

RENEWABLES IN REVIEW 2023



**BUSINESS
RENEWABLES
CENTRE**

CANADA 

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Message from the BRC-Canada Director



There's no doubt 2023 was a year of change, and a bit of turbulence. But that couldn't throw the renewable energy industry off its path and our rapid forward momentum continues, much to the credit of BRC-Canada participants!

Internally, transition began in May, when our former director, Nagwan Al-Guneid, left to take a seat in the Alberta legislature. Luckily, as the program manager, I was able to fill that gap, first as acting director, and then, following an extensive search, as director.

During that acting period, the Alberta government introduced a moratorium on approvals for new renewable energy projects. But that did not prevent great progress in deal volumes. We're now up to 3.3 gigawatts (GW) in our first full year with BRC-Canada's new 10 GW goal. As well, we've seen other jurisdictions, in particular Nova Scotia, but also Ontario, B.C. and Saskatchewan, take steps or indicate interest in encouraging renewable energy development in their provinces. We look forward to helping buyers embrace these new opportunities!

In the meantime, our team has worked hard to build out our content library with new and relevant analysis and tools. Highlights include a municipal tax revenue analysis in Alberta, a renewable energy glossary and nine blogs on current and emerging issues.

We also leaned into priority policy work as it emerged, including fostering the fledgling power purchase agreement steps being taken in Ontario and acting as the business renewables industry voice during Alberta's inquiry into renewable energy development.

It's been a busy year, but one we can look back on with the satisfaction of knowing we worked hard and achieved a great deal for our participants. We can't wait to see what 2024 brings!

Jordan Dye

STATE OF THE MARKET

Spreading the benefits of corporate renewables procurement across Canada

Owing to its openly competitive energy-only market, Alberta's grid is unique in being open to corporate renewable energy procurement by default. For that reason, it has so far enjoyed all of the benefits of hosting wind and solar projects to feed the growing corporate appetite for new, low-cost renewable energy, as reviewed in our fact sheet **Alberta's corporate renewables advantage**. But thanks to the eagerness of other provinces to harness these opportunities, and in response to demands from corporate power consumers in provinces with emissions-intensive grids, Canada's playing field for corporate renewables procurement is expanding.

Provinces whose grids are not open to corporate renewables deals by default have options to enable this customer choice, as reviewed in our fact sheet, **Spreading the benefits**. As seen across more than half of U.S. states, they're motivated not only to bring new investment in low-cost non-emitting electricity supply, but also to improve their attractiveness to business and industries looking to allocate capital and bring their operations and jobs to places that can help them meet corporate environmental, social and governance (ESG) commitments.

With initiatives underway to support this growing trend, it will take the combined efforts of corporate renewables procurements across Canada to reach BRC-Canada's new 10 GW by 2030 goal, especially as Alberta pauses renewables and considers policies that would chill continued investment. Fortunately, while Alberta considers moving backwards, other provinces are taking steps to open their emitting grids to corporate renewables procurement.

