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# BC BIOENERGY NETWORK



# 2022 YEAR IN REVIEW

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# ABOUT BC BIOENERGY NETWORK

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BC Bioenergy Network (BCBN) facilitates strategic partnerships to identify low carbon solutions in a dynamic regulatory environment.



## *Partnering for a Greener Future*

### **Business Address**

2337 Lower Mall,  
Vancouver, B.C., V6T 1Z4

### **Mailing Address**

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Vancouver, B.C., V6T 2E7

### **Contact Information**

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scott.stanners@bcbioenergy.ca



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# MORE ABOUT BCBN

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## WHO

BCBN guides the development of the bioenergy sector in British Columbia as a facilitator of strategic partnerships to attract investment from private and public sources, BCBN advances the production and use of low carbon fuels in the province to displace fossil fuels, spur innovation, and support economic development.

## WHAT

- Identification of Problems and Conceptual Solutions
- Commission Research and Feasibility Studies
- Project Management and Oversight
- Network Building and Event Hosting
- Investment Attraction and Funding Coordination

## WHY

- **Reduce GHG Emissions:** There is a global need to reduce GHG emissions and mitigate our effect on the environment.
- **Accelerate Innovation:** There is a need to accelerate the move to low carbon solutions in transportation and other sectors of the economy.
- **Reach Government Targets:** BCBN has a critical role in supporting the Province of B.C. toward its 2030 GHG emission reduction targets in CleanBC.
- **Move from Planning Phase to Commercial Scale Operations:** BCBN acts as a catalyst to move projects from the planning phase into commercial deployment at scale, including efforts to attract investment and remove barriers to deployment.

## HOW

- **Strategic Partnerships:** Form strategic partnerships with local, national and international entities to fund purpose-driven research and feasibility studies in the low carbon fuels sector.
  - **Convene Key Stakeholders:** Convene key stakeholders in the low carbon fuels sector to enable a coalition approach to identify solutions for complex challenges.
  - **Project Leadership:** BCBN leads projects from the development of a request for proposal to proponent selection, project management and completion.
  - **Advisor to Government:** Use our knowledge and information from research and project activities to advise government on the strategic direction of the low carbon fuels sector in B.C., Canada and internationally to meet climate change targets.
  - **Capacity Building and Training Programs:** Develop and facilitate training, education and capacity building programs through workshops, webinars, conference sponsorship, and the West Coast Bioenergy Guild to strengthen the low carbon fuels network in B.C. and Canada.
  - **Event Management:** Plan and host virtual and in-person events to facilitate information exchange related to innovation and policy developments in the bioenergy sector.
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# WEST COAST BIOENERGY GUILD 2022

West Coast Bioenergy Guild is a regular educational networking event hosted by BC Bioenergy Network since 2009. Special guests share their insights and highlights from the bioenergy sector followed by group discussion. Recordings and slides are available at the [BCBN website](#).

Special Guests

April 20th, 2022



**OSHADA MENDIS**

Deputy Director, Clean Fuels Portfolio, Natural Resources Canada

Presentation Topic: "Bioenergy Development Opportunities in Canada and the IEA Roadmap 'Net Zero Emissions by 2050'"

June 14th, 2022



**DR. MAHMOOD EBADIAN**

Research Lead  
BC-SMART



**DR. MOHSEN MANDEGARI**

Program Lead  
BC-SMART

Presentation Topic: "Decarbonizing the Canadian Rail Sector; with a focus on bio-based diesel and the opportunities and challenges"

July 12th, 2022



**JARED GIRMAN**

Director of Government Relations and Strategic Initiatives  
West Coast Reduction Ltd.

Presentation topic: "West Coast Reduction and Bioenergy Feedstock Supply"

September 13th, 2022



**DR. SCOTT RENNEKAR**

Professor and Program Director  
Department of Wood Science, University of British Columbia

Presentation topic: "Tomorrow's Workforce for the Bioeconomy"

November 15th, 2022



**PERRY EDDY**

Senior Investment Analyst, Strategic Innovation Fund (SIF)  
Innovation, Science and Economic Development Canada

Presentation topic: "SIF 101"

December 13th, 2022



**GURMINDER MINHAS**

Managing Director, Performance BioFilaments Inc.

