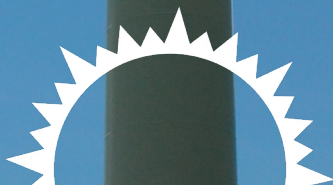




2024  
**RENEWABLES**  
IN REVIEW



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# Message from the BRC-Canada Director



Looking back through the year to craft this message is always a highlight. From reviewing the amazing work done by the team in launching new resources to support participants, to assessing the deals and drivers shaping access to renewable energy deals for our community, I recommend that we all take a moment to occasionally pull back and appreciate all that goes into a year.

In most aspects, 2024 was a year of dualities. The BRC-Canada team successfully launched multiple new resources, providing participants with guidance on energy storage, improved support for new buyers' early learning, and a significant step into the policy space. I am excited to see this work continue into 2025 as we increase the value and offerings available to the BRC-Canada community.

We also saw renewed interest in provinces across Canada to evaluate and support options for corporate procurement in renewable energy. This interest mirrors the global push by corporations to offset Scope 2 electricity emissions as companies and institutions move towards a net-zero economy.

The usual suspects weren't alone in driving the focus on renewable energy. One of the most exciting aspects of this role is working with new buyers as they explore renewable energy options. This year, we experienced a surge of interest in BRC-Canada, with the highest annual membership recruitment to date!

What is even more encouraging is that these new participants are also expanding the industries that make up our community. Corporations from new industries, including pipelines, insurance brokers, carbon dioxide removal and data centres, have found a space in BRCC this year. The increasing diversity of industries pursuing renewable energy shows that corporate commitment to climate action remains strong.

At the same time, we have faced significant setbacks in Canada's primary market for power purchase agreements. Alberta is the only jurisdiction that enables direct renewable energy deals between buyers and developers, making it singularly important to corporations and institutions focused on securing renewable energy. In 2024, BRCC tracked the slowest year for PPA deals since our founding in 2019.

The current slowdown has been driven by persistent policy uncertainty, significant government intervention in the market, and the simultaneous launch of multiple policy processes. These factors create a challenging environment that restricts growth and stability. As we look forward to 2025, we at BRCC hope that the regulatory uncertainty that has hampered the industry can be resolved.

While Alberta is currently an outlier regarding the global drive for corporate renewables, all of the building blocks remain in place to reinvigorate the market. As our participants highlighted at the 2024 Fall Forum, there is significant demand from buyers, developers are ready to build, municipalities are reaping the rewards, and we are focused on unleashing Alberta's potential.

*Jordan Dye*



## STATE OF THE MARKET

# A quiet year for deals

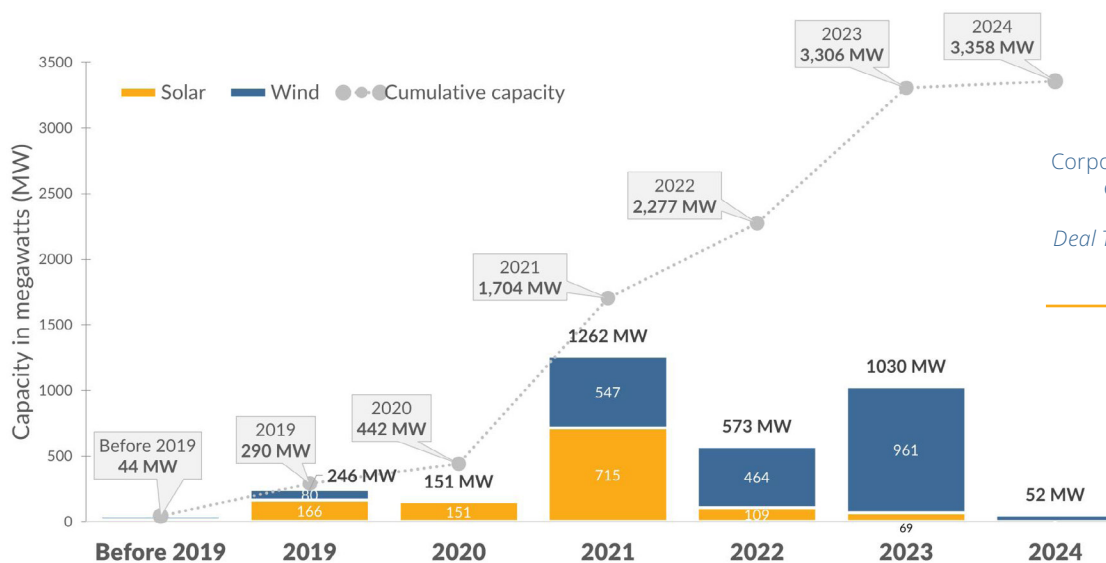
With shifting policies and growing interest from new industries, 2024 was an interesting year for the renewable energy market. However, it was a relatively quiet year for power purchase agreements (PPAs) in Canada – BRC-Canada tracked only one publicly announced deal, which came in the first quarter of 2024. This was a letdown compared to the record-breaking PPA activity in 2023, though not unexpected given the ongoing regulatory movement. Both buyers and developers seem to be holding off, waiting for more clarity before jumping into new deals.