Corporate Procurement Jurisdictions

- Existing
- New or upcoming

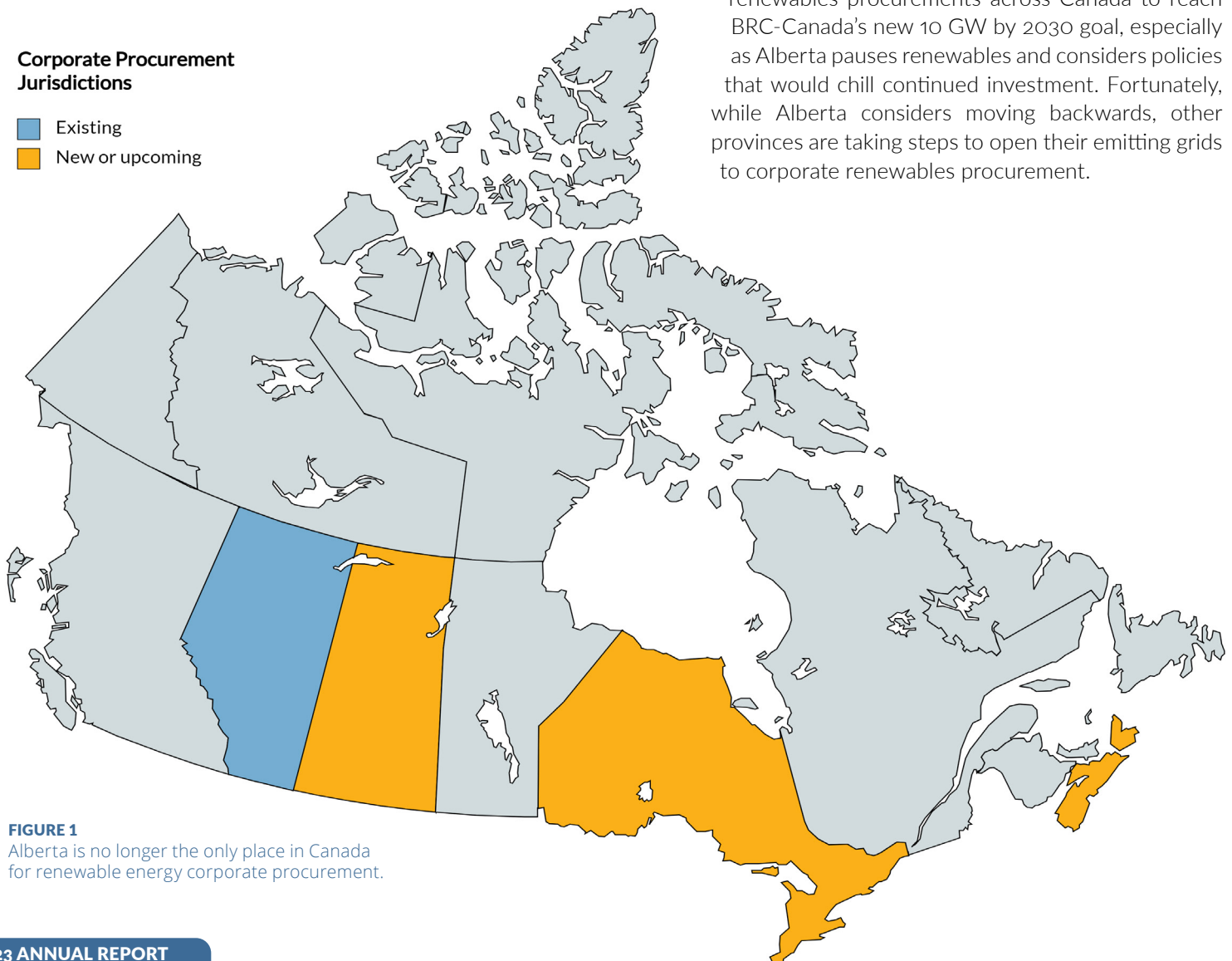


FIGURE 1
Alberta is no longer the only place in Canada for renewable energy corporate procurement.

Nova Scotia

In Nova Scotia's case, those steps have been major strides. Nova Scotia is the clear leader in developing comprehensive, market-tailored, transparent green tariff programs. This will harness corporate procurement to play an important role in **Nova Scotia's 2030 Clean Power Plan** push for a major build-out of new wind (over 1,370 MW) and solar (over 300 MW) over the remainder of this decade to reach 80% renewable energy by 2030.

After a pause to pursue a general rate base procurement in 2022 and 2023, **Nova Scotia's Green Choice Program (GCP)** – a centralized aggregation- or subscriber-model green tariff program – is back in full swing. With a low \$1/MWh in administrative costs offset by a credit for carbon tax avoidance, the GCP is expected to attract considerable corporate and institutional interest. Designed with substantial stakeholder engagement, the program's cost allocations appear fair and offer a competitive option for procuring renewable energy certificates, which will be retired on the customers' behalf.

Nova Scotia launched the first GCP round in December, including a procurement of around 350 MW of new renewable electricity to be operational by 2027 (through a request for proposals, RFP,

due in June) alongside an application portal for interested buyers that will close in March. Once projects are selected in mid-2024, expect Nova Scotia to be the first province outside Alberta to show up in a big way on BRC-Canada's Deal Tracker.

