



# CONFERENCE PROGRAM

## JANUARY 19 - 21, 2021





## DAY 1 – TUESDAY JANUARY 19<sup>TH</sup>

9:00 am – 9:10 am

Welcome to 2021 Value of Biogas - January

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9:10 am – 10:00 am

Raise the Roof - Increasing Biogas Production

Feedstock pre-treatment and improved biological activity can boost methane production. Hear how this might be possible:

- Combined FNA-Heat Pretreatment to Improve Methane Production from TWAS - **Salomeh Chegini**, *Ryerson University*; and
- Impact on Volatile Solids Reduction & Biogas Production within Municipal AD Systems via Bioaugmentation - **Jonathan Lee**, *Environment Depot, for Wastewater to Energy*.

10:00 am – 10:30 am: Networking

10:30 am – Noon

BREAKOUT SESSIONS

### Stage 1: Money for Nothing - Making Manure Profitable

Biogas plants that digest a high proportion of manure can be financially challenging. Discover ways to enhance economic feasibility:

- Towards Increased Nutrient Recirculation Through AD of Manure in Finland - **Elina Tampio**, *Natural Resources Institute Finland*;
- Cash Cow? How Small Farms Can Profit from Biogas - **Antonio Saavedra**, *Xebec Adsorption Inc.*;
- Enzymatic Hydrolysis and BMP Tests for Dry Manure - **Niloofar Abdehagh**, *CHFour Biogas Inc.*; and
- Where's the Beef? Economics of Cattle Feedlot Manure Digestion - **Alex Hayes**, *InnoTech Alberta*.

### Stage 2: Knock on Wood - Utilizing Forest Residues for RNG

Forestry residue is abundant. Learn about using forestry residue to produce syngas and RNG:

- Complementarity of Industrial Effluents in Lafões, Portugal - **Ana d'Espiney**, *Instituto Superior Técnico, University of Lisbon*; *National Laboratory of Energy and Geology*;
- Thermochemical Conversion of Forest Residues to Produce RNG: A Technology Scan - **Junnan Chao**, *University of British Columbia*; and
- Environmental and Economic Analyses of RNG from Waste Forestry Residual Biomass - **Haoqi Wang and Xiaotao Bi**, *University of British Columbia*.



## Noon – 12:30 pm: Networking

12:30 pm – 1:00 pm

### Show and Tell - Exhibitor Showcase #1

Join a Showcase to learn more about our Value of Biogas Exhibitors:

- **Xebec:** BGX Biostream for Small-Scale Biogas Projects;
- **Sentry:** Toxicology Detection in AD Case with CMSA; and
- **Wartsila Renewable Gas:** The Importance of Reducing Emissions During Biogas Upgrading.

1:00 pm – 1:20 pm

### Life's a Gas - Renewable Gas in BC

An overview of FortisBC's Renewable Gas Program: A look back at progress to date, and a look forward to what is to come:

- Renewable Gas in BC - **Jenelle De La Cour**, *FortisBC*.

1:20 pm – 2:00 pm

### Better Play it Safe - The Importance of Biogas Plant Safety

Safe installation and operation of biogas plants is critical. Hear how safety risks can be reduced through assessment and education:

- Regulatory Framework Surrounding Biogas, Digester Gas and Landfill Gas - **Ryan Milligan**, *Technical Safety BC*; and
- An Introduction to the CSA Biogas Code - **Anahita Jami**, *CSA Group*.

## Special Thank You to Our Presenting Sponsor



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## DAY 2 – WEDNESDAY JANUARY 20<sup>TH</sup>

9:00 am – 9:10 am

Welcome to 2021 Value of Biogas - January

Welcome to Day 2 of 2021 Value of Biogas - January.

9:10 am – 10:00 am

This is England - Biogas Plants in the UK

With hundreds of plants, the popularity of biogas in the UK has grown rapidly. Hear about biogas plants in the UK:

- Malaby Biogas: A Food Waste AD Case Study - **Thomas Minter**, *Malaby Biogas Ltd*; and
- Food and Agri Wastes to RNG: UK Case Study - **Kevin Monson**, *Weltec Biopower (UK) Ltd*.

10:00 am – 10:30 am: Networking

10:30 am – Noon

BREAKOUT SESSIONS

### Stage 1: Born in the USA - Biogas Plants in the US

The US has over 2,000 biogas plants. Learn about these plants and work to support technology adoption south of the border:

- RNG Resource Assessment & Co-produced Carbon Capture & Storage: A Pennsylvania Case Study - **Senorpe Asem-Hiablie**, *Pennsylvania State University*;
- Cow Power Success Stories in the U.S. - **Kyle Snyder**, *DMT Clear Gas Solutions*;
- Reducing Methane Loss During Upgrading at a Biogas Plant in Oregon - **Joe Ayala**, *Wartsila Renewable Gas*; and
- Building a 'Grass to Biogas' Value Chain to C-CHANGE - **Lisa Schulte Moore**, *Iowa State University*.

### Stage 2: Money, Money, Money - Insights into Financing On-Farm Biogas Plants

Financing on-farm biogas plants can be challenging. Learn about biogas plants and how to assess risk.

