

# **Delegation Brochure**

## Transatlantic Dialogue Hydrogen Hubs

June 09 – 13, 2025

Vancouver – Montreal - Toronto

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Federal Ministry for Economic Affairs and Energy

#### Introduction

As part of the **Transatlantic Dialogue – Hydrogen Hub Exchange Project**, the Canadian German Chamber of Industry and Commerce Inc. is organizing a trade mission to Canada for German Hydrogen Hub Stakeholders from across Germany. With support from the German Federal Ministry for Economic Affairs and Energy (BMWE) and the KfW Development Bank, the delegation will visit Canada from June **09 to 13**, **2025** to exchange and build partnerships with leading Canadian Hydrogen Hubs and to learn more about the Canadian hydrogen landscape. The delegation will also join a Canadian-German Hydrogen Hub Reception in **Montreal**, **Quebec on June 10**, **2025**.

The program will take us to Vancouver, Montreal, and Edmonton, with a few intermediate stops at new and relevant hydrogen hub projects across Western and Eastern Canada, with a focus on hydrogen application technologies.

#### **Participating Hubs**

#### Cluster Brennstoffzelle BW

The expansion of hydrogen and fuel cell technology in Baden-Württemberg is being driven forward by the Fuel Cell Cluster BW together with science and industry. It brings together companies, research institutes, the public sector and associations, and aims to achieve the market maturity of hydrogen mobility with marketable and customer-friendly series products.

With professional network management, the Fuel Cell Cluster BW bundles all activities and expertise for the development and market ramp-up of hydrogen and fuel cell technology in Baden-Württemberg. Founded in 2013, the cluster is now an important driving force in the state and coordinates the transfer of knowledge. Together with all relevant players, the cluster focuses on the upscaling of mobile and stationary fuel cell applications and thus on the series production of this technology.

#### Cluster Brennstoffzelle BW - e-mobil BW GmbH

Cara Schwark Cluster Manager <u>cara.schwark@e-mobilbw.de</u>



#### Steinbeis Innovationszentrum (siz) Energieplus

As a company in the Steinbeis Group, the Steinbeis Innovation Center energieplus (SIZ) is an affiliated institute of the Technical University of Braunschweig and conducts research into sustainable, cross-sector concepts for cities and municipalities. Another focus is on research in the field of quality management and operational optimization of buildings and technical systems. As generalists with a strong practical focus, we work on research projects at the interfaces between the various stakeholders throughout the planning and life cycle, including the corresponding digitalized processes. The focus of their work is on the application-oriented implementation of projects with the diligence of scientific standards.

#### Home page - siz energie+

David Sauss Management / Research Assistant <u>david.sauss@siz-energieplus.de</u>

#### Center for Energy Technology, University of Bayreuth

The Center for Energy Technology (ZET) concentrates expertise and activities in the field of energy technology at the Faculty of Engineering at the University of Bayreuth. Currently, eight chairs cover thermal, chemical, biological and electrical aspects of the generation, transmission, storage and utilization of energy.

Thanks to the broad research spectrum of the ZET, forward-looking topics such as sector coupling, energy selfsufficient buildings or high-voltage direct current transmission are dealt with in a particularly intensive and interdisciplinary manner. The projects range from application-related basic research to the development of energy-related products and processes. State-of-the-art equipment in the ZET's 12 keylabs enables interdisciplinary and innovative research.

#### ZET - Zentrum für Energietechnik

Matthias Welzl Senior Research Associate | Coordinator Hydrogen Research and Technologies Matthias.Welzl@uni-bayreuth.de

#### Vallée de la Transition Énergétique

Guided by a desire to help accelerate the energy transition and reduce the environmental footprint of urban, industrial and port environments, the cities of Bécancour, Shawinigan and Trois-Rivières have joined forces to put forward a collective proposal for a sustainable transition that matches their ambitions and those of Quebec as a whole. Together, they aspire to create a strong research ecosystem, and provide innovative, technological and economic solutions to societal and ecological challenges. Their mission is to initiate, develop and promote innovation in energy transition for a prosperous, world-class economy in an ecosystem that prioritizes sustainable development for the benefit of its living environment.

The VTE intends to become a national and global benchmark in research, development, industrialization and commercialization of innovation stemming from its technological axes. The aim is to clearly position Quebec and its strengths in an emerging market.

#### Vallée de la transition énergétique

**Guillaume Parenteau** Vice President – Business Development gparenteau@zivte.com

#### Edmonton Region Hydrogen Hub

The Edmonton Region Hydrogen HUB is a collaborative initiative dedicated to advancing a thriving hydrogen economy in the Edmonton Region and beyond. Bringing together municipalities, industry, and associations, the HUB focuses on building a robust hydrogen value chain through collaboration, system integration, and policy advocacy. Leveraging the region's world-class hydrogen production facilities and strategic infrastructure, the HUB drives innovation, promotes decarbonization, and stimulates economic growth, positioning the Edmonton region as a global leader in sustainable hydrogen development.