Presentation topic: "Opportunities for forest based biomaterials"

# FINAL REPORT

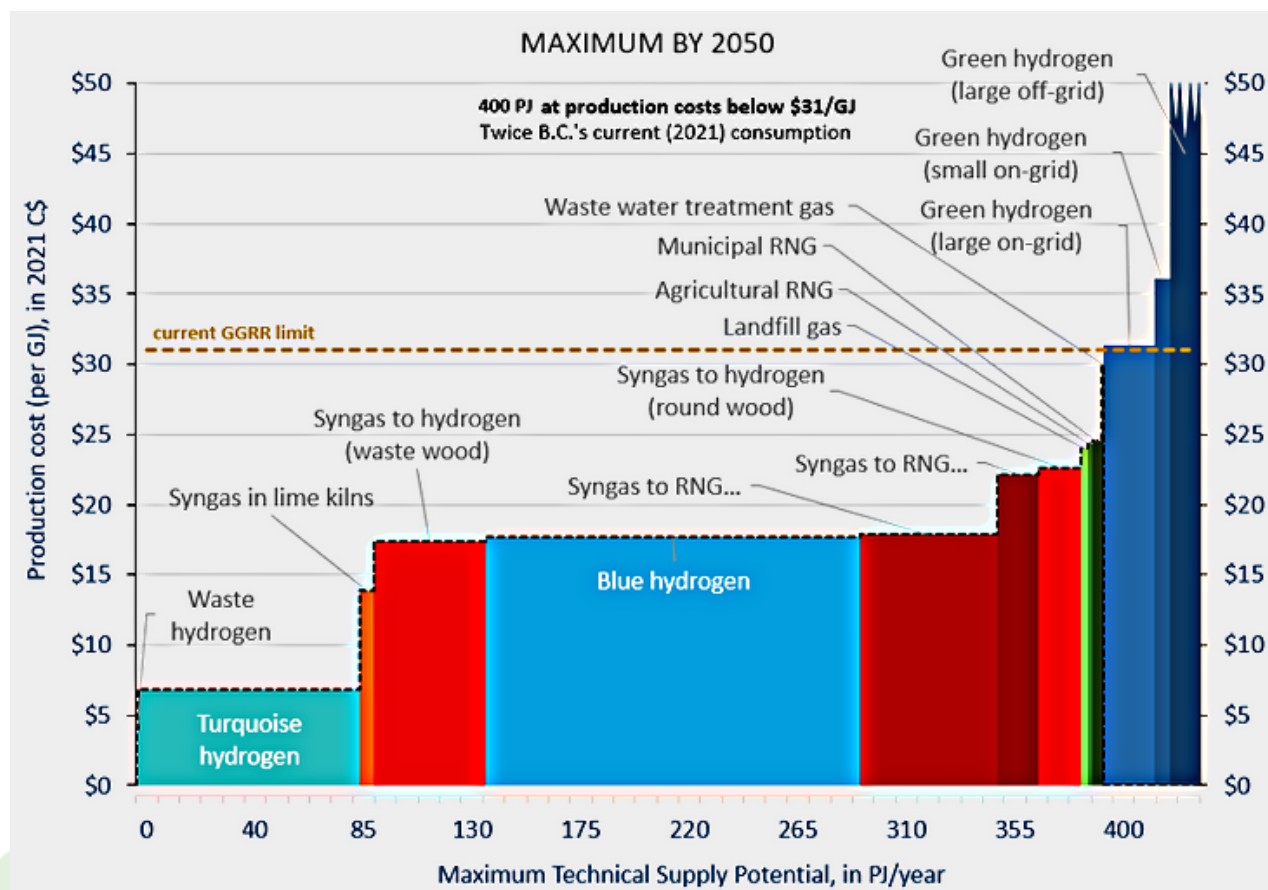
## B.C. RENEWABLE AND LOW CARBON GAS SUPPLY POTENTIAL STUDY

BC Bioenergy Network partnered with FortisBC and the Government of British Columbia to explore the potential production of renewable and low carbon gases in B.C. and beyond.



