

2022 RENEWABLES IN REVIEW



BUSINESS
RENEWABLES
CENTRE

CANADA 

2022 Year in Review

A message from BRC-Canada director Nagwan Al-Guneid

My first year at the Business Renewables Centre-Canada was an extraordinary one – with a significant milestone reached long before we had planned to do so. In May, companies in Alberta secured the last of our initial target of two gigawatts (GW) worth of corporate renewable energy deals. That's enough energy to power 640,000 homes. The original plan was to do this by 2025, so the enthusiastic response considerably outpaced our initial expectations.

The early progress happily forced our hand and BRC-Canada announced a new target in November. The ambition now is to reach a total of 10 GW of renewable energy to be procured by companies and institutions across Canada by 2030. Achieving this goal is important because it would bring the country within striking distance of its commitment to a net-zero electricity grid by 2035.



[BRC-Canada's New Target: 10 GW by 2030](#)



The key to making this work is to boost renewable energy procurement in provinces that have electrical grids that overall still emit greenhouse gases. Besides Alberta, that means Saskatchewan, Ontario, Nova Scotia and New Brunswick. In the coming year, we plan to encourage renewable energy procurement in those provinces by producing and publishing resources that will explain how to go about doing that in provinces that lack Alberta's open market. In-person events aimed at buyers in Toronto and Calgary will also feature experts and renewable energy buyers to spread the word on the best approaches to procurement in Alberta's market.

We hope you will join us in spreading the word about the benefits of building up renewable energy – since 2019 that amounts to \$3.75 billion in investment and 4,500 jobs in Alberta alone by the end of 2023. We're ready to help companies and institutions learn the best approaches to taking this important step toward achieving their environmental, social and governance goals. So, join us!

Nagwan Al-Guneid
Director, BRC-Canada



**BUSINESS
RENEWABLES
CENTRE**

CANADA 

Nova Scotia Gears Up Renewable Energy Options

Nova Scotia demonstrated exciting and inspiring progress on the renewable energy front in 2022. The province tackled everything from legislative amendments to the development of a new climate plan, expanded access to renewables and of most interest to BRC-Canada participants – the almost-ready-to-launch green tariff program for commercial and institutional customers.

The province also undertook the largest renewable electricity procurement in its history. An independent procurement administrator, the Coho Climate Advisors, led a request for proposals that resulted in five new wind projects awarded for a total of 372 megawatts of new renewable electricity. Impressive Indigenous involvement meant that all projects were majority owned by the Mi'kmaq of Nova Scotia and provided significant benefits through investments in local social and economic programs.

NOVA SCOTIA'S Climate Change Goals

Greenhouse Gases and Renewable Energy

2030

- 53% GHG emission reduction from 2005 levels
- 80% Renewable Energy Standard
- Retire all coal-fired generating assets

2035

- 90% GHG emission reductions from electricity sector from 2005 levels

2050

- Net-zero emissions

The legislation amendments included changes to the *Electricity Act* which guaranteed any rate payer in Nova Scotia the right to net meter without fear of new charges, fees or rates applied to a customer's bill by Nova Scotia Power Inc. The legislation also provided an "as of right" guarantee to residential net-metered projects up to 27 kilowatts (kW), allowing people to zero-out their electricity bills annually.

Under the *Electricity Act*, the Renewable Electricity Regulations were changed to increase the net-metering capacity limits from the previous 100 kW to a maximum of 1,000 kW for larger businesses, aquaculture, wineries and registered farms in the province. For smaller general customer classes, the capacity limit increased up to 200 kW. This better reflects the energy needs for most business customers in Nova Scotia.

In December, the province released its [Climate Change Plan for Clean Growth](#) which boasts a list of 68 actions designed to help Nova Scotians reduce their greenhouse gas emissions, save on their energy bills and prepare for the impacts of climate change. The plan includes commitments to create a clean energy system.