Edmonton Region Hydrogen HUB

Brent Lakeman Executive Director <u>blakeman@edmontonglobal.ca</u>



#### SFU Clean Hydrogen Hub

In partnership with government, associations and leading companies in British Columbia and across Canada, the SFU Clean Hydrogen Hub will dramatically lower the costs of clean hydrogen production, while codeveloping technologies and products to decarbonize the Canadian economy and export around the world. The hub leverages SFU's leadership in clean hydrogen research and industry partnerships and demonstrates <u>SFU climate innovation</u> in action. It is a testament to how SFU is engaging in global challenges and focused on creating positive change.

Situated atop Burnaby Mountain, the hub will produce clean hydrogen and will be a one-megawatt testbed for advancements in emerging clean hydrogen technology. It will also serve as a global centre for research and innovation that will connect stakeholders across the value chain—from academic researchers to system developers and manufacturers, to community partners piloting clean energy solutions, and industry users in manufacturing, heavy duty transport and off-grid energy generation.

#### SFU Clean Hydrogen Hub - Simon Fraser University



SIMON FRASER UNIVERSITY

Laura Sloboda Operations Director, Clean Hydrogen Hub laura sloboda@sfu.ca

#### **DELEGATE PROFILES**

#### <u>David Sauss, Director & Research Associate, Steinbeis</u> <u>Innovationszentrum (siz) energieplus</u>

Since 2018, David Sauss has headed the Steinbeis Innovation Center (siz) energieplus with locations in Braunschweig and Stuttgart together with Prof. Dr.-Ing Norbert Fisch. After studying business administration in Greifswald and Braunschweig, he joined the Institute of Building and Solar Technology as a research associate in 2003. There he researched topics relating to energy efficiency in buildings and districts, focusing on monitoring and implementing energy concepts. From 2011 to 2014, David Sauss worked at the Lower Saxony Energy Research Center in the Regenerative Energy Systems working group. Since 2015, together with Prof. Norbert Fisch, he has built up the Steinbeis Innovation Center energieplus into a leading research institution for energy efficiency in buildings and districts. His current focus is on hydrogen production and integration into the neighborhood. The siz energieplus has been an affiliated institute of the Technical University Braunschweig since 2016. He has been Managing Director of the H2-Terminal Betriebsgesellschaft since 2022.



David Sauss is married, has five children and lives in Braunschweig. He is accompanied by his colleagues **Julia Gottsmann** and **Ann-Kathrin Dreier**.

**Organizational Profile**: As a company in the Steinbeis Group, the Steinbeis Innovation Center energieplus (siz) is an affiliated institute of the Technical University of Braunschweig and conducts research into sustainable, cross-sector concepts for cities and municipalities. Another focus is on research in the field of quality management and operational optimization of buildings and technical systems. As generalists with a strong practical focus, we work on research projects at the interfaces between the various stakeholders throughout the planning and life cycle, including the corresponding digitalized processes. The focus of their work is on the application-oriented implementation of projects with the diligence of scientific standards.

#### Julia Gottsmann, Research Associate, Steinbeis Innovationszentrum (siz) energieplus

Julia Gottsmann studied environmental engineering and has been working as a research associate at siz energieplus since the beginning of 2023, including as part of the "Hydrogen Terminal Braunschweig" project team. With the construction of the H2-Terminal, an infrastructure was created that enables research along the entire value chain of green hydrogen. The team's research focus in this project is on the use of waste heat from the electrolysis process. In addition to the focus on hydrogen applications, it is also dedicated to investigating the feasibility of heat networks. She delved deeper into the latter in her master's thesis in cooperation with the heating company Avacon Natur GmbH by developing a decarbonization strategy for existing grids.



#### Ann-Kathrin Dreier, Research Associate, Steinbeis Innovationszentrum (siz) energieplus

Ann-Kathrin Dreier studied environmental engineering in her Bachelor's and Sustainable Design in her Master's programme at the Technical University Braunschweig, Germany from 2013 to 2020. She worked as a project engineer for energy design braunschweig GmbH from 2020 to 2022. She still has been working as a research associate for climate neutral district concepts and energetic simulations at the siz energieplus since 2020.



#### Dr.-Ing. Theresa Weith, Coordination and Team Lead, UBT Future Energy Lab Wunsiedel GmbH

Dr.-Ing. Theresa Weith has been Coordinator and Team Leader at UBT Future Energy Wunsiedel GmbH (FEL) since November 2024. In this role, she collaborates closely with the management team, initiates and supervises R&D projects, manages partnerships with academia and industry, and is establishing an international training and education unit. From 2022 to 2024, she worked as Manager for Training Concepts at Glen Dimplex Deutschland GmbH, where she developed training materials and programs in the field of heat pump technology and coordinated collaborations with universities, educational institutions, and external trainers. Between 2011 and 2022, she held various academic positions at the Chair of Engineering Thermodynamics and Transport Processes at the University of Bayreuth, including leading the Heat Transfer Research Group. Her doctoral research focused on heat transfer characteristics of zeotropic mixtures for applications in Organic Rankine Cycle systems.