BCBN commissioned a report that investigated two scenarios to create an upper and lower bound for renewable and low carbon gas production with B.C. resources by 2030 and by 2050. The report considers significant current barriers, such as geographic limitations, transport constraints, resource availability, conversion efficiency, and various system assumptions, including technology readiness and realistically achievable implementation rates. Assuming these barriers are overcome, the maximum supply resource potential for 2030 and 2050 is 50 and 440 PJ per year respectively.

Ultimately by 2050, the province's gas system could be completely supplied by made-in-B.C. renewable and low carbon sources.



[The report is available at the BCBN website](#)

# BC-SMART LOW CARBON FUELS CONSORTIUM



## Project Title:

**BC Sustainable Marine, Aviation, Rail and Truck Low Carbon Fuels Consortium**



## Consortium Members:



BCBN funded the establishment and growth of the BC Sustainable Marine, Aviation, Rail and Truck (BC-SMART) Low Carbon Fuels Consortium. BC-SMART leverages industry and government support to develop “software” recommendations such as policy and regulatory measures as well as “hardware” recommendations that identify supply chain and infrastructure to facilitate the production of low carbon transportation fuels in B.C.

Nearly 20 organizations including Air Canada, WestJet, Boeing, YVR Airport Authority, CP Rail, CN Rail, and Seaspan executed a memorandum of understanding to collaborate on the decarbonization of the transportation fuels they consume including gasoline, diesel, jet and marine fuels. BC-SMART publishes a newsletter, hosts theme-driven workshops, and publishes reports that evaluate low carbon fuel options in B.C. for these sectors.

## Events:

### Webinar

[Decarbonizing the rail sector via the use of low carbon-intensive fuels](#)

### Workshop

[Progress in SAF/Biojet production and use](#)

## Related IEA Bioenergy Task 39 Newsletters:

### Issue 59, July 2022

[Biofuels Policies and Market in Belgium](#)

### Issue 60, October 2022

[Biofuels Policies and Market in Austria](#)

## Newsletters:

### Issue 5, February 2022

[Decarbonizing the trucking sector](#)

### Issue 6, May 2022

[Decarbonizing the rail sector](#)

### Issue 7, June 2022

[Decarbonizing the aviation sector](#)

### Issue 8, September 2022

[Biofuel policies and Fuel LCA models](#)

**Read More about BC-SMART:**  
[www.bc-smart.ca](http://www.bc-smart.ca)

# BC BIOENERGY SECTOR AWARDS 2022



2022 was the 2nd annual BC Bioenergy Sector Awards, hosted by BCBN. The awards recognize leaders who have made meaningful contributions to advance bioenergy research, policy & sector building, and innovation in British Columbia and were presented on October 20th, 2022 at the virtual ceremony.

**BC Bioenergy Network**  
PARTNERING FOR  
A GREENER FUTURE

**BC BIOENERGY  
SECTOR AWARDS**  
OCTOBER 20TH, 2022

**RESEARCHER AWARD**  
*Xiaotao Bi*  
Professor and Director  
Clean Energy Research Centre  
University of British Columbia

**CHANGEMAKER AWARD**  
*Robert Pinchuk*  
Director  
Low Carbon Strategy  
Parkland Corporation

**CHAMPION AWARD**  
*David Schick*  
Vice President  
Western Canada, Innovation and Regulatory Affairs  
Canadian Fuels Association

## Congratulations to the Winners of the 2nd Annual BC Bioenergy Sector Awards!

### **Researcher Award**

Xiaotao (Tony) Bi  
Professor and Director, UBC Clean Energy Research Centre

### **Changemaker Award**

Robert Pinchuk  
Director, Low Carbon Strategy, Parkland

### **Champion Award**

Dave Schick  
Vice President, Western Canada, Innovation and Regulatory Affairs, Canadian Fuels Association

# BC BIOENERGY SECTOR AWARDS: VIRTUAL CEREMONY



On Thursday, October 20th, 2022, BC Bioenergy Network announced three recipients of the 2022 BC Bioenergy Sector Award during the virtual ceremony. This was the 2nd annual celebration of the BC Bioenergy Sector Awards. These awards were presented for outstanding leadership and contribution to the bioeconomy sector in British Columbia.

