





# CANADIAN GERMAN CONFERENCE ON RENEWABLE ENERGIES AND ENERGY STORAGE IN RURAL AND REMOTE CANADA

April 17, 2018, Ontario Investment and Trade Centre, Toronto www.germanchamber.ca

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## CANADIAN GERMAN CONFERENCE ON RENEWABLE ENERGIES AND ENERGY STORAGE IN RURAL AND REMOTE CANADA

April 17, 2018, 09:00 am – 04:30 pm, Ontario Investment and Trade Centre, Toronto

09:00	Registration & Breakfast
09:30	Welcome and Opening Remarks Yvonne Denz, Senior Vice President, CGCIC
	Peter Fahrenholtz, Consul General, German Consulate General Toronto
09:40	Energy Transition Made in Germany – Introduction Thorsten Gusek, Managing Partner, energiewaechter GmbH on behalf of the German Energy Solutions Initiative, German Federal Ministry of Economic Affairs and Energy
09:55	Ontario – Clean Technology Initiatives and Investment Opportunities  Harald Feldhoff, Manager, Cleantech and Materials Unit, Ontario Investment Office
10:10	Programs and Projects to Promote Renewable Energies in Rural and Remote Communities Randy Zadra, Senior Advisor, National Research Council of Canada (NRC) Johnathan Martin, Program Leader – Bioenergy, National Research Council of Canada (NRC)
10:30	Smart Microgrids – Present Development and Outlook Lars Waldmann, Chairman, European Institute for Energy Technologies
11:10	Coffee Break and Networking
11:30	Planning for Project Success in Remote and Rural Canada  Dawn Lambe, Executive Director, Biomass North Development Centre
11:45	Almaden Europe GmbH: From Arctic to Desert Climate – PV Modules with Double Yield Dr. Erich Merkle, CEO
12:00	BAE Batterien GmbH: Reliable Energy Storage Systems for Remote Communities  Ekaterina Zakhvatova, Head of Sales
12:15	DIVE Turbinen GmbH & Co. KG: Turnkey Hydro Power Solutions Stefan Perlot, Representative Canada
12:30	Heinz Entsorgung GmbH & Co. KG: Waste to Energy as Part of Microgrids Karl Neubert, Market Advisor
12:45	InTech GmbH & Co. KG: Renewable Energy and Storage Solutions Dr. Ing. Hansjörg Vollmer, CEO









01:00	Networking Lunch
02:00	Stiefelmayer Heizung & Sanitär: Energy Saving with Comfort Thomas Stiefelmayer, CEO
02:15	Thermoelect GmbH: Off-grid Wood Gasifier CHP with Maintenance Free Thermoelectric Generators Horst Erichsen, CEO
02:30	Alternative Energy for Remote Mining Michel Carreau, Ph.D., Director Hybrid Power, Associate, HATCH
02:50	Coffee Break and Networking
03:20	Decentralized Supply Concepts in Distribution Grids  Dr. Jan Fritz Rettberg, Head of Innovation Management, ie³ Institute of Energy Systems, Energy Efficiency and Energy Economics, TU Dortmund University
04:00	Diesel-Displacement with Solar Systems in the Canadian Arctic – Challenges and Opportunities Klaus Döhring, CEO, Green Sun Rising Inc.
04:20	Closing Remarks  Janis Wilkinson, Interim Executive Director, Ontario Sustainable Energy Association (OSEA)  Kathrin Wesselow, Competence Centre for Energy and Cleantech, CGCIC
04:30	End of Conference and Networking Reception













#### **SPEAKER PROFILES**

#### Thorsten Gusek, Managing Partner, energiewaechter GmbH

Thorsten Gusek is Managing Partner of the Berlin based consultancy energiewaechter GmbH. He is head of consulting services focusing on markets for renewable energies, energy efficiency, and green tech.

Before establishing energiewaechter GmbH in 2010, Thorsten started his professional career in 2007 as a consultant advising several PV technology providers that were entering markets in Germany and other European countries. In this capacity, he identified the market potential and business opportunities for suppliers of several renewable energy technologies. Furthermore, he advised a German utility company on entering the photovoltaic industry and organized business events and travels to foreign green tech markets on behalf of the client. In 2006, Thorsten graduated from Georg-August-University of Göttingen with a degree in business administration with a focus on marketing, international economics, and the contemporary PV-market in Germany.



www.energiewaechter.de

#### Harald Feldhoff, Manager, Cleantech and Materials Unit, Ontario Investment Office

Harald Feldhoff is currently the Manager of the Cleantech and Materials Unit in the Ontario Investment Office at the Ontario Ministry of Economic Development and Growth. He and his team focus on working with Ontario's cleantech and materials industries, which include chemicals and steel. Harald has also worked across the ministry in various roles over the past decade, including as a Senior Policy Advisor in the Office of the Deputy Minister.



Prior to joining the Ontario Public Service, Harald garnered private sector experience at Standard & Poor's in Toronto and a large central banking institution in Germany. He strongly values partnerships and collaboration across organizational lines and enjoys managing projects involving complex stakeholder issues. Born in Cologne, Germany, Harald has lived most of his adult life in Canada and proudly became a Canadian citizen in 2010. Harald has an MA in Economics from the University of Toronto, specializing in the environment and resources management.

www.investinontario.com

#### Randy Zadra, Senior Advisor, National Research Council of Canada (NRC)

Randy Zadra has over 20 years of experience in international business innovation, and technology management. He is a senior advisor to the National Research Council (NRC) in Canada leading new international applied R&D and co-innovation initiatives. He served 9 years in various senior management capacities with BCE and Teleglobe in Montreal, and Washington DC. He has worked in senior management roles with several software and technology companies in Boston, and Montreal, including Orblynx, and Datawind. He also worked at the MIT Media Lab in Boston serving as Project Director and leading the Entrepreneurship and Development Program. He taught several entrepreneurship courses, served as a judge on the MIT business plan competition, and has served as an advisor and board member for several early stage companies. He studied at Carleton University and the MIT Sloan School of Management.



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www.nrc-cnrc.gc.ca







#### SPEAKER PROFILES

#### Johnathan Martin, Program Leader - Bioenergy, National Research Council of Canada (NRC)

Since Jonathan Martin joined the National Research Council in 2005, he has co-authored 20 journal articles and 3 book chapters, while managing numerous projects on alternative power sources such as hydrogen, methanol and formic acid fuel cells and metal-air batteries. He has contributed to over 30 technical reports for various industrial clients and government agencies, regarding the environmental impacts, safety standards, and performance of energy systems and the transportation sector. He has been the Program Leader for NRC's initiative on Bioenergy Systems for Viable Stationary Applications since 2013.



www.nrc-cnrc.gc.ca

#### Dawn Lambe, Executive Director, Biomass North Development Centre

Dawn Lambe is Executive Director of Biomass North Development Centre, a Canadian sector association that advocates for members of the new bioeconomy. Biomass North also performs market and technical research, leads tours and trade missions, and develops bioenergy projects and project partnerships in northern Ontario.

After 20 years in technology design for private and public clients, Dawn earned her Masters in Economics and has devoted her second career to working with industry, academia, municipalities and First Nation communities to create sustainable economic development in the emerging low carbon economy.



www.biomassnorth.org

#### Lars Waldmann, Chairman, European Institute for Energy Technologies

Lars Waldmann has been working in the field of innovative renewable energy technologies since 1986. He held several top-level positions in the German solar industry (e.g. REW, SCHOTT and Q-Cells) before he became founding member and Senior Associate at Agora Energiewende (energy transition), an independent political Think-Tank on energy transition in Berlin. His focus is on energy technologies, IT, infrastructure and strategic planning. In 2016, Mr. Waldmann founded the company Energiewende Consult. He is a well-respected expert and advisor serving numerous scientific and political committees.



www.ev-energietech.org

#### Michel Carreau, Ph.D., Director Hybrid Power, Associate, HATCH

Michel Carreau is a specialist in energy with a Ph.D. from the Massachusetts Institute of Technology and a Post-Doctorate from Boston University with more than 30 years of experience in energy. He has expertise in the development of energy projects such as hybrid power, hydro-electricity, wind, solar, thermal power, energy storage, LNG, and energy efficiency. Michel works directly with mining companies, ports and industrial companies to develop solutions to lower their energy cost and carbon footprint. Michel has expertise in managing multi-disciplinary teams for innovative projects delivered in more than 20 countries.



www.hatch.com











#### **SPEAKER PROFILES**

### Dr. Jan Fritz Rettberg, Head of Innovation Management, ie<sup>3</sup> Institute of Energy Systems, Energy Efficiency and Energy Economics, TU Dortmund University

Jan Fritz Rettberg graduated with a Ph.D. in technology and innovation management from TU Dortmund University. Upon graduation, he joined the ie³ Institute for Energy Systems, Energy Efficiency and Energy Economics as chief executive of the North Rhine-Westphalian Competence Centre for Infrastructure and Power Grids. In this capacity, he directs all projects of the Competence Centre, one of which is to establish a technology and testing platform for interoperable e-mobility, infrastructure and grids (TIE-IN) with a number of industrial partners. He is a member of the scientific advisory council of the German Federal Association for eMobility. Furthermore, he was responsible for the preparation of the Masterplan Energy Transition Dortmund and is now the representative of the L.E.D. Centre for Energy Transition Dortmund. He is also coordinating the Smart City project for the City of Dortmund. In collaboration with the Chamber of Commerce of Dortmund he is developing regional approaches with respect to energy transition and Industry 4.0.



www.ie3.tu-dortmund.de/cms/en/Institut/index.html

#### Klaus Doehring, CEO, Green Sun Rising Inc.

Klaus Doehring holds two Master degrees in engineering, from the University of Braunschweig, Germany and from the University of British Columbia, Canada. Mr. Doehring has worked internationally in the automotive industry for over 25 years, with a proven track record in engineering and program management. Ten years ago, Klaus Doehring started his own company, Green Sun Rising Inc., focusing on solar technologies. He has built a network of solar activities and expertise, supported by leading Global solar companies, with many years of experience and know-how in solar technology application. Green Sun Rising develops and implements solar projects across North America, including the Canadian Arctic.



http://www.greensunrising.com/

#### Janis Wilkinson, Interim Executive Director, Ontario Sustainable Energy Association (OSEA)

Janis Wilkinson has been a positive force in the Canadian Solar PV sector for the past decade. Janis is a tireless and effective advocate for renewable energy. She has had measureable success advancing the renewable energy agenda with the public, as well as with corporate and government audiences. Her skills and contribution to the solar sector are multidimensional. Typically, when in her private sector career, she both participated in regulatory consultations with government, while engaged in overseeing increased sales and installations.



Recently, Janis has leveraged her knowledge and experience from the private sector PV solar space to further benefit the renewable sector. She has assumed the role of Interim Executive Director of the Ontario Sustainable Association of Ontario (OSEA's). Her goal is to realign OSEA's operations to make it responsive to the changed dynamic in the industry.

www.ontario-sea.org

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#### **Almaden Europe GmbH**

Established in September 2013 and based in Munich, Germany, **Almaden** is a leading innovator in the photovoltaic sector focusing on self-sufficient solar energy systems that are flexible and easy to assemble. The company's mission is to make small-scale solar systems more easily accessible and appealing to individual households.



Hence, Almaden provides visually appealing solar solutions for carports, patio headings and versatile roof solutions using glass-glass PV modules connected with filigree aluminum for efficient energy production. In addition to residential solutions, Almaden also offers innovative technology for large PV power plants. All Almaden products are built to provide long term durability under extreme weather conditions such as extreme cold, water fall, wind gusts or high snow loads.

www.almaden-europe.eu

#### **BAE Batterien GmbH (BAE)**

Since 1899, **BAE** stands for quality and reliability in the industrial lead-acid battery market. The core business of BAE is the production of stationary batteries with a focus on emergency power supply for data centers, electrical power supply facilities, and telecommunication infrastructure, which has in common that uninterrupted power supply is critical. In addition, BAE produces batteries for motive power and railway applications. However, BAE has also been active in the field of renewable energy for many years providing solutions for reliable and environmentally friendly electrical power supply.



BAE is a private medium-sized company based in Berlin that is well positioned in the international battery market. BAE's highly flexible and process-orientated organizational structure enables the company to provide their customers with tailor-made solutions and high-quality customer service.

www.bae-berlin.de

#### **Heinz Entsorgung GmbH & Co. KG**

Heinz Entsorgung is a medium-sized family business offering customized solutions in waste management, recycling and logistics, guaranteeing complete and efficient recycling of raw materials for customers from various industries. The company is family managed in third-generation and employs more than 400 specialists at 13 locations in Bavaria, offering waste management services to 7,000 business customers and 16 municipalities in Bavaria. Consequently, Heinz considers itself to be not only a waste management company but also a supplier of raw materials. This approach is also applied when gathering and disposing bio-waste to produce power and heat through fermentation, which is done through a public private partnership with municipalities in Bavaria, Germany.



www.heinz-entsorgung.de









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#### InTech GmbH & Co. KG

**Intech** has been offering sustainable energy solutions, including energy generation and energy saving solutions, for municipalities and industrial clients for over 20 years. Its core business is the execution of feasibility studies with respect to the identification and quantification of energy saving potential and the delivery of self- sufficient energy systems. Furthermore, Intech is an EPC-partner, offering engineering, procurement, as well as construction services for sustainable energy systems.



In the field of heat engineering, Intech has long-term international experience in planning and delivering biomass combustion plants for district heating systems. Intech has been active in the Canadian market in the areas of photovoltaics and energy consulting since 2009.

www.intechcleanenergy.com

#### Stiefelmayer Heizung & Sanitär

**Stiefelmayer Heizung & Sanitär** is a family owned small business located near Munich, Germany, that operates as a full-service provider and offers tailor-made solutions for bioenergy, solar thermal installations, geothermal systems and communal heating for industrial and private customers.



Since the company was founded in 2006, it has been focusing on heat generation from regenerative fuels, combined heat and power, heat pump technology and optimal heat transfer through surface heating systems.

www.stiefelmayer-heizung.de

#### **Thermoelect GmbH**

The world's first wood gasifying central power station for households and in-door use (e-woodstove) generates electricity from split wood logs through the use of thermoelectric generators. This new technology has now reached commercialization and serial production. The **Thermoelect** team, consisting of 10 engineers, technicians, sales and marketing experts, has developed the e-woodstove in cooperation with various partners in science and research, including the German Aerospace Center (Cologne), the German Biomass Research Centre (Leipzig) and the Fraunhofer Institute for Physical Measurement Techniques IPM (Freiburg). Manufacturing base for the e-woodstove is the Centre for Technology and Research (TFZ) located in the harbour of the city of Wismar at the Baltic sea.



www.thermoelect.com

#### **DIVE Turbinen GmbH & Co.KG**

DIVE Turbinen GmbH & Co. KG has a focus on R&D, sales and realization of hydro power plants. The DIVE-Turbine is a maintenance-free and fish-friendly turbine solution with very low investment in civil works and infrastructure. Its range of application is up to 4MW per turbine from 2m-60m head.



Exclusive partner for Canada and USA: Bridge Executive Energy Solutions Ltd.

www.dive-turbine.com









#### CANADIAN GERMAN CHAMBER OF INDUSTRY AND COMMERCE

The Canadian German Chamber of Industry and Commerce INC. (CGCIC) is the primary contact for German and Canadian companies interested in doing business in the respective other country. It promotes bilateral economic relations between Canada and Germany by providing professional market entry and business support services and by hosting events and trade delegations.

CGCIC acts as the official representative of German trade and industry in Canada. It is recognized as a German Chamber of Commerce abroad (AHK) by the Association of German Chambers of Industry and Commerce (DIHK) in Berlin and supported by the Federal Ministry of Economic Affairs and Energy.

If you are interested in obtaining further information on our activities and services, please feel free to contact us:

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www.germanchamber.ca

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If you are interested in learning more and staying informed about the

German Energy Solutions Initiative,

please sign up for the **Newsletter** of the German Federal Ministry for Economic Affairs and Energy.