The renewable energy project in the one announced deal already had a PPA in 2023, continuing the deal stacking trend we saw a year ago. (Deal stacking means having more than one virtual PPA made for the same project to support larger renewable projects.) In terms of economic impact, metrics like investments in new construction, job creation and homes powered by corporate renewable energy deals have not changed, since no new renewable energy projects were enabled by PPAs in 2024.

Something to highlight is that since only one deal was publicly contracted in 2024, many industries that have been regular players in the PPA space since 2021 were absent from the

Deal Tracker. The technology sector, in particular, stands out. This could be a concern, as tech companies have ambitious clean energy targets making them rely more on renewable energy for their operations, and the shift might signal a drop in investment or a potential move away from Alberta. But, as we heard at the **BRC-Canada Fall Forum**, both buyers and developers seem eager to see what the new year brings. Many are ready to get back to signing deals once there's more clarity on the regulatory front.

On a positive note, despite the low deal activity, some projects under existing contracts from previous years came online in 2024. Since 2019, 35% of Alberta's new generation capacity – including 67% of new wind and solar capacity – has been enabled by corporate procurement. While the renewable energy construction boom in Alberta continued through 2024, this growth represents investment largely facilitated by deals announced in prior years (reflecting a lag between project approvals and deal announcements and actual renewable energy capacity additions). As the volume of construction-ready projects with deals announced has dwindled through the weak year for deals in 2024, wind and solar capacity growth is very likely to slow dramatically in 2025.



**FIGURE 1.**  
Corporate renewable energy deals on BRC-Canada's Deal Tracker as of the end of 2024.

# Policy uncertainty has defined the past two years

Beginning with the renewable energy moratorium announced in August 2023, the Government of Alberta embarked on several parallel streams of policy reforms impacting renewable energy. At a high level, the reforms have been lumped into three general buckets:

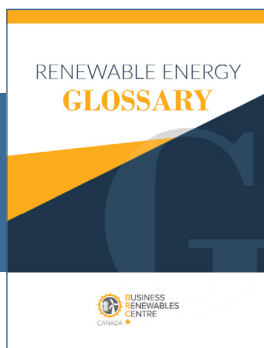
1. **Land use regulations**
2. **Electric energy market restructuring**
3. **Transmission policy overhaul**

All of these initiatives started in the second half of 2023 and continued through various stakeholder engagements led by various government departments and agencies through 2024. Cumulatively, the ongoing flux has introduced multiple layers of policy and regulatory uncertainty, preventing new capital allocation to renewable energy. Whereas the Alberta government justified the moratorium as a necessary

pause to bring regulatory certainty to the industry, most of these initiatives, particularly the market and transmission framework reforms, have yet to reach sufficient clarity to enable continued capital investment by the end of 2024. Projects that initiated capital investment before the onset of the uncertainty proceeded with project completion. But when that construction lag concludes, sometime in early 2025, and in the absence of new construction starts, the pipeline of new renewable energy capacity will start to dry up.

As BRC-Canada's State of the Market has documented for several years now, corporate PPAs have been essential to enabling renewable energy investment in Alberta. While the policy reforms have hindered renewable energy investment directly, they are also indirectly complicating and adding risk to new PPA negotiation.

The ongoing flux has introduced multiple layers of policy and regulatory uncertainty, preventing new capital allocation to renewable energy.



Want the full definition of a renewable energy term?  
You can refer to our **Renewable Energy Glossary**.

There are four broad types of negative impacts on both renewable energy financing and on PPA mechanics from the policy reforms underway:

## 1. Regulatory restrictions on new project approvals

New regulations prohibit wind energy in certain areas and add scrutiny to projects related to agricultural land displacement and viewscape impacts.

**RISK:** This could limit project options for future buyers. However, buyers selecting from the large number of projects already approved shouldn't be impacted.

## 2. New regulatory charges for renewable energy projects

New costs are likely forthcoming related to:

- financial security for post-project reclamation,
- transmission cost allocation to new projects,
- ancillary services costs to fund services that help the grid operate, and
- payments to avoid congestion.

**RISK:** These additional costs would increase the cost of new renewable energy. But since the details are still unknown, it is difficult for developers and buyers to negotiate PPA terms and agree on terms that sufficiently manage risk for both parties.

## 3. Constraints to getting renewable energy to market

Congestion on transmission lines cause generators to have to curtail – or stop delivering electricity to the grid. Details of a new transmission planning framework to build the grid and mitigate congestion will not be resolved until the end of 2025, but increased congestion is expected on the system.

**RISK:** Congestion causes less energy and environmental attributes to be delivered, meaning renewable energy operators need to raise prices to earn their revenue requirements.