The one-hour virtual event was opened by Scott Stanners (Executive Director at BC Bioenergy Network) and inspired by comments from last year's winners: Jack Saddler (UBC), Dave Bennett (FortisBC), and Michael Rensing (BC Ministry of Energy, Mines and Low Carbon Innovation). In the second part of the event Paul Austin (Fort Capital Partners and Director of BC Bioenergy Network) presented the awards to the 2022 winners, who each shared an acknowledgment speech. Followed by Petra Srutkova (BC Bioenergy Network), who hosted a refreshing Trivia Quiz, and surprise Special Guest Ashley Callister (CICE) delivered an extraordinary bioenergy-themed musical performance.

## BC Bioenergy Sector Awards

Presented on Bioenergy Day, October 20th, 2022

Featuring comments from Award Winners from 2021 and 2022:



Researcher Award 2021  
**Jack Saddler**  
UBC



Changemaker Award 2021  
**David Bennett**  
FortisBC



Champion Award 2021  
**Michael Rensing**  
BC Government



Researcher Award 2022  
**Xiaotao Bi**  
UBC



Changemaker Award 2022  
**Robert Pinchuk**  
Parkland Corporation



Champion Award 2022  
**David Schick**  
Canadian Fuels Association



[The Event Recording is available at the BCBN website](#)

BC Bioenergy Network thanks you for your nominations and participation.

We are proud to recognize the accomplishments of the award recipients and look forward to continuing support and celebrating the growth of the sector.



# HIGHLIGHTED EVENTS 2022



## Sponsored:

### Value of Biogas West 2022 Conference



November 1st - 2nd, Vancouver, B.C.

Canada's premier biogas & RNG event attracts top industry stakeholders. The 2022 Value of Biogas West Conference hosted on November 1 and 2 was a record-breaking conference for the Canadian Biogas Association.

[View Conference Highlights](#)

## Other:

### 2022 WPAC AGM & CONFERENCE: Wood Pellets and The Bioeconomy



September 20th - 21st, Vancouver, B.C.

Around 200 industry insiders gathered for the Wood Pellet Association of Canada (WPAC) conference in Vancouver in September 2022 to discuss the state of bioenergy and its future potential.

[See the Presentations](#)

### Scaling Up 2022 Conference



November 7th - 9th, Ottawa, ON

The conference Scaling Up 2022 - Further and faster: A sustainable economy beyond oil, gas and coal was Canada's 7th annual industrial bioeconomy business conference, which brought together Canadian and international public and private stakeholders to discuss solutions to accelerate the global bioeconomy.

[See Details](#)

# B.C. BIOENERGY NEWS HIGHLIGHTS 2022

## New Wood Waste to Energy Centre

British Columbia Institute of Technology (BCIT) has opened a \$1.5 million Wood Waste to Energy Centre (WWEC) at its Burnaby Campus, which uses a biomass boiler to recycle wood waste into clean energy. Yearly, WWEC will use 250 tons of wood cut-offs and sawdust from Carpentry and Joinery programs to heat buildings at the Burnaby Campus and thus save 1% of BCIT's total emissions, equivalent to 75 tCO<sub>2</sub>e GHG. This project was supported with \$200,000 from BC Bioenergy Network. [Details here.](#)



## Tidewater Renewables Ltd. Enters into 20-year Renewable Natural Gas (RNG) Offtake Agreement with FortisBC

Under the new Offtake Agreement, FortisBC expects to purchase up to 525,000 gigajoules of RNG annually from a new RNG facility located in Foothills County near High River, Alberta. This new facility will convert organic waste into enough energy to meet the needs of more than 5,800 residential homes in British Columbia. [Details here.](#)



## B.C. Centre for Innovation and Clean Energy (CICE) Awards Climate Solutions Funding through Inaugural Open Call for Innovation

CICE announced funding awards from their inaugural Open Call for Innovation, which provides grants to catalyze B.C.-based innovators. Award winners in the bioenergy sector include Hydron Energy and Parkland Refining BC Ltd. [Details here.](#)