But Nova Scotia's progress will not end there. The province plans to make 2023 even more remarkable by providing additional pathways that allow all Nova Scotians to access and choose renewable energy. The Green Choice Program is the province's green tariff program which allows larger commercial and institutional customers in Nova Scotia to access new renewable energy to meet their demand and address Scope 2 emission reduction targets. (Scope 2 emissions are indirect emissions from the generation of energy purchased from a utility provider.) This will also include provincial government operations as committed to in the Climate Change Action Plan. This program is in the final design stages and is anticipated to launch in early 2023. Please reach out to GreenChoice@novascotia.ca or novascotia@customerfirstrenewables.com to be added to distribution lists or visit the website for updates: <https://novascotiagcp.com/>.



The eight deals announced in 2022 bring the total deal count to 30 since 2019. Fully 24 of those deals have come about since early 2020, a period defined by the business, economic, and logistical uncertainties and challenges of the global COVID-19 pandemic and its aftermath. This is a testament to the momentum and resilience of corporate interest in securing new solar and wind energy under long-term contract. While there was a relative dip in new procurement in 2022, there is still an upward trend from 2019 and years prior.

BRC-Canada helped companies along the way, sharing the hard-earned lessons of early movers and providing a community where buyers can learn how to source renewable energy directly from renewable energy project developers. As an inherently forward-looking initiative, BRC-Canada and its members already cast their eyes to next steps and adopted a new 2030 target that quintuples our founding vision, as discussed earlier in our director's message. But the milestone of surpassing our first target merits a look-back at the year that was and the market as it currently stands.

New buyers expand the breadth and diversity of demand, building a more robust and resilient market

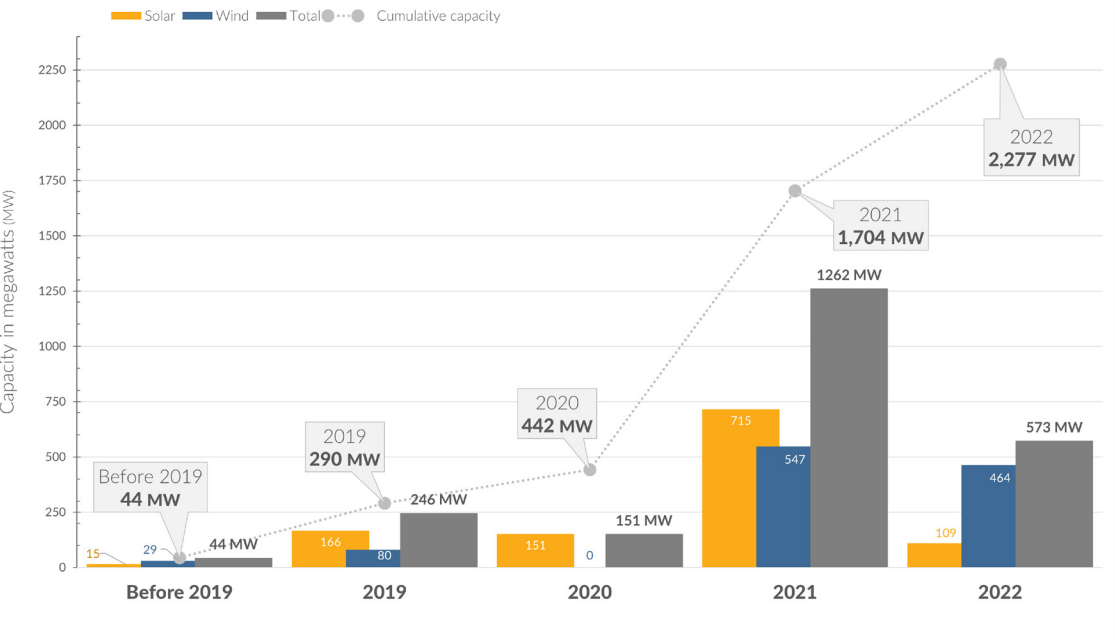
The eight 2022 deal announcements included eight unique buyers: though two buyers doubled-down on announcements this year (Microsoft and the City of Edmonton each announced two separate deals), this was offset by one deal aggregated by three distinct buyers (RBC and Bullfrog expanded their 2020 partnership to a three-buyer aggregation by adding Shopify in their latest deal).

In 2022, the market for corporate renewable energy procurement bounded past the 2 gigawatt (GW) target the Business Renewables Centre- Canada (BRC-Canada) set in 2019.