## 4. Complexity lowering market revenue expectations

Market changes underway will mean lower revenues for renewable energy through the impacts of new features, including but not limited to negative pricing (paying to generate) and a day-ahead market (committing energy production a day prior).

**RISK:** With lower market revenues, buyers would need to pay higher prices on PPAs in order for renewable operators to earn their revenue requirements.

Overall, the effect of the new policy reforms in terms of regulatory restrictions and costs, impediments to market access, and reduced expected market revenues are aggravated by the remaining uncertainty in the magnitude of these policy risks.

Until these risks can be quantified more precisely, it will be very challenging to ascertain whether the economics of corporate renewables procurement remain attractive and where those prices need to land for a mutually beneficial PPA arrangement.

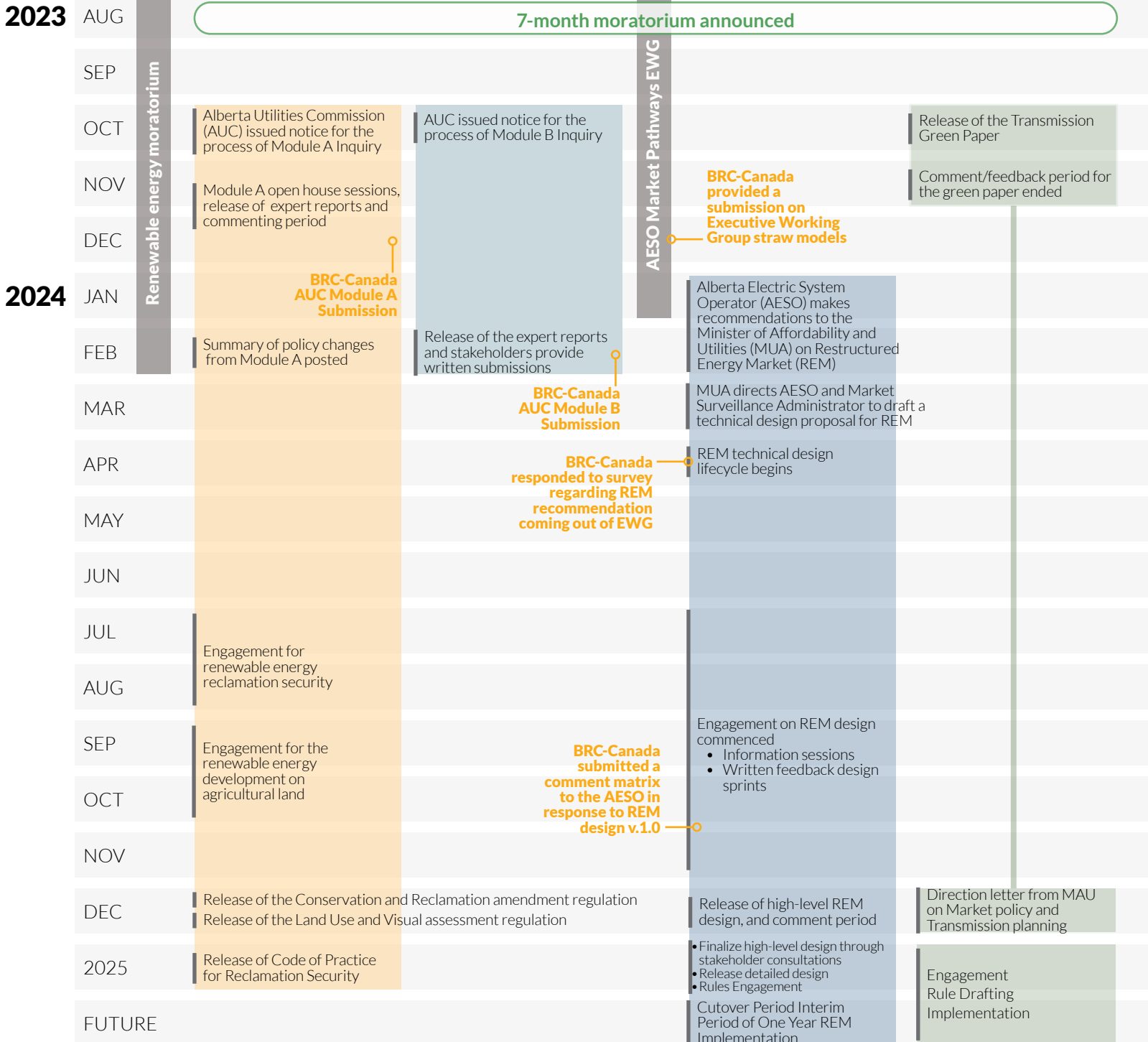
# Alberta Policy Timeline

Land use regulations

Impact of increasing renewables on supply mix & system reliability

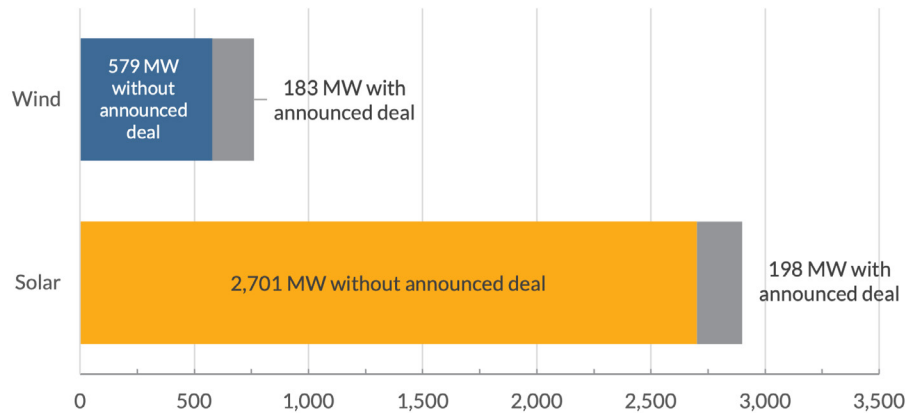
Electric energy market restructuring

Transmission policy overhaul



# Buyers and projects are piling up

While 2024 was a historically quiet year for corporate renewable procurement in Canada, there are signs of sunnier skies in 2025. Shovel-ready projects continue to pile up, while buyers show strong signs of pent-up demand.



**FIGURE 2.**  
Construction-ready capacity as of November 2024.

## Shovel-ready projects are piling up

One side-effect of this period of policy uncertainty is that projects without an announced PPA are piling up at the starting line. At the end of every year, we look at the Alberta Electric System Operator (AESO) Long-Term Adequacy report to see how many of the projects categorized as “Under Construction” do not yet have a publicly-announced corporate PPA. (Some projects in this category are not under active construction and would be better labelled “shovel-ready.”) This year, there are more than ever in this category. In the last Long-Term Adequacy report of the year, released in November 2024, the total capacity of shovel-ready solar projects was 2,899 megawatts (MW), of which 2,701 MW was tied to projects without an announced deal. That blows past all previous years.

It isn’t unusual to see most construction-ready solar projects lacking announced deals. Recent history would suggest that these announcements will come in the future. Offtake deals are often necessary to help shovel-ready projects bridge the “financing chasm” and proceed to actual construction. However, the growing backlog of projects — now nearly double what it was a year ago — along with the fact that only 22 MW of solar has completed construction in the last three quarters suggests that something is blocking the road on the project highway, causing a pileup in the queue.