## Prince George Landfill Teams Up with FortisBC for RNG Production

FortisBC expects to produce approximately 90,000 gigajoules of RNG a year from this project over its 20-year contract, starting 2024. This is enough energy to meet the annual natural gas needs of approximately 1,000 homes in B.C. [Details here.](#)



## FortisBC Expects to Triple RNG Supply in 2022

FortisBC's annual review of its climate action performance has shown that FortisBC Energy Inc. and FortisBC Inc. helped its customers avoid approximately 578,000 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) in 2021 – the equivalent annual emissions of about 177,000 gasoline-powered automobiles. [Details here.](#)



## Parkland Announces Plans to Expand Co-processing Activities and Build British Columbia's Largest Renewable Diesel Complex

Parkland announced plans to increase renewable fuel production at its Burnaby Refinery. Plans include building on the track record of innovation and leadership, by expanding the company's existing co-processing volumes to approximately 5,500 barrels per day, and building a stand-alone renewable diesel complex, within the Burnaby Refinery capable of producing approximately 6,500 barrels per day of renewable diesel. [Details here.](#)



## District of Sicamous, B.C., to Construct New \$1.74M Bioheat Facility

The \$1.74 million facility will be comprised of a biomass boiler heating system and boiler house from Fink Machine, which will use wood waste to heat several buildings in the industrial park. [Details here.](#)



# CANADA BIOENERGY NEWS HIGHLIGHTS 2022

## Minister Wilkinson Announces up to \$800 Million in Project Funding to Advance Canada's Clean Fuels Sector

Approximately 60 projects have been selected to receive funding under the \$1.5-billion Clean Fuels Fund with the total federal investment up to \$800 million. These projects represent a first tranche of the highest-ranking applications from last year's call for proposals and have a total combined value of more than \$3.8 billion. [Details here.](#)

## Canadian Biomass 2022 Pellet Mill Map

The map includes updated pellet production capacity information and locations in Canada. [See the map here.](#)

## Tidewater Renewables Enters Strategic RNG Partnership

Tidewater Renewables, headquartered in Calgary, Canada entered into a strategic RNG and feedstock partnership with Rimrock RNG and Rimrock Cattle Company. [Details here.](#)



## Canadian Government Grants \$12M Funding to Biofuel Projects

At GLOBE Forum 2022, Jonathan Wilkinson, Minister of Natural Resources, announced the investment in seven organizations advancing emerging clean technologies including two B.C. organizations, Canfor Pulp and UBC. [Details here.](#)



## Enerkem Receives \$5.5 Million from Clean Resource Innovation Network

Enerkem, a world leader in the production of biofuels from waste materials, received \$5.5 million in funding as part of the CRIN Low Emissions Fuels and Products Technology Competition. [Details here.](#)



## Canadian Council for Sustainable Aviation Fuels (C-SAF) Launches

Canadian aviation industry leaders are joining forces to create the C-SAF, whose mission is to accelerate the deployment of sustainable aviation fuels (SAF) in Canada to ensure that the Canadian aviation sector remains competitive as it transitions to a net-zero future. [Details here.](#)



## Federated Co-operatives Limited (FCL) to build nation's largest renewable diesel facility, canola processing plant in Regina

FCL said it plans for the two facilities to be located north of the Co-op Refinery Complex and will be known as the Integrated Agriculture Complex. Regina's AGT Foods, will be a partner for the canola crushing plant. [Details here.](#)



# INTERNATIONAL BIOENERGY NEWS HIGHLIGHTS 2022



## Frontline BioEnergy and Red Rock Biofuels Run Tests

The companies have announced that they have successfully tested their innovative technology that gasifies Red Rock's residual woody biomass feedstock into a high-quality syngas for the production of SAF and renewable diesel. [Details here.](#)



## First flight in history with 100% sustainable aviation fuel on a regional commercial aircraft

Braathens Regional Airlines, the French-Italian turbo propeller (turboprop) aircraft manufacturer Avions de Transport Regional, and Finland-headed sustainable aviation fuel (SAF) supplier Neste Oyj made aviation history with the world's first-ever 100 percent SAF-powered test flight on a commercial regional aircraft. [Details here.](#)