By year end, 573 megawatts (MW) of announced deal volume was added. This brought the cumulative total to 2,276 MW, surpassing the original target that was meant to stand twice as long, until 2025. The current total is enough to supply the annual energy needs of a million Alberta homes.



Corporate Renewable Energy Deals in Canada
(as of Dec 31, 2022)



Sectoral Distribution of Renewable Energy Deals in 2022

Sector	Compliance or Voluntary?	Deal participation	Capacity under contract (MW)	Proportion
Oil and gas	C	8	871	38.3%
Technology	V	4	622	27.3%
Public institution	V	4	208	9.1%
Telecommunication	V	4	162	7.1%
Chemicals	C	2	151	6.6%
Food & Beverage	V	2	88	3.9%
Electricity	V	4	76	3.3%
Banking & Finance	V	3	68	3.0%
Forestry	C	1	22	1.0%
Ecommerce	V	1	8	0.4%

NOTE: Capacity volumes in deals that involved multiple buyers were split between the buyers

Among these eight buyers, five are contracting new renewable energy directly from Canadian projects for the first time. The five new entrants come from banking and finance (Scotiabank), technology and ecommerce (Microsoft and Shopify), chemicals manufacturing (MEGlobal), and the first municipal government to enter the scene (City of Edmonton). There are now 21 different buyers participating in announced deals, coming from 10 different sectors.

This growing diversity undergirds the resilience and vibrancy of the market in Alberta, helping to insulate it from the economic cycles attendant to any one sector and stabilizing demand over time. Oil and gas (which includes extraction, processing and transportation, at 871 MW or 38.3 per cent), plus the closely associated chemicals manufacturing sector (151 MW or 6.6 per cent), have fallen to 44.9 per cent of all cumulative deal volume to-date, with growing new purchases by other sectors, particularly technology (622 MW or 27.3 per cent).

Relatedly, the compliance market continued to shrink modestly in the purchasing share in 2022, in favour of the voluntary market, which made up three-fifths of buyer demand announced last year. The compliance market is represented by buyers with a compliance obligation under the province's industrial carbon pricing system, the Technology Innovation and Emissions Reduction (TIER) system, for which they can use offsets procured from new renewable energy producers. Buyers with TIER obligations now make up 45.9 per cent of the announced capacity demand to-date (cumulatively across all years). Notably, however, the compliance market continues to skew relatively toward wind

energy with its higher capacity factors, so that more energy (as opposed to capacity) is still contracted in the compliance market than the voluntary market.

With the voluntary market making up the balance (54.1 per cent) of the capacity under contract, it is remarkable that Alberta – a province with significant industrial electricity use and emissions to offset – is attracting at least as much renewable energy investment from commercial and institutional organizations driven by voluntary environmental, social and governance (ESG) motivations. This is no doubt driven, in part, by Alberta's unique position as the only province open to corporate renewable energy procurement, though all buyers to date are also electricity consumers in the province.