For larger industrial buyers, Nova Scotia is also covering off the other side of the green tariff model spectrum, the sleeve-deal model: a limited opportunity for designated renewable energy projects to sign-up their own corporate buyers. Announced in a **BRC-Canada webinar**, Nova Scotia is offering a workable option for sleeved PPAs that allow corporate buyers to secure renewable energy from projects that are in all rate payers' interest. Both programs together establish Nova Scotia as the clear leader in jurisdictional expansion of corporate renewables procurement in Canada.

Saskatchewan

Saskatchewan is similarly developing both subscription- and sleeve-deal-model green tariffs, though with less public transparency and engagement. Lacking the comprehensive opportunity for input and feedback from the three crucial stakeholder groups – prospective buyers, developers and the general ratebase – it is less clear that the program designs can accommodate the same interest or scale of corporate renewables procurement as Nova Scotia is looking to secure.

Saskatchewan's Renewable Partnership Offering (RPO) is a subscription-model green tariff program designed to help customers meet their ESG needs. The **first round** will see large corporate and institutional customers eligible to sign up for a portion of the energy from a new

100 MW solar facility in the Estevan area. SaskPower ran the procurement process for this facility in 2023, though the successful proponent has yet to be announced. Despite restricting each customer to only 25% of their power needs and a higher-than-usual allocation of green tariff costs, corporate interest would have fully subscribed the 100 MW a few times over, justifying sequels of the RPO in coming years.

SaskPower's **Renewable Access Service (RAS)** is the sleeve-deal green tariff program targeted to the largest of commercial and industrial customers, inviting them to negotiate PPAs with their chosen renewable energy developer, with SaskPower helping to move the power from developer to customer. In the pilot round targeting just five companies, SaskPower has limited the proportion of the customers' energy needs they can seek, similar to the RPO. If this is also combined with relatively punitive green tariff rates and curtailment risks imposed on developers, it is not clear that the program will enable the scale of renewable energy procurement necessary to meet corporate ESG goals. However, SaskPower can improve program design in future rounds, as it opens the RAS to more customers in 2024. BRC-Canada remains ready and able to support design improvements that would help to better

Ontario

In November, Ontario's Ministry of Energy **announced a clean energy growth consultation**, having recognized the need to double the province's electricity generation capacity by 2050, using clean energy. The consultation included a focus on allowing commercial and industrial customers to match their energy consumption with renewable energy (including wind, solar, small hydropower, biofuels and battery storage) through PPAs. BRC-Canada led a submission on behalf of buyers. The comment period closed in mid-December and next steps to enable corporate action could come as early as spring 2024.

New Brunswick

New Brunswick released a new Energy Strategy in December that targets considerable growth in renewable energy. However, the plan remains surprisingly silent on creating opportunities for the private sector to contribute to this growth. The province continues to ignore calls to enable companies operating in and looking to invest in New Brunswick to procure renewable energy for their own competitiveness.

Alberta

In August 2023, the Alberta government intervened in regulatory process to pause all Alberta Utilities Commission (AUC) approvals for new renewable energy projects over 1 MW for seven months, until February 29, 2024. BRC-Canada reacted to this moratorium and provided active public commentary, including written and oral testimony submissions for Module A of the inquiry, as well as media interviews to the Globe & Mail, Calgary Herald, CBC, the Guardian, Reuters and many more news outlets. To date, the impact of the moratorium has not appeared in the tracked deal volume because of the lag time to deal announcement and the availability of solar and wind projects with pre-existing approvals in place at the beginning of August, as shown in **Table 1**.

However, a series of policy risks have accumulated that are expected to chill and delay deal announcements in months to come. At year-end, the province has initiated several relevant material policy reviews that remain unresolved:

- **Module A of the AUC Inquiry:** review of land impact issues, including reclamation security, development on agricultural lands and Crown land, and impacts on "viewscales." The AUC is expected to report back to government by the end of January, followed by regulatory design and implementation.
- **Market pathways:** the Alberta Electric System Operator (AESO), the Market Surveillance Administrator (MSA) and Module B of the AUC's Inquiry are all reviewing the sufficiency of current market design and alternatives for ensuring system reliability and affordability. After the MSA and AESO report back by January, the AUC's Module B proceeds in February before reporting back to government by the end of March, followed by government policy announcement.
- **Transmission policy review:** the Ministry of Affordability and Utilities has closed input on its Transmission Policy Green Paper, assessing changes to the province's zero-congestion policy and allocation of system costs. Next steps and timing are unclear.