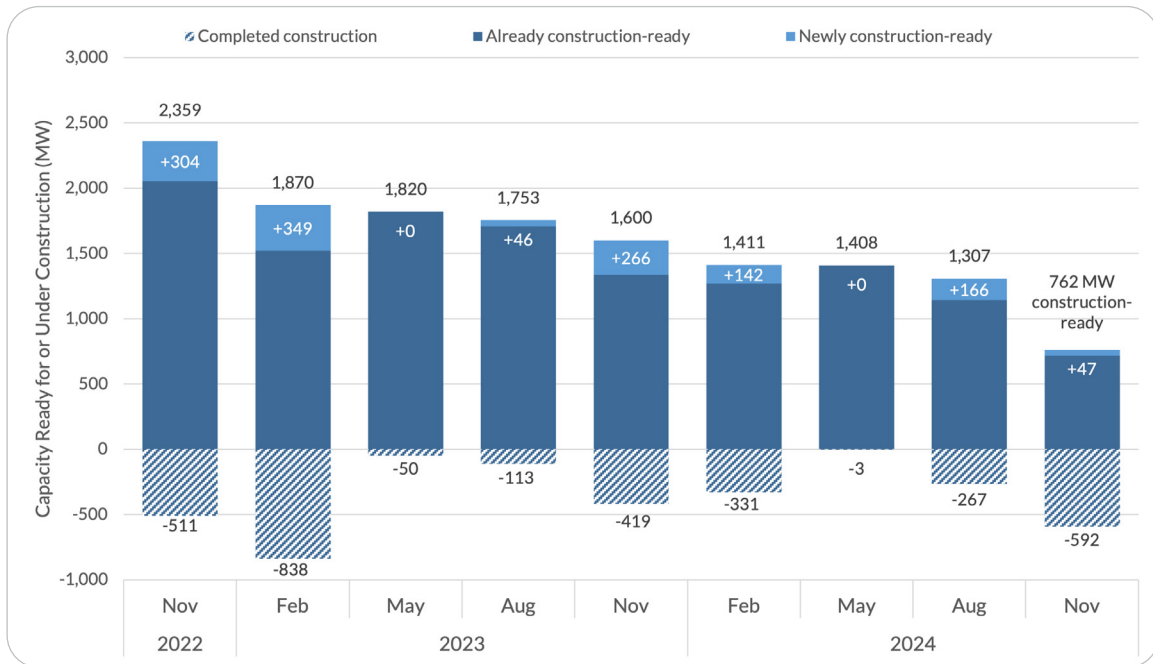
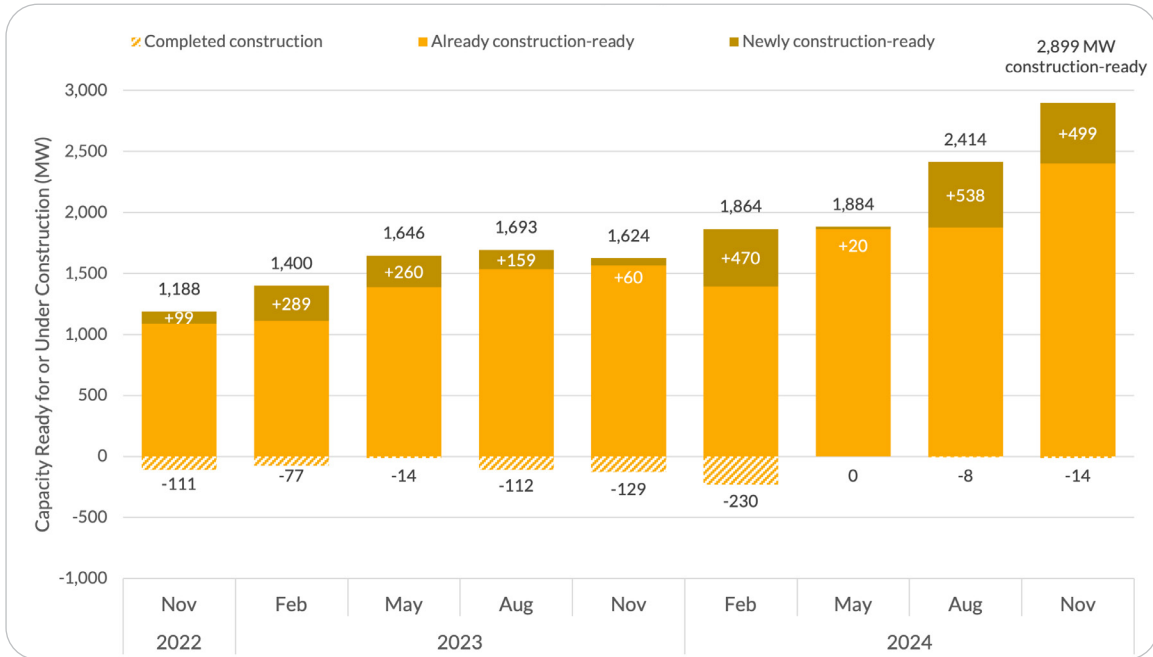
On the wind side, the overall trend is a decreasing amount of construction-ready wind capacity as projects with approvals and offtake deals finish construction and begin operating. However, more than 579 MW of that capacity does not have a corporate deal announced — more than any other year. That accounts for 79% of the total project capacity ready for, or under, construction, when previous years tallied under 25%.

Recent months saw several large wind projects complete construction, totalling 1,190 MW in AESO’s 2024 LTA reporting. All of these projects had an offtake agreement, either as a corporate PPA or as part of the government’s Renewable Electricity Program. This capacity has not quite been replaced by new wind projects entering construction, meaning we don’t expect much new wind to come online for a long time. Solar now dominates the shovel-ready project stage of the construction queue.

Looking forward, if policy uncertainty can be resolved, buyers in the market today should have more projects to choose from than ever before, for both wind and solar.



**FIGURE 3.**  
Construction-ready  
Solar Projects



**FIGURE 4.**  
Construction-ready  
Wind Projects

## Most new buyers in BRC-Canada history

The BRC-Canada community welcomed eight new prospective buyers in 2024, making it the biggest year for new prospective buyers joining our community since BRC-Canada's founding year of 2019.

Notably, the newest sector to join us also accounted for the largest proportion of new buyer organizations. Three direct air capture companies joined as participants, indicating an important new source of renewable energy demand in the coming years. Following closely, the financial sector represented the next largest share of new prospective buyers in our community this past year.

We've observed a few emerging trends among buyers recently. More companies with relatively smaller electricity demands are expressing interest in joining BRC-Canada and pursuing PPAs. Additionally, there's growing interest in the aggregation model, where multiple companies or organizations collaborate to secure a single contract with one developer and project.

To support this shift, BRC-Canada is developing an aggregation primer, set to launch in spring 2025. This resource will provide detailed insights into the benefits of aggregation deals and guide buyers on how to participate effectively.