Capacity under contract

54.1%

VOLUNTARY ENVIRONMENTAL, SOCIAL AND GOVERNANCE MOTIVATIONS

45.9%

COMPLIANCE OBLIGATIONS

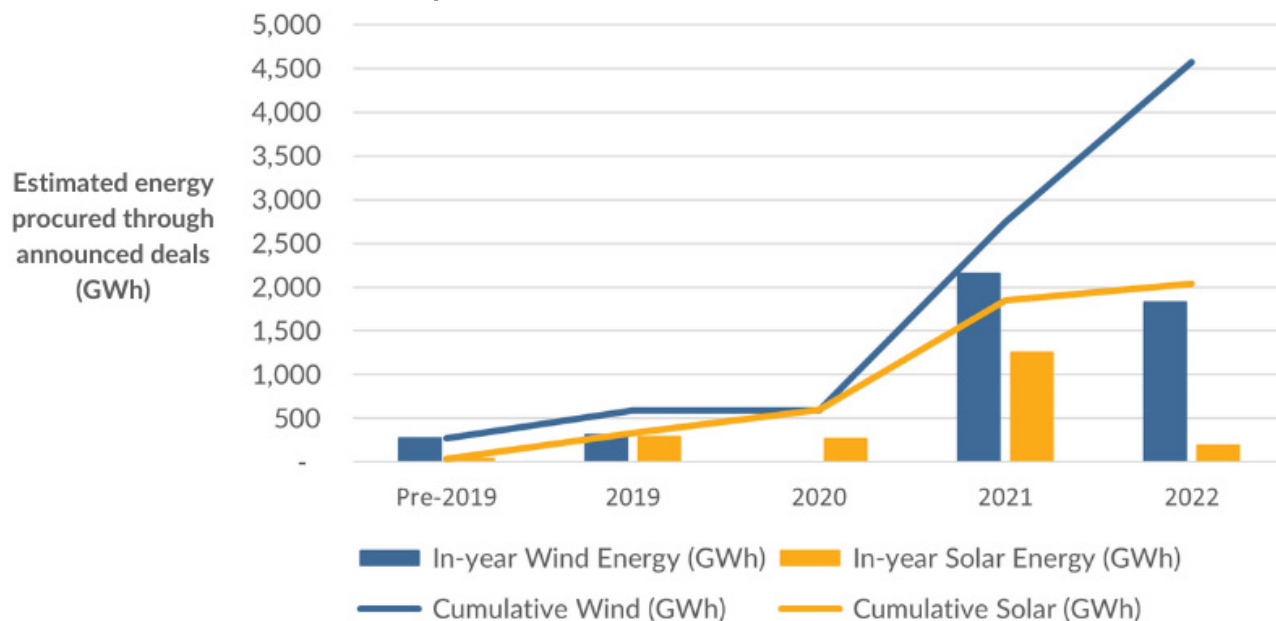


The Procurement Pendulum Continues Swinging to Wind

In 2019 and 2020, there were eight solar deals to one wind deal. The pendulum began to swing in 2021 with a stronger complement of wind deals: though the capacity of wind deals announced still did not quite match solar, wind's higher capacity factor – the amount of energy produced (in MWh or GWh) per installed generating capacity (in MW) – meant more wind energy was procured. Wind's momentum continued in 2022, with more than four times as much wind capacity (464 MW) contracted than solar (109 MW), meaning almost 10 times as much annual wind energy procured. As mentioned above, the move toward wind has been fostered particularly by TIER compliance, with both compliance market deals in 2022 seeking wind, just like the prior two compliance deals from 2021.

There has been a lot of public commentary about the expansion that corporate procurement has brought to solar in Alberta. Indeed, given that utility-scale solar did not exist in Alberta before the market for virtual power purchase agreements (vPPAs) and most large projects have had an offtaker announced, solar's growth in Alberta is almost entirely linked to this market. However, the market is now fostering at least as much wind as solar. Cumulatively across all years, the capacity under announced contracts is now almost evenly split, meaning likely more than twice as much annual wind energy has been procured to-date. Corporate renewables procurement is definitely a big solar story, but it's arguably an even bigger wind story.

Estimated Contracted Wind and Solar Energy by Year of Deal Announcement



“In-year” represents the estimated amount of energy that would be generated from the deals announced in that year. “Cumulative” represents the estimated amount of energy that would be generated from all deals announced up to that year, including all previous years as well.

Developer Appetite for Merchant Exposure Continues to Grow while Deal Layering Emerges

Reduced reliance on single buyers to fully contract entire project generation would facilitate the recent

trend toward wind energy. While solar development achieves economies of scale at a wider range of project sizes, wind projects tend to be much larger. The earliest deals in Alberta's market typically saw single buyers fully subscribing the project sizes: this included nine of the first 11 deals announced up to the end of 2020. There was a smaller pool of buyers that could pick up the commonly much larger energy production from individual wind farms.

However, in 2021, it became much more common for deals to cover only a proportion of the project generating capacity. This continued in 2022. Many projects have now proceeded to investment with less than two-thirds – and even as little as half – their capacity subject to an announced offtake deal. This has indicated a growing appetite from developers to accept merchant price exposure for a portion of the project capacity – a prospect rendered more appealing by the very robust electricity market prices over the last two years.