	SOLAR		WIND		TOTAL	
	Count	Capacity (MW)	Count	Capacity (MW)	Count	Capacity (MW)
APPROVED	13	2,271	4	582	17	2,853
UNDER CONSTRUCTION	14	1,185	2	128	16	1,313
TOTAL	27	3,456	6	710	33	4,166

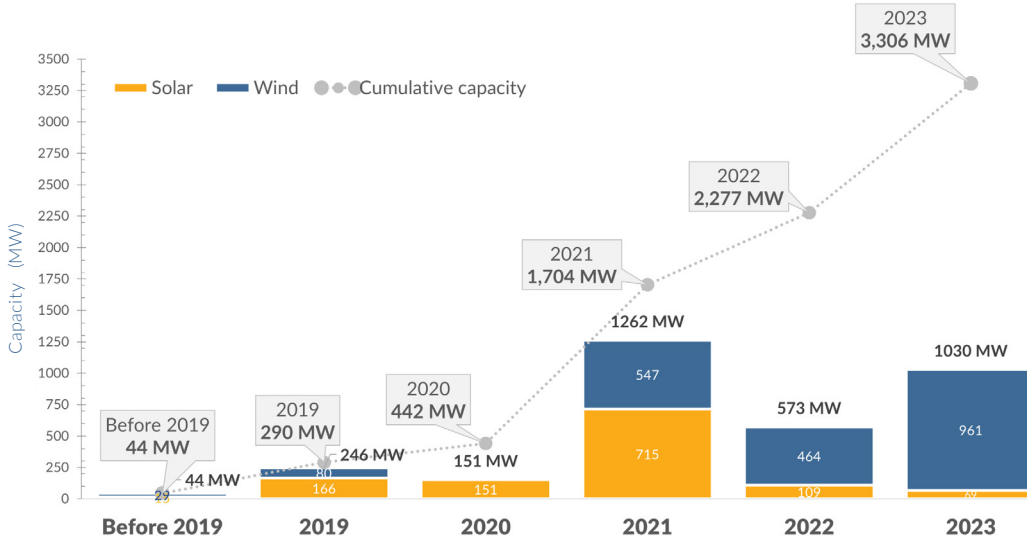
TABLE 1 Approved and under construction wind and solar projects in Alberta, scheduled to come online by the end of 2025, without an announced offtake agreement. Source: BRC-Canada Deal Tracker and AESO Long-term Adequacy Report Nov 2023

BRC-Canada has been active in reviewing potential impacts from these policies for members and submitting feedback to engagement processes where appropriate. The market confidence necessary to enable the long-term commercial deals underlying the corporate renewables procurement market is very susceptible to the timing and resolution of these outstanding policy uncertainties.

DEAL TRACKER 2023

Setting a new record for contracted energy

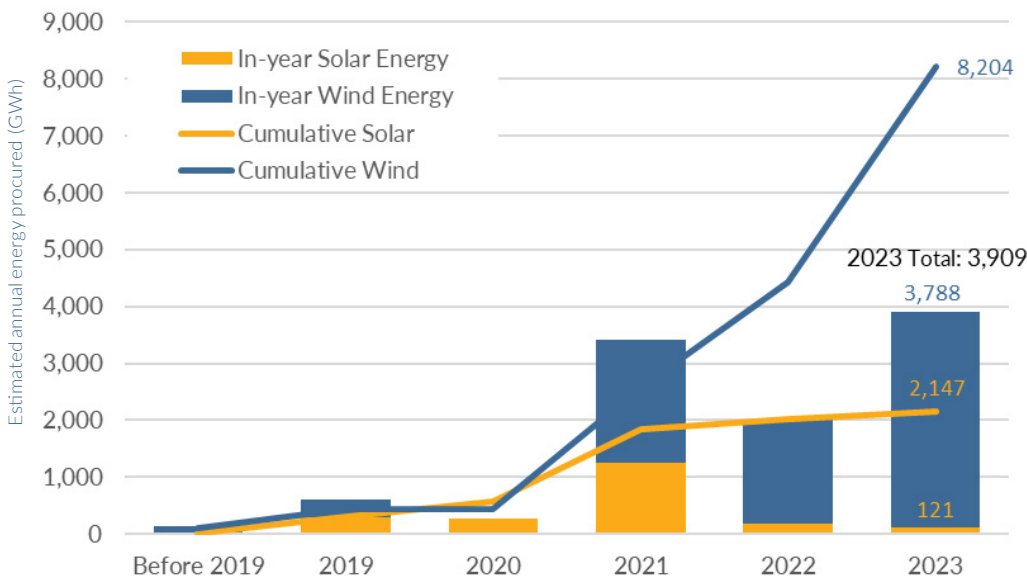
Corporate Renewable Energy Deals in Canada