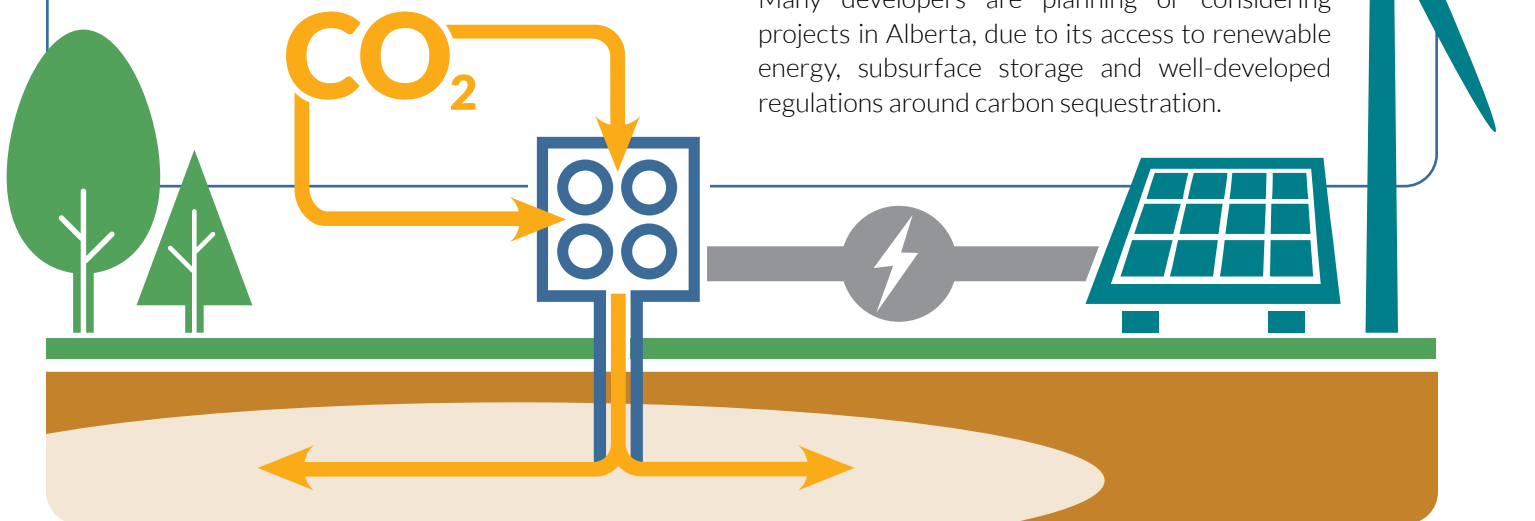
### What is direct air capture?

New technologies have emerged to remove carbon dioxide from the atmosphere and reduce its impact on the climate. One of the more prominent categories is direct air capture, which describes a variety of technologies that extract carbon dioxide from the air by catching it with special materials or liquids. The carbon dioxide is then released from the materials and securely locked away from re-entering the atmosphere.

With currently available technology, these process steps are highly energy intensive. Based on current technologies, roughly **6-10 gigajoules (GJ) of energy** in the form of heat and electricity are required to remove

one tonne of carbon dioxide from the atmosphere. In order to maximize the core value of their product – the net removal of carbon dioxide – direct air capture project developers need to procure clean electricity. Assuming **20%** of the energy requirement is electrical, a single, full-sized DAC plant that removes 500,000 tonnes of carbon dioxide annually could require 150 gigawatt hours (GWh) of renewable energy. Based on the pilot scale activity already underway in the province, we estimate over 50 GWh of demand in the near term.

Many developers are planning or considering projects in Alberta, due to its access to renewable energy, subsurface storage and well-developed regulations around carbon sequestration.



## Power-hungry data centres

These days, it feels like you can't look at the news without seeing a story about impending data centre growth as a result of the booming popularity of artificial intelligence. The Canadian data centre market is projected to reach \$9.04 billion **by 2029** because of the growing demand for cloud services and computational power. This growth won't be from the type of data centres that powered message boards back in the day. These are hyperscaler data centres, much bigger and more capable of powering modern cloud computing needs.

Among other jurisdictions, Alberta is positioning itself as a key player in this expansion by leveraging its cold climate, scalable power generation and business-friendly policies to attract data centre investment. An example of this was seen with the opening of Amazon Web Services (AWS) Canada West (Calgary) Region. Across four PPAs, Amazon has purchased over 850 megawatts (MW) of wind and solar capacity in Alberta through PPAs.



Will the growth in large-scale data centres translate into demand for renewable energy? If the leading hyperscaler companies are any indication, it should.

The three biggest hyperscalers are Amazon Web Services, Microsoft Azure and Google Cloud Platform. Amazon has been the largest corporate buyer of renewable energy for **four years** running and counted the access to renewable energy in Alberta among its list of factors for bringing its western Canadian AWS investment to the Calgary area. Microsoft

and Google both aim to be entirely powered by renewable energy through hourly matching – that is, purchasing the same amount of renewable energy generated within an hour as the amount they consumed. These organizations lead all corporates in renewable energy procurement ambition, and so we expect renewable energy demand to follow if more hyperscaler data centres are set up in Alberta. And lucky for them, there are projects to pick from.