A new phenomenon has now emerged in 2022, however, to further support larger wind projects: more than one offtake deal announced for the same project, or “deal stacking.” The first three “stacked” deals in Alberta were announced in 2022, all for wind energy projects. Together, these three projects account for a remarkable 473 MW of new wind energy capacity now operating or under construction. Through both merchant exposure and deal stacking, only five of the 19 deals announced since the start of 2021 contracted the entire generating volume of the related project. The other 14 deals include either merchant exposure, two deals on the same project, or both – a dramatic change from 2019 and 2020.


Market Trends Amplify Economic Benefits for Alberta, which Is Attracting Other Provinces

The effect of these trends is to amplify the renewable energy investment in Alberta. Cumulatively, the approximately 2.3 GW of contracted renewable energy capacity announced are supporting over 2.8 GW of total project capacity. This means that the market for corporate renewable energy deals in Alberta is fostering well over \$4 billion of new construction in the province and the nearly 5,000 jobs that come with it.

No wonder, then, that other provinces are looking to get in the game for this investment. With Nova Scotia actively advancing its Green Choice Program and Saskatchewan similarly developing a green tariff program for consumers to subscribe to long-term energy from new renewable projects, Alberta will finally have company as a host for corporate renewable energy investment in 2023. These emerging opportunities will help to expand the corporate renewables market further, enabling progress toward BRC-Canada’s newly multiplied target of 10 GW by 2030.



Buyers' BREAKFAST



January 25, Toronto

The BRC-Canada team will be in Toronto! Join us at this buyers-only breakfast to gain insights and take advantage of an open question-and-answer session

with experts on renewable energy purchasing in Canada, including experienced buyers in the Canadian market.

Learn more about BRC-Canada, including our educational resources on renewable energy purchasing in Canada, upcoming networking and learning opportunities, and our exclusive community benefits. All knowledge and experience levels are welcome.

SPEAKERS



Brian Hong

RBC Capital Markets
Vice President,
Sustainable Finance



Jason Chee-Aloy

Power Advisory
Managing Director



Sarah Genetti

Labatt
Senior Director,
Procurement and Sustainability

Buyers BOOTCAMP



April 18-19, Calgary

The Buyers' Bootcamp is an intensive course on power purchase agreement procurement, giving renewable energy buyers the opportunity to hear key insights and perspectives on the opportunities and challenges of the process from those that have led processes themselves. This bootcamp will take place on April 18 and 19.

Fees: Free for members; \$500 for non-members.

Register now for the members-only BRC-Canada forum. Join our experts from across the sector for a curated conversation designed to keep you at the front of Renewable Energy Developments. The forum is the perfect opportunity to meet with other members of the BRC community and understand the trends driving our market.

BRC-CANADA FORUM



April 20, Calgary

<https://businessrenewables.ca/events>

Welcome to the BRC-Canada community!

We were excited to welcome eight new community participants in 2022, including some heavy hitters in the energy developers world (ENMAX and TransAlta Corporation) and a Canadian icon - Canadian Tire! BRC-Canada's increasingly diverse membership reflects how renewable energy investments are becoming more commonplace across all of Canada's business sectors. Thank you all for joining us for your procurement journey!



Thank you to Advisory Board Members

A big thank you to our Advisory Board

Our Board members provide crucial insight and strategizing behind the scenes, and BRC would not be able to grow as it has done without their help!

Amazon
Bullfrog Power
BluEarth Renewables
Canadian Tire
Capital Power
Cassels

City of Edmonton
EDF Renewables
EY
Greengate Power
LevelTen Energy
Marathon Capital

Power Advisory LLC
RBC
RES Canada
Starbucks
TC Energy
TELUS



MEMBERportal

Log in to the BRC member portal for exclusive tools and resources, and keep checking back for new additions in 2023!

- Primers, templates, videos
- Buyer's road map
- Detailed deal tracker
- Newsletter archive
- Member directory (NEW IN 2022!)



businessrenewables.ca/user/login



**BUSINESS
RENEWABLES
CENTRE**

CANADA 

GOLD PARTICIPANTS



SILVER PARTICIPANTS

