

is a competitive power market a contract for difference mechanism can be used with the floating price determined by the system operator in the specific market.

In addition, some VPPAs include the environmental attributes (and the derivative registered or certified renewable energy certificates (RECs)) associated with the renewable generating facility as part of the agreement.

It is important to note that RECs may be included in a VPPA - or they may be sold separately from the VPPA as they are also traded as separate assets. When negotiating VPPAs, it is essential to know what you are buying.

Purchasing the RECs associated with a renewable generation facility are what help companies green their electricity consumption. As with any ESG measure, credibility of RECs is essential to avoid allegations of greenwashing. Similar to a bottle of 1989 Château Margaux Bordeaux, RECs have sources (wind, solar, a blend, etc.), geographic region and vintages. The value of a particular REC on the market will vary depending on those factors. To ensure a REC's credibility, independent third parties typically certify them.

What are the benefits of renewable VPPAs?

1. Achieve net zero with cost effectiveness

Recent demand for VPPAs is largely driven by corporations without significant direct renewable energy experience. Perhaps their power consumption is not high enough to achieve the economies of scale available to larger renewable energy developers.

Buying RECs directly from skilled and experienced power developers can be one of the most cost-effective ways to reduce the greenhouse gas emissions profile from your electricity consumption.

The scalability and approachability of investing in VPPAs offers an accessible option to access RECs without investing directly in a physical asset. Since multiple VPPAs can support a single renewable generation facility, a company can contract for their specific needs while renewable developers work to contract the full output of their facility across multiple buyers.

2. Hedge volatile energy prices

Unpredictable input costs consistently rank among the top threats on many corporate SWOT matrices. VPPAs offer one way to ensure stable electricity prices, an important component of an organization's overall energy hedge and cost management strategy.

VPPAs can also help hedge geographic risk. While traditional PPAs require physical infrastructure to connect buyer and seller, VPPAs can be contracted with power producers in other jurisdictions. This is particularly valuable for renewable VPPAs, where solar facilities could in theory be built in a desert in Mexico but contract with a counterparty in the U.S. or Canada. There are limitations to this approach, as the availability and transferability of certified RECs will vary across regions and the strength

of the financial hedge for both buyer and seller often depends on being in a common market.

3. Attract capital more easily

ESG makes good business sense. Renewable VPPAs that come with certified RECs are a tangible and concrete way to demonstrate to shareholders that your organization has a strong emissions reduction program.

4. Achieve greenhouse gas reduction targets

Before VPPAs were readily available, organizations had to invest in significant infrastructure to be powered by renewable energy. VPPAs allow your corporation to achieve current environmental targets promised to stakeholders and pre-empt future regulatory burden using offsets rather than with a physical pipeline.

What are the risks?

Renewable VPPAs are growing rapidly as a go-to transaction in the renewable energy market to align operations with ESG performance, especially for corporations with minimal experience in the energy market. As a result, several risks stem from information asymmetry:

1. Perception of greenwashing

Ensure that a credible auditor certifies the RECs associated with your organization's VPPA to avoid the appearance of greenwashing. In addition, ensure that all RECs are properly administered and retired once used.

2. Financial risk

Although renewable VPPAs act as a hedge against energy prices as they increase - they are not guaranteed to keep the purchaser "in the money". Depending on market conditions, electricity prices can slip below zero, leading to losses for purchasers that sign on to higher price VPPAs. Adding a thoughtful floor-pricing clause to renewable VPPA contracts can mitigate this risk. And as with any financial hedge, it is important to thoroughly verify the other party's credit.

3. Purchasing unbundled RECs

RECs may or may not be included in a renewable VPPA. When they are bundled, their vintage, source and geographic origin are clear. If unbundled, it can be more difficult to verify the factors that not only affect ESG credibility but also may impact eligibility as a greenhouse gas offset. It is essential to work with the developer to ascertain where, when and how RECs will be created.

4. Non-compete clauses

Integrating ESG into your company's operating strategy is not only about seeking investors, it is typically also a market differentiation strategy. Consequently, it may be

important to include a non-compete clause to ensure you competitors do not contract for RECs from the same renewable facility that you do.

The bottom line

Over the last decade, renewable VPPAs have been increasingly on the radar of corporations with ESG performance goals. VPPAs are finding their way into the news as well. Cenovus Energy recently announced their investment in a facility that will add 150 megawatt of renewable energy to Alberta's electricity grid and Amazon unveiled an 80 megawatt solar project in April 2021. Corporations committed to achieving ESG targets need to consider being powered, at least in part, by VPPAs.

Renewable VPPAs are levelling the energy market playing field for organizations of all sizes to offset their greenhouse gas emissions. While they are cost effective and have few barriers to entry, most buyers in the Canadian market are inexperienced at negotiating these contracts. As the renewable VPPA market experiences rapid expansion over the next several years, more sophisticated and tailored contracts will follow and information asymmetry between developers and buyers will likely persist. While entering into a renewable VPPA is one of the lowest hanging fruits being offered to companies committed to ESG, it is essential to engage with the right legal counsel to ensure your corporation gets the best green new deal.

If you're interested in learning more about how renewable VPPAs can fit into your corporation's ESG strategy, contact the authors or any of the key contacts listed below.

1 The ESG premium new perspectives on value and performance

2 Power Data, Data Directory

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