# One other province pushes on to capture benefits of corporate renewables procurement

It seems all but certain that 2025 will be the year that a new province lands onto our Deal Tracker, which logs corporate renewable energy deals in Canada. While a handful of

provinces have been developing corporate procurement programs for a while, only one is trending towards public announcements of deals.

## Nova Scotia

Nova Scotia is poised to land on the Deal Tracker soon, with the progress made by the Green Choice Program (GCP).

The GCP is a subscriber-model green tariff program that offers a competitive way for industrial energy buyers to secure renewable energy with a low administrative fee of \$1 per megawatt hour (MWh). Buyers were able to enroll in the first round of procurement this past year and will be allocated a set amount of the targeted 350 MW of clean energy from the portfolio of projects that will be developed. Selected projects were recently notified, and agreements are expected to be executed within the first half of 2025.

For larger industrial buyers, Nova Scotia also has a separate limited program to enable them to procure clean energy in a way that benefits all ratepayers. Through this program, buyers can pursue one of two types of PPAs, as mentioned in [a BRC-Canada webinar](#): a sleeve PPA, where the PPA is facilitated through the utility, or a backstop PPA, where ratepayers can be the offtaker of last resort where it is in the interest of the ratepayers.

These programs, in conjunction with other initiatives in Nova Scotia, have the province pushing towards their goal of sourcing 80% renewable energy by 2030. Their momentum far outpaces other provinces that are developing corporate procurement programs.

It seems all but certain that 2025 will be the year that a new province lands onto our Deal Tracker.

## Saskatchewan

Saskatchewan's Renewable Partnership Offering (RPO) — also a subscription-model green tariff program — enabled customers to purchase from Iyuhána Solar, a new 100 MW solar facility in the Estevan area via a first round of procurement in 2023. Subsequent rounds of this program have not been announced. We're excited to add this procurement to the Deal Tracker once more details around the purchased volume are publicly available.

There were no updates to the Renewable Access Service program in 2024, either, despite the indicated intent to expand access to all interested large buyers. The program is a sleeve-deal green tariff program that has allowed select buyers to negotiate PPAs with renewable energy developers, with SaskPower facilitating the connection of power. BRC-Canada anticipates updates in 2025 and remains ready to support design improvements considered for a larger-sized program.

## Ontario

The momentum in Ontario to unlock corporate procurement slowed over the second half of 2024. A **consultation** on regulation amendments to enable corporate PPAs was open from May to June 2024. BRC-Canada submitted a comment letter, supporting the initiative to enable corporate PPAs. Within the comments were recommendations to:

- expand access to the program beyond Class A market participants,
- include hybrid renewable-storage facilities as eligible generators,
- remove the requirement to divulge commercially-sensitive agreements, and
- remove restrictions on development on prime agricultural land.

Including facilities with energy storage would offer a unique product for buyers seeking certain attributes in their procurement. **Our primer on energy storage** details how it can fit into corporate procurement.

While there have not been updates on the initiative since this consultation, there is hope that 2025 will bring a renewed focus on it now that other initiatives like **the expansion of the Second Long-Term Procurement** are progressing well.

Even though Ontario's grid is relatively cleaner than those in Alberta, Nova Scotia and Saskatchewan, there is still tremendous buyer interest and demand for corporate PPAs, as described in **our blog post earlier this year**.





# Sustained international momentum suggests that Canada is missing out

Outside of Canada, there are no signs of market slowdown. The global PPA market hit **US\$28 billion in 2023** and is trending to reach a whopping US\$444 billion in just 10 years. With more than **148 gigawatts (GW)** of renewable capacity signed through PPAs since 2008, it is evident that markets are active in pairing corporate demand for clean energy with new generating capacity. As corporations across the world try to meet their climate targets, PPAs remain an essential tool in the global transition to renewable energy.

In 2023, **46 GW of solar and wind contracts were announced, an 11% increase from 41 GW in 2022.** This continued growth in PPAs is driven by strengthening

corporate interest in reducing Scope 2 emissions. This is exemplified by the growth of the RE100 initiative, which brings together over 400 organizations committed to using 100% renewable electricity. These members have committed to purchasing an additional 100 GW by 2030 to meet sustainability goals.

Other reasons such as technological advancements, declining solar and wind power costs, and supportive government policies, such as tax credits and subsidies, are making PPAs seem like the perfect choice for corporate companies to achieve their targets.



## United States

The United States is currently the fastest-growing region in the PPA market, with 17.3 GW of deals announced in 2023. According to the Clean Energy Buyers Association, the first half of 2024 **saw a 13% increase in deal volume** compared to the first half

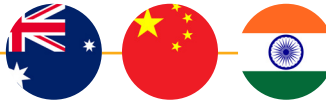
of 2023, indicating continued momentum. Corporate giants and tech companies with large capacity demands are pushing the market and enabling innovative deal structures allowing other companies and organizations to follow suit.