## Chevron Completes Acquisition of Renewable Energy Group Inc.

On June 13, Chevron Corp. completed its previously announced acquisition of biofuel producer Renewable Energy Group Inc. The rebranded business segment, Chevron Renewable Energy Group, will remain headquartered in Ames, Iowa. [Details here.](#)

# INDIGENOUS BIOENERGY NEWS HIGHLIGHTS 2022



## **\$29-Million Fund for Remote Communities to Switch from Diesel to Renewables**

The New Relationship Trust, Coast Funds, and the Province of British Columbia are launching the Community Energy for Diesel Reduction program, a three-year \$29-million investment in communities transitioning from diesel-generated electricity to renewable energy sources. [Details here.](#)



## **Arbios Facility Named Chuntoh Ghuna - "The Forest Lives"**

The Lheidli T'enneh First Nation and Arbios Biotech have been working in close partnership to develop the renewable biofuels facility in Prince George, including the site preparation. They have recently announced the naming of the Arbios commercial-scale facility, which is now known as Arbios Biotech Chuntoh Ghuna and means "The Forest Lives." [Details here.](#)

## **NRCan Announced Additional \$300 Million is Available until 2027 for Clean Energy Projects**

This new funding will continue supporting the transition of Indigenous, rural and remote communities using fossil fuels for heat or power into renewable energy. Indigenous-owned or led projects will continue to be prioritized, and this funding will support projects pursuing a variety of technology types in all stages of development. There is no deadline to apply. Applications are reviewed on an ongoing basis. [Details here](#) and [here.](#)



## **Clean-Energy Funded Five Indigenous Projects on B.C.'s North Coast and Ten Indigenous Projects on Vancouver Island and Gulf Islands**

The Province is partnering with Indigenous communities throughout B.C. to work toward a low carbon future by providing funding from the First Nations Clean Energy Business Fund. [Details for North Coast here](#) and for Vancouver Island and Gulf Islands [here.](#)



# BIOENERGY POLICY HIGHLIGHTS 2022



Government of Canada

## Clean Fuel Regulations: SOR/2022-140

Canada Gazette, Part II, Volume 156, Number 14

Registration

SOR/2022-140 June 21, 2022

CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999

ENVIRONMENTAL VIOLATIONS ADMINISTRATIVE MONETARY PENALTIES ACT



Environment Canada



Ministry of Environment and Climate Change Strategy

British Columbia Greenhouse Gas Offset Protocol: Methane from Organic Waste



## Environment and Climate Change Canada Released Official Clean Fuel Regulations in Canada Gazette, Part II.

The Clean Fuel Regulations will require gasoline and diesel primary suppliers (i.e. producers and importers) to reduce the carbon intensity (CI) of the gasoline and diesel they produce in, and import into, Canada from 2016 CI levels by 3.5 grams of carbon dioxide equivalent per megajoule (gCO<sub>2</sub>e/MJ) in 2023, increasing to 14 gCO<sub>2</sub>e/MJ in 2030. Parties that are not primary suppliers would be able to participate in the credit market as voluntary credit creators by completing certain actions (e.g. low carbon fuel producers and importers). Clean Fuel Regulations [here](#).

## Canada Launches Greenhouse Gas Offset Credit System to Support a Clean, Green Economy

Taking action to reduce carbon pollution is critical as Canada builds a strong and resilient economy and a cleaner future. On June 8th, 2022 the Government of Canada launched Canada's Greenhouse Gas Offset Credit System, a key measure outlined in Canada's 2030 Emissions Reduction Plan. About Greenhouse Gas Offset Credit System [here](#), News release [here](#).

## Publication of the Government of Canada's Fuel Life Cycle Assessment (LCA) Model

Environment and Climate Change Canada announces the formal publication of the Fuel LCA Model in its Data Catalogue. Access the [Environment and Climate Change Canada Data Catalogue](#). Details on the Fuel LCA Model [here](#).

## B.C. Has a New Offset Protocol

The B.C. Ministry of Environment and Climate Change Strategy has posted a new Director-approved offset protocol to the B.C. Offset Program website. The Methane from Organic Waste Offset Protocol (MOWOP) is now available for use by projects that capture and destroy methane from landfills or from the anaerobic digestion of organic waste. Offset Program [here](#). Formal notification [here](#) and access to MOWOP [here](#).

