The Clean Economy Bridge
Annual Conference 2025

CONFERENCE SUMMARY

# TOWARDS A VISION OF TRANSATLANTIC CLEAN ECONOMIES

## THE CLEAN ECONOMY BRIDGE CONFERENCE | NOVEMBER 2025

***The Clean Economy Bridge Conference 2025 was a week-long event promoting dialogue on clean economy topics between Germany, the United States, and Canada. This year's conference took place from November 21st to the 26th across three Canadian provinces: Toronto, Ontario; Vancouver, British Columbia; and Edmonton, Alberta.***

***The conference featured a diverse program designed to engage stakeholders at multiple levels. Activities included round-table panel discussions, closed-door sessions with government officials, and youth events to foster engagement across demographics. Overall, the sessions created space for discourse and collaboration between national and sub-national actors, the private sector, civil society organizations, and youth change agents.***

**The conference kicked off in Toronto with a keynote from Consul-General of the German Consulate General in Toronto, Anne Wagner-Mitchell.** **Ms. Wagner-Mitchell** set the tone for the conference by ***underscoring the urgency of transatlantic cooperation in the face of accelerating climate change*** and rising global temperatures. She highlighted that, in a world where climate ambition is weakening and the gap between pledges and concrete action is widening, collaboration between Canada, Germany, and the United States is essential.

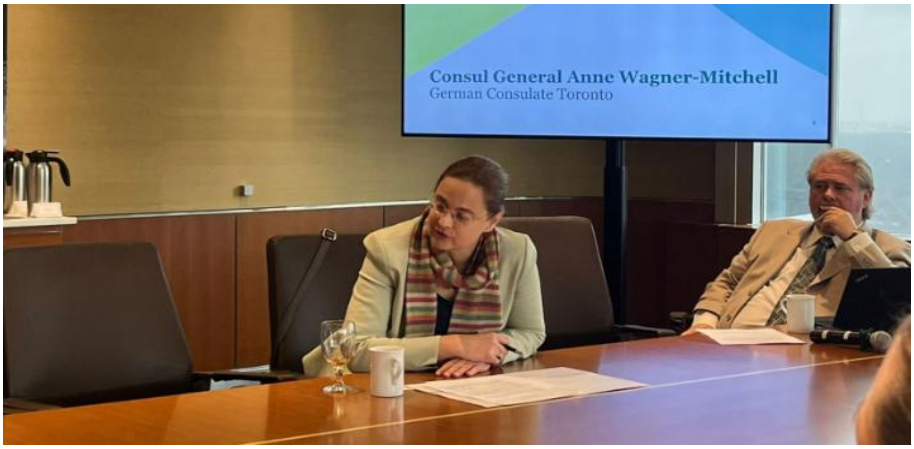


*Photo from left to right: Anne Wagner-Mitchell and Dan Ruby*
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**"TRANSATLANTIC COOPERATION ISN'T JUST BENEFICIAL, IT'S ESSENTIAL."**

**Toronto Consul-General Anne Wagner-Mitchell**

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IKI International Climate Initiative
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