## Europe

In the second-largest PPA market, 2024 kept pace with the previous record-breaking year. **By October, capacity under PPAs surpassed 10 GW, nearing 2023's capacity.** Corporate alignment with Europe's sustainability commitments have helped them to adopt PPAs as they work toward achieving clean energy goals.

To meet rising demand, businesses are also leveraging innovative PPA structures including the proliferation of hybrid PPAs. Germany, the U.K. and France are observed to lead the region in advancing corporate renewable energy procurement.



## Asia-Pacific

The PPA market in the Asia-Pacific region is experiencing significant growth, driven by an increasing focus on renewable energy adoption and surging energy demand fueled by urbanization and industrial growth in emerging economies such as China, India and Southeast Asian countries. **In the first quarter of 2024 alone, companies in the region disclosed 5.4 GW of deals.** Australia and India led this momentum, contributing 80% of the announcements. As energy demand and corporate sustainability commitments continue to rise, Asia-Pacific is set to be a key player in the global PPA landscape.

## Canada missing out on PPA benefits

PPAs play a critical role in helping corporations and institutions achieve their climate goals while accelerating the adoption of renewable energy in their operating regions. Alberta stands out as one of the few provinces in Canada that enables PPAs, due simply to its unique electricity market. This drove development of the highest solar and wind energy capacity nationwide and attracted millions in investment. But recent policy uncertainty is now a barrier that artificially constrains the PPA market. This holds Canada back while other global

regions flourish with the economic benefits that come with renewable energy deals.

Looking at other regions worldwide and overall rapid growth of the PPA market so far, 2025 is shaping up to be another great year for PPAs. But it is also clear that favourable and transparent government regulations are an essential catalyst in allowing regions to adopt renewable energy through mechanisms like PPAs.

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Alberta stands out as one of the few provinces in Canada that enables PPAs, due simply to its unique electricity market.

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# BRC-Canada continues to grow

Although market momentum stalled, BRC-Canada continued to flourish in 2024. Our library of resources was bolstered by several new unique pieces targeting specific evolving issues in corporate procurement, including a webinar on expanding credit access for a wider range of buyers and a primer on how energy storage can fit within PPAs. We've also updated our crowd favourites, like our analysis of how much tax revenue is brought into Alberta municipalities by renewable energy projects.

Our events calendar was busy, too. We held a virtual Buyers' Bootcamp in order to reach more prospective buyers, resulting in our largest cohort yet. In the summer, we

collaborated with Cassels to co-host a Calgary Stampede networking event, featuring a fireside chat with our director, Jordan Dye, and our founding director, Sara Hastings-Simon. And then in November, we held our Fall Forum, which brought together market stakeholders to discuss the current state of corporate procurement in Canada.

BRC-Canada's involvement in policy also grew in 2024. We've been keeping community members up to date with a policy newsletter, which summarizes the latest developments across Canada. And in both Alberta and Ontario, we submitted comments to regulatory proposals.

audience REACH	expert EVENTS	policy WORK	publications & RELEASES	community GROWTH
<b>32%</b> increase in website users	BRC-Canada Forum	Submitted feedback across AESO's energy market design processes	<b>4</b> Reports	<b>8</b> New buyers
<b>583</b> media mentions	2-day intensive Buyers' Bootcamp	Written submission responding to expert reports for AUC Inquiry Module B	<b>10</b> Blog posts	<b>1</b> New developer
<b>441 million</b> potential viewers of media coverage	Pre-Stampede happy hour networking event	Participant-exclusive policy newsletter	<b>3</b> Fact sheets	<b>3</b> New buyer industries
<b>\$4.1</b> million advertising value equivalency	<b>3</b> webinars led by experts	ONTARIO: Responded to the OReg Amendments in Ministry of Energy letter	Monthly newsletters	<b>56</b> Total participants

Although market momentum stalled, BRC-Canada continued to flourish in 2024.

# Participant Portal

- Log in to the BRC-Canada member portal for exclusive tools and resources — and keep checking back for new additions in 2025!
- Primers, templates, videos
- Buyer's road map
- Detailed deal tracker
- Newsletter and blog archive
- Member directory
- Be sure to see our new resources in 2024, including:
  - PPAs for Rainy Days
  - Powering Up Guide
  - Navigating the PPA Landscape of Alberta
  - Infographic: 2024 Alberta renewable energy municipal tax revenue map



## thank you

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SILVER PARTICIPANTS



SILVER PARTICIPANTS



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A Joint Venture between



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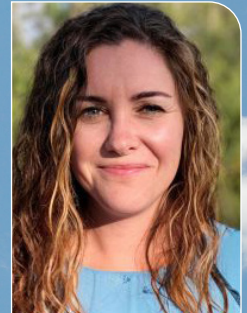
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