Backed by the policy stability enjoyed before the August pause and subsequent announcements, the 2023 market for corporate renewable energy procurement broke records. More renewable energy generation was contracted through corporate procurement deals in 2023 than any year so far!

Surpassing 3.3 GW of contracted solar and wind capacity, the Deal Tracker has reached one-third of the way to BRC-Canada's 10 GW by 2030 goal set in 2022. As explained above, thanks to jurisdictional expansion, this is the last year for an Alberta-centric Deal Tracker, as new provinces are poised to contribute to the deal volume beginning in 2024.

Estimated contracted wind and solar energy by announcement year



Though the capacity of announced deals in 2023 still fell shy of the watershed 2021 pandemic rebound year, the swing toward wind energy means that 2023 edged out 2021 in terms of actual energy contracted. Thanks to the higher capacity factor of wind power, explained in our blog post "[The Math on Renewable Energy](#)," around 3.9 GWh/year of projected energy generation was contracted in 2023, compared to around 3.5 GWh/year in 2021.

More renewable energy generation was contracted through corporate procurement deals in 2023 than any year so far!

Buyer diversity continues to grow

The nine new deals in 2023 involved nine unique buyers and every one of the deals involved a BRC-Canada participant as developer, buyer or both. There was a near-even split between deals by experienced buyers who have taken part in at least one prior deal and buyers who are contracting deals for the first time, a sign of a mature but ever-growing market. Experienced buyers Amazon, Cenovus, Microsoft and West Fraser brought the largest deals (75 MW or higher), all focused on high-production wind energy. But new buyers from a variety of sectors – Rogers Communications (Shaw Communications at the time of the deal), the Government of Canada, PepsiCo Canada, Gibson Energy, and Lafarge – brought a mix of wind and solar with deals ranging from 26 to 74 MW.

Lafarge brought a new sector, cement, to the growing mix of industries procuring renewable energy in Alberta. Other buyers represented existing emitting industries, like forestry and oil and gas, as well as big power users like telecommunications, government, food and beverage, and particularly technology. Large deals from technology buyers have jumped this sector ahead of oil and gas in cumulative deal volume, though growth from both sectors along with the five other sectors represented this year illustrate a dynamic and diverse market for corporate renewables. Altogether, there have now been 26 different buyers representing 10 different sectors.

Voluntary vs. compliance market

The strength of technology, in particular, has driven a stronger complement of ESG-driven (“voluntary”) deals, now representing 59% of cumulative capacity under contract. But the growth overall means that both voluntary sectors and sectors with Technology Innovation and Emissions Reduction (TIER) industrial carbon pricing obligations (“compliance” sectors), like forestry and oil and gas, as well as cement, have

increased their deal volume relative to 2022. The overall trend shows growth in general, but particular strength in voluntary deals, especially from technology and telecommunications. Moreover, because the voluntary market has shown more interest in solar in prior years, the split in energy terms is closer to even (around 55% of energy contracted has been from the voluntary market, 45% from compliance).

sector	Compliance or Voluntary	Deal Participation	Capacity under contract	Proportion
TECHNOLOGY	V	7	1,195	36%
OIL AND GAS	C	10	1,077	33%
GOVERNMENT/PUBLIC INSTITUTION	V	5	282	9%
TELECOMMUNICATION	V	5	192	6%
CHEMICALS	C	2	151	5%
FOOD & BEVERAGE	V	3	129	4%
FORESTRY	C	2	97	3%
ELECTRICITY	V	4	76	2%
FINANCIAL SERVICES	V	3	68	2%
CEMENT	C	1	39	1%

TABLE 2 Contracted capacity across industry sectors, and their proportion of total capacity under contract. Purchases are categorized as voluntary or compliance market based on the industry’s assumed participation in Alberta’s TIER system.

