

2019 VoB WEST: BIOGAS OPERATOR'S FORUM
TUESDAY JANUARY 15TH
Coast Coal Harbour Hotel (Vancouver, B.C.)

Registration & Breakfast (7:30 – 8:30 am)

Registration opens at 7:30am. Breakfast and coffee served until 8:30am.

Biogas Operator's Forum – Part 1 (8:30 – 10:00 am)

Hear what it's like to run an on-farm biogas plant from experienced plant operators:

- Chris Perry, GrowTEC;
- Brendan Van Biert, Fraser Valley Biogas; and
- Jerry Keulen, Seabreeze Farm.

Coffee Break (10:00 – 10:30 am)

Biogas Operator's Forum – Part 2 (10:30 – Noon)

Hear what it's like to run a biogas and landfill gas capture plant from experienced plant operators:

- Ben Poitras, Surrey Biofuel Facility;
- Stefan Michalski, Lethbridge Biogas; and
- Ben Van Nostrand, Salmon Arm Landfill.

Lunch (Noon – 1:00 pm)

Biogas/RNG Facility Tours (1:00 – 5:30 pm)

The time is finally here. A chance to see a working biogas plant! Which tour did you sign-up for?

Fraser Valley Biogas (FVB): B.C.'s first on-farm biogas plant, and first biogas plant in Canada to inject RNG into the pipeline, FVB has been operational since 2010. Today, FVB co-digests dairy manure from several farms with food waste to produce approximately 90,000 GJ/year of RNG. With plans for expansion, FVB may soon become one of Canada's largest on-farm biogas plants.

Note: The FVB tour is held entirely outside. Attendees should wear clothing and footwear appropriate for an on-farm tour in early January.

Surrey Biofuel Facility (SBF): Located in Port Kells, the recently built SBF converts 115,000 tonnes/year of residential organic waste into approximately 120,000 GJ/year of RNG. This RNG is used to fuel the City's natural gas powered waste collection vehicles, and provides a renewable fuel source for the City's new District Energy System.

*Note: All attendees on the SBF tour **MUST wear steel toe boots**. Anyone without steel toe boots will not be allowed on the Surrey Biofuel Facility tour.*

Networking Reception (5:30 – 7:30 pm)

All attendees are invited to the 2019 Value of Biogas West Networking Drinks Reception. Network with intelligent, likeminded individuals while enjoying a few snacks and drinks from the cash bar.

2019 VoB WEST: CONFERENCE AGENDA

WEDNESDAY JANUARY 16th

Coast Coal Harbour Hotel (Vancouver, B.C.)

Registration & Breakfast (7:30 – 8:30 am)

Registration opens at 7:30am. Breakfast and coffee served until 8:30am.

CBA: Achievements and Direction (8:30 – 9:10 am)

With a vision of developing the Canadian biogas industry to its fullest potential, the Canadian Biogas Association (CBA) is the collective voice of Canada's biogas industry. Learn more about what the CBA is currently doing, and take this opportunity to help shape the CBA's future direction:

- **Jennifer Green**, *Canadian Biogas Association*.

RNG Assessment & Market Transition (9:10 – 10:20 am)

RNG market assessment and transition is important. Join us for presentations on development and promotion of RNG in Washington State, the success of switching from diesel to natural gas fleets, and lessons learned transitioning from a compressed to liquefied biogas market in Sweden:

- An Expanded Look at RNG Development in Washington State - **Jim Jensen**, *WSU Energy Program*;
- Cost and Enviro Benefit of NGVs in Pacific Northwest - **Connor Reiten**, *NW Alliance for Clean Transportation*; and
- Transitioning from Compressed to Liquefied Biogas Market: Lessons Learned from Sweden - **Gustav Rogstrand**, *Research Institutes of Sweden*.