Note: while created for banks, all are welcome to join:

- The Potential of On-Farm Biogas Plants - **Mathew Dickson**, *Hallbar Consulting Inc*;
- British Columbia's Commitment to Renewable Gas Development: How to Create Demand for RNG - **Paul Wieringa**, *B.C. Ministry of Energy, Mines and Low Carbon Innovation*;
- Financing Farm Biogas to RNG Projects: A Utility Perspective - **Colton Aston**, *FortisBC*;
- Financing Biogas - **Tracy Haynes**, *The Atmospheric Fund*; and
- Insights into Financing On-Farm Biogas Facilities - **Ashkan Shoja-Nia**, *EPCOR Commercial Services Inc*.



## Noon – 12:30 pm: Networking

12:30 pm – 1:00 pm

Show and Tell - Exhibitor Showcase #2

Join a Showcase to learn more about our Value of Biogas Exhibitors:

- **DMT Clear Gas Solutions:** Standardized DMT RNG Systems in the Canadian Market;
- **Bright Biomethane:** Bright's Modularity & Prefab: Fast Installation, Low Costs; and
- **Dorset:** Your Digestate Processing Options and Applications.

1:00 pm – 2:00 pm

Canadian Dream - Biogas Plants on Canada's West Coast

Defined by its coastline and mountain ranges, BC is home to a handful of biogas plants. Learn about biogas plants located on Canada's West Coast:

- Combining Biogas with Nutrient Recovery for Enhanced Environmental Benefits - **Andrew VanderZaag**, *Agriculture and Agri-Food Canada*;
- RNG Virtual Pipeline - **Joey Broda**, *FortisBC*; and
- Lulu Island Wastewater Treatment Plant Biomethane Project - **Jeff Carmichael & Jennifer Farr**, *Metro Vancouver*.

## Special Thank You to Our Gold Sponsors



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## DAY 3 – THURSDAY JANUARY 21<sup>ST</sup>

9:00 am – 9:10 am

Welcome to 2021 Value of Biogas - January

Welcome to Day 3 of 2021 Value of Biogas - January.

9:10 am – 10:00 am

You Can't Catch Me - Capture and Use of CO<sub>2</sub> & Syngas

CO<sub>2</sub> from upgrading is a potential co-product, while syngas methanization could be a game changer. Hear about Swedish research to make these a reality:

- Bio-CCS: A Way to Make Biogas Carbon Negative? - **Johan Andersson**, *Research Institutes of Sweden AB*; and
- Biological Methanization: Applied Experiments and Techno-Economic Assessment - **Henrik Olsson**, *Research Institutes of Sweden AB*.

**10:00 am – 10:30 am: Networking**

10:30 am – Noon

BREAKOUT SESSIONS

### Stage 1: Road to Recovery - Capturing Digestate Nutrients

Nutrient recovery can save cost and create end-products. Learn about technologies and tools for digestate nutrient recovery:

- Digestate and Manure Valorisation: Keys to Efficiency and Profitability - **Olivier Dehay & Marius Cote**, *France Evaporation*;
- Biosolids Utilization and the Circular Economy - **Michael Vujicic**, *Veolia*; and
- Innovations in Digestate Processing & Marketing - **Céline Vaneeckhaute**, *Université Laval*.

### Stage 2: In Abundance - Development of Canada's Hydrogen Sector

RNG isn't the only renewable in town. Learn how the hydrogen economy is growing in Canada:

- Hydrogen's Role in Decarbonizing Heat for Industry and the Built Environment - **Jeff Grant**, *Zen and the Art of Clean Energy Solutions*;
- FortisBC Decarbonization Strategy and the Potential for Hydrogen - **John Quinn**, *FortisBC*; and
- Hydrogen Fuelling Infrastructure in BC - **Shannon Halliday**, *HTEC Hydrogen Technology & Energy Corporation*.

**Noon – 12:30 pm: Networking**



## 12:30 pm – 1:00 pm

## Show and Tell - Exhibitor Showcase #3

Join a Showcase to learn more about our Value of Biogas Exhibitors:

- **FortisBC:** Q&A with FortisBC;
- **Evonik Corporation:** Don't Waste the Waste; and
- **Greenlane Biogas:** Options for Upgrading High Nitrogen Landfill Gas to RNG.

## 1:00 pm – 2:00 pm

## Do It Clean - The Importance of Biogas Pre-Cleaning

Biogas contains impurities that may require removal prior to upgrading. Learn how to pre-clean biogas and why it is important:

- Enabling More Efficient RNG Production by Online Monitoring of Biogas Contaminants - **Ian Hunter, Camlin Biogas;**
- Evonik Membranes and CO<sub>2</sub>: Lessons Learned From > 365 Biogas Plants - **Erik Hoving & Ahmed Almujaheed, Evonik Corporation; and**
- Hydrogen Sulfide Removal of Landfill Gas: A Case Study - **Martin Tielbaard, Paques Environmental Technologies Inc.**

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### Bronze Sponsors



### Exhibitors



VALUE OF  
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