The procurement pendulum keeps swinging toward wind

As noted above, 2023 was more heavily weighted toward wind deals than any prior year, continuing a trend that started in 2021. Cumulatively, around 63% of deal capacity is now from wind energy, after a 2023 that was 93% wind, with only two small deals left to solar. Given the higher capacity factors of wind, there is now nearly four times as much estimated wind energy under contract as solar. Continuing with prior trends, wind deals still tend to be larger, fitting the typically larger projects they back.

	solar		wind	
COMPLIANCE DEALS	5		9	
VOLUNTARY DEALS	16		10	
CUMULATIVE DEAL VOLUME	1,225MW	69 MW (2023)	2,081MW	961 MW (2023)
AVERAGE DEAL SIZE	58 MW	34 MW (2023)	110 MW	137 MW (2023)
CONTRACT LENGTH	12-25 years		10-23 years	
PROJECT CAPACITY	1,520 MW		2,619 MW	

Deal innovations continue to emerge to forge win-win matches that amplify economic benefits for Alberta

Continuing with innovations first pioneered in 2022, two deals in 2023 contracted from projects that already had deals announced, adding to the “deal stacking” that has helped add together smaller deal volumes to support the typically large capacities of wind projects.

The tendency for deals to come along for the same project later makes it difficult to assess how much of each project is contracted. However, only one deal in 2023 fully contracted the entire project capacity (Lafarge’s deal for all 38.5 MW from Empress Solar). All other projects have total project capacities larger than the deal sizes,¹ suggesting that developers may be taking a merchant position – meaning they are selling some electricity based on the fluctuating pool price – on some projects, a growing trend observed since 2021. This points to stronger appetite for developers to accept merchant price exposure (up to 29% of the capacity of projects with deals announced in 2023 could be merchant), unsurprisingly coinciding with very strong

energy market prices since 2021. Altogether, these trends demonstrate how Alberta’s open and competitive market allows win-win matches that bring together suppliers who are offering just what each unique buyer needs.

Given that deals are leveraging more renewable energy investment through developer merchant appetites than the deal volumes themselves, the economic benefits for Alberta are magnified. Cumulatively, the approximately 3.3 GW of contracted renewable energy capacity are now supporting over 4.1 GW of total project capacity. This means that the market for corporate renewable energy deals in Alberta is fostering over **\$6 billion of new construction** in the province, over **6,000 jobs** and over **\$35 million in municipal tax revenue**. These deals will provide enough energy annually to theoretically power all **1.7 million homes** in Alberta, which will help keep energy rates in check for all power users once generating.

¹ Assuming Buffalo Atlee’s four phases are taken together, as Gibson Energy contracted the entire 26 MW of project capacity from phases 2 and 4.

A breakthrough year

2023 was an eventful year for BRC-Canada, to say the least. We launched more educational resources than ever before, providing expertise and original analysis to our community participants. We played a vocal role in supporting the industry through the moratorium on renewables in Alberta, compiling hundreds of media mentions. And we have leapt forward in our community growth, extending our impact to more organizations across Canada.

Bigger and better than ever

With 12 new participants joining, 2023 was the biggest year of growth since BRC-Canada was founded in 2019. BRC-Canada is now more than double the size it was in its first year. We're excited to continue expanding our community as new jurisdictions unlock more potential buyers.



We held our much-awaited two-day intensive Buyers' Bootcamp earlier this year, followed by our sold-out BRC-Canada Forum in April. The forum, attended by buyers, developers, non-governmental organizations and key government participants, featured discussions led by industry experts. Did you know that policy uncertainty was identified as the number one perceived risk at the event, three months prior to the moratorium announcement? Be sure to be in the room in 2024 to get these types of insights!