Coffee Break (10:20 – 10:50 am)

Renewable Opportunities for Pulp Mills (10:50 – Noon)

Pulp mills can consume large amounts of fossil fuels and produce organic waste. This should make them ideal candidates for biogas and other renewables. Attend this session to hear more about the potential for turning pulp mill waste into biogas, and the opportunity for using indirect gasification for production of renewable gas:

- Anaerobic Digestion of Foul Condensate Wastewater in Kraft Pulp Mills - **Alex Hayes**, *InnoTech Alberta*;
- Modeling the Potential for Biogas Production at a Pulp Mill - **Gustav Rogstrand**, *Research Institutes of Sweden*; and
- Renewable Syngas for use in Pulp Mill Lime Kilns - **Paul Watkinson**, *Highbury Energy Inc.*

RNG in B.C. (Noon – 12:30 pm)

As the first utility in North America to offer RNG to its customers, and as a key player in B.C.'s growing RNG market, FortisBC is heavily involved in everything RNG. FortisBC will discuss their recent Request for Expressions of Interest for Biomethane and Biogas supply. They will also provide insights on developing RNG supply and offer case studies from a range of different sectors:

- **Scott Gramm**, *FortisBC*.

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Lunch (12:30 – 1:45 pm)

Breakout Session #1 (1:45 – 3:20 pm)

RNG at Wastewater Treatment Plants

While anaerobic digestion is commonly used at wastewater treatment plants, biogas production is often flared. Join us after lunch to hear about research into the use of thermochemical hydrolysis processes, temperature-phased anaerobic digestion, and the use of biochar to enhance biogas production:

- Biosolids Energy Optimization and Recovery with Thermochemical Hydrolysis Process - **Jerod Swanson**, *Centrisys/CNP*;
- Influence of Temperature Phased Anaerobic Digestion on Stabilization of Municipal Wastewater Sludge - **Bitia Nazyab**, *UBC*; and
- Biochemical Methane Potential Assays for Biochar Selection in Anaerobic Digestion - **Caroline Cimon**, *UBC Okanagan Campus*.

BCBN's Nutrient Recovery Challenge – Enhancing the RNG Supply Chain

Digestate management is a key component of any agricultural biogas plant. Learn about the B.C. Bioenergy Network's Digestate Challenge and how it is helping to drive development of technologies for lower-cost digestate management:

- BCBN's Nutrient Recovery Challenge - **Scott Stanners**, *B.C. Bioenergy Network*;
- Technology Development for Nutrient Recovery from Anaerobic Digestate using Biopolymer - **Niloofer Abdehagh**, *CHFour Biogas Inc.*;
- Digestate Harvesting...Bulk Cake to Granules, a Value Adding Journey! - **Chris Bush**, *Trident Processes*; and
- Introducing MagPi to Harvest Phosphorus and Nitrogen from Liquid Wastes - **Rob Stephenson**, *Muddy River Technologies*.

Break (3:20 – 3:50 pm)

Breakout Session #2 (3:50 – 4:40 pm)

Municipal Dry Batch Digestion Case Studies

High solids, dry batch anaerobic digestion plants are increasing being used by municipalities to convert residential waste into biogas and digestate. Join us for the final session of the day to hear about two dry batch biogas plants in Edmonton, Alberta, and San Luis Obispo, California:

- A Case Study- Edmonton AB Conversion of Organic Fraction of MSW - **Douglas Renk**, *BIOFerm Energy Systems*; and
- San Luis Obispo. First HZI and Newest AD Operation in California - **Ricardo Hamdan**, *Hitachi Zosen Inova*.

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Agricultural Biogas Plant Optimisation & Management

Generating sufficient biogas from certain feedstock can be difficult. Furthermore, dealing with digestate from a biogas plant can be challenging. Join us for the final session of the day to hear about a feedstock pre-treatment technology that reduces volume and increases both digestibility and biogas production, and learn about a full-scale digestate treatment plant in the Netherlands:

- MW-AOP for Sustainable Manure Management - **Asha Srinivasan**, *Boost Environmental Systems, Inc.*; and
- Using GENIUS Modular Solution to Turn Digestate into High-Quality Fertilizer - **Scott Christian**, *Nijhuis Water Technology Inc.*

Wrap-up (4:40 – 5:00 pm)

Join us for final wrap-up of the day and to learn about the upcoming Value of Biogas East conference in Toronto (March 21st and 22nd).