## The Implementation of New Low Carbon Fuels Act Delayed

The implementation of B.C.'s new Low Carbon Fuels Act will be delayed by one year to January 1, 2024 in order to provide more time for consultations with First Nations as well as stakeholders in the aviation and marine sectors. The government's intention is to complete consultations and regulatory development in time for the new Regulations to be approved by summer 2023, providing all stakeholders with clarity regarding the changes that would come into force on January 1, 2024.

# REPORTS 2022

## Biofuels in Canada 2022

Advanced Biofuels Canada has released this year's Biofuels in Canada report, an annually funded project that is independently authored by Navius Research, Inc to provide an evaluation of Canadian renewable and low carbon policies and their impact on biofuels consumption, GHG reductions, and consumer costs. Read the report [here](#).

## Moving Forward Together: An Update to our Driving to 2050 Vision

Canadian Fuels Association (CFA) released report Moving Forward Together: An Update to our Driving to 2050 Vision outlining how CFA and its members continue to forge new strategic partnerships to help to decarbonize the transportation sector in Canada. Read the report [here](#).

## BECCS Done Well Report

The report BECCS DONE WELL: Conditions for Success for Bioenergy with Carbon Capture and Storage, commissioned by energy company Drax, is recognizing that a range of Negative Emissions Technologies – both nature- and technology-based—will be needed if we are to limit the global temperature increase to 1.5 °C by the end of the century. Read the report [here](#).

## Hitting Canada's Climate Targets with Biogas & Renewable Natural Gas (RNG)

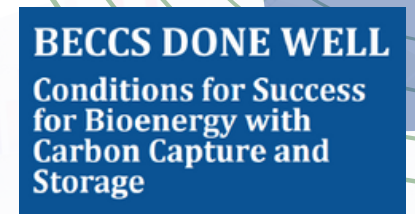
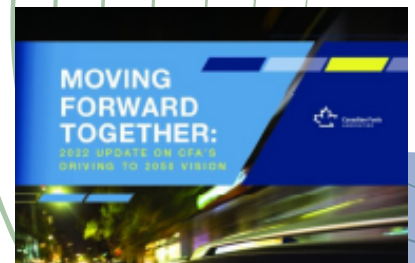
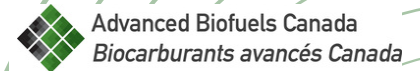
Biogas & RNG is a proven climate solution, with 279 projects across Canada already preventing more than 8 Mt of greenhouse gas emissions from reaching the atmosphere every year. But how much greater a role can biogas & RNG play in hitting Canada's 2030 and 2050 climate targets? Details [here](#). Read the report [here](#).

## Clean Energy Research Centre (CERC) Shares a White Paper on Clean Energy Pathways and Strategies to Meet B.C.'s Decarbonization Targets

A team of engineers at the University of British Columbia has found that British Columbia's current plan to meet its Paris emissions reduction targets for 2030, as set out in CleanBC: Roadmap to 2030, will not be successful unless drastic changes are made to the way the province produces and uses clean and renewable energy. Details [here](#).

## Task 37 Newsletters

IEA Bioenergy Technology Collaboration Programme Task 37: Energy from Biogas releases a Newsletter every month. See all Newsletters [here](#).



# MEET THE TEAM

ON BEHALF OF BCBN, WE THANK ALL OUR PARTNERS AND STAKEHOLDERS FOR A WONDERFUL 2022. WE LOOK FORWARD TO 2023.

## BOARD OF DIRECTORS



**David Schick**

Chairperson



**Paul Austin**

Director



**Vivian Kan**

Director



**David Bennett**

Director



**Scott Stanners**

Director

## MANAGEMENT



**Scott Stanners**

Executive Director



**Ralohn Hunt**

Project Director,  
Secretary and Treasurer



**Petra Srutkova**

Business and Marketing  
Administrator

*[Learn more about BCBN at bcbioenergy.ca](http://bcbioenergy.ca)*