Our monthly newsletter highlights significant developments in Canada's renewable energy and PPA sector. It introduces new BRC-Canada participants and spotlights those making strides in the renewable energy market. If you're not signed up already, you can do so at businessrenewables.ca.

Participants also receive an exclusive policy-focused newsletter that shares intel on key policy topics across the country. BRC-Canada had an active year in policy advocacy and intends to continue that in 2024 as new jurisdictions open for business.

audience REACH	expert EVENTS	policy WORK	publications & RELEASES	community GROWTH
+133% increase in newsletter subscribers	BRC-Canada Buyers' Breakfast in Toronto	Submitted written comments & oral testimony for AUC Inquiry Module A	3 Reports	5 New Buyers
>805 media mentions	2-day intensive Buyers Bootcamp	Submitted written comments for AESO Market Pathways Initiative	9 Blog Posts	7 New Developers
736 million potential viewers of media coverage	BRC-Canada Forum	Submitted written comments for AESO Long-Term Outlook Preliminary Update	4 Factsheets	55 Total Participants
>\$6.8 million advertising value equivalency	7 webinars led by experts	NOVA SCOTIA: Supported launch of Green Choice Program	Renewable Energy Glossary	
		ONTARIO: Submitted comments for Regulation 429/04 Amendments	Monthly Newsletters & Participant Exclusive Policy Newsletter	

thank you
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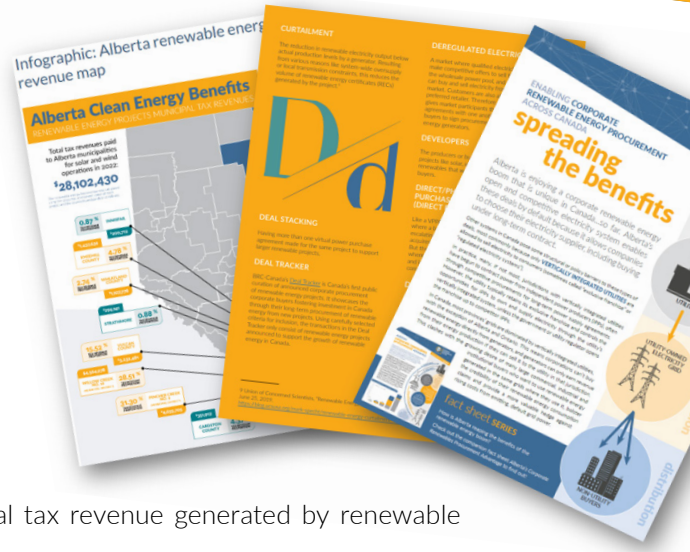
Member Portal

Log in to the BRC-Canada member portal for **exclusive tools and resources**, and keep checking back for new additions in 2024!

- Primers, templates, videos
- Buyer's road map
- Detailed deal tracker
- Newsletter and blog archive
- Member directory

Be sure to see our new resources in 2023, including:

- Exclusive analysis on municipal tax revenue generated by renewable energy projects in Alberta
- Renewable energy glossary
- Alberta renewable energy polling results



Upcoming BRC-Canada events

<p>jan</p> <p>WEBINAR: State of the Market</p>	<p>feb</p> <p>WEBINAR: Sustainability Strategy</p>	<p>mar</p> <p>WEBINAR: Risk Management in PPAs</p>
<p>apr</p> <p>APRIL 23, 24 & 25 Buyers' Bootcamp BRC-Canada Forum</p>	<p>may</p> <p>WEBINAR: PPA Accounting</p>	<p>jun</p> <p>WEBINAR: Buyers' Roundtable</p>

We have a full program of events lined up for the first half of 2024

Be sure to visit our website for more registration details – our BRC-Canada Forum was sold out last year. You won't want to miss out!

businessrenewables.ca/EVENTS

GOLD PARTICIPANTS



SILVER PARTICIPANTS



BRC-CANADA team



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Director



**Carson
FONG**
Program
Manager



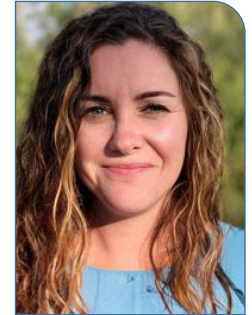
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