**Organizational Profile:** The UBT Future Energy Lab Wunsiedel GmbH, or FEL for short, is a young, nonuniversity research institution. It was founded in 2023 as a joint venture between the University of Bayreuth and the municipal utility company SWW Wunsiedel. Supported by funding from the Free State of Bavaria, the company FEL aims to make a significant contribution to a digitalized, decarbonized, and decentralized energy future. At the interface of science, industry, policy, and society, FEL fosters collaboration between established companies and start-ups, as well as other research institutions to develop practical, forward-looking energy solutions. In addition to research and development, FEL places special emphasis on the dissemination of its research results. This is achieved through technology transfer, practice-oriented training programs, scientific publications, and targeted outreach. FEL's core focus lies in scaling and applying research results in real-world environments. The city of Wunsiedel, known for its holistic energy concept and pioneering energy park with a hydrogen plant, provides an ideal location for this work. Here, FEL forms a network to bring expertise from academic research directly into use for energy producers, suppliers and consumers.

#### Tim Herrmannsdörfer, H2 Infrastructure, UBT Future Energy Lab Wunsiedel GmbH

Tim has been a research associate at the Center of Energy Technology (ZET) since 2021. He is part of the hydrogen technologies research group at the Chair of Engineering Thermodynamics and Transport Processes and has extensive expertise in modelling and simulation of energy systems, with a focus on electrolysis plants, gained through his work in the "ZET Future Energy Lab Wunsiedel" research project. His research focuses on the techno-economic optimization of power-to-gas plants. Before joining ZET, he completed his Master's degree in Energy Technology at the University of Bayreuth.

Since the beginning of 2025, Tim has also joined the UBT Future Energy

Lab Wunsiedel GmbH as a project manager, where he is responsible for developing and planning a hydrogen test infrastructure connected to an adjacent hydrogen production plant. This initiative aims to support the scaleup of hydrogen technologies and provides industry partners and research institutions with the opportunity to test their technologies under different operating conditions.

#### Petros Polykarpoulos, Research Associate, University of Bayreuth

Petros is a research associate at the University of Bayreuth and the Centre of Energy Technology since June 2023. As part of the HYER project, a joint Canadian-German research consortium, they are investigating PEM electrolyser cell degradation, utilising novel experimental and numerical techniques. His primary research focus is on the intermittent operation of renewable-powered electrolyser systems and the prediction of their lifetime performance.

**Organizational Profile:** The University of Bayreuth is one of the most successful young universities in Germany. Through its faculties and research institutes, the University covers research, development and testing along the entire process chain of hydrogen, while maintaining close

collaborations with scientific institutions and industry partners for joint innovation and technology transfer.





#### Rob Atkinson, Siemens AG

With 21 years at Siemens, Rob is currently leading the hydrogen activities for the discrete automation business. Originally hailing from the United Kingdom, he started out working as a commissioning engineer of automation and drive solutions for the O&G and marine industries. After moving to Germany in 2007, Rob has been involved in multiple different areas of business for Siemens, ranging from, large variable frequency drives, switchgear, compression as well as automation, and the Siemens Digital Enterprise offerings. Having been primarily involved in energy his entire career, Rob started working on hydrogen full time in 2022, he started the Siemens Hydrogen community which now encompasses over 450+ Siemens personnel globally who have hydrogen on their radar. He is also part of the steering committee for Siemens' Hydrogen Centre of Competence.



Organizational Profile: Siemens AG, a strong partner across the entire hydrogen value chain. Our industry expertise across applications in the

hydrogen value chain positions us a strong partner of OEMs, EPCs, Operators, End Customers, Governments and Municipalities. Building on our expertise in digitalization, automation and electrification we are dedicated to support our customers along their "hydrogen" journey and project lifecycle. Our services cover everything from first pilots to scalable & standardized solutions including the generation of green electricity and grid connection, as well as hydrogen production, storage, transportation, and utilization.

#### Umer Farooq, Siemens AG

Umer Farooq is a Business Development Leader at Siemens, where he supports clients on their decarbonization journey by providing hydrogen solutions for the energy and oil & gas sectors. He has over 20 years of experience in developing and executing projects across the North America. Middle East and Africa region.



## Funded by:



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### **CANADIAN GERMAN CHAMBER OF INDUSTRY AND COMMERCE**

The Canadian German Chamber of Industry and Commerce (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 Climate Action. If you are interested in obtaining further information on our activities and services, please feel free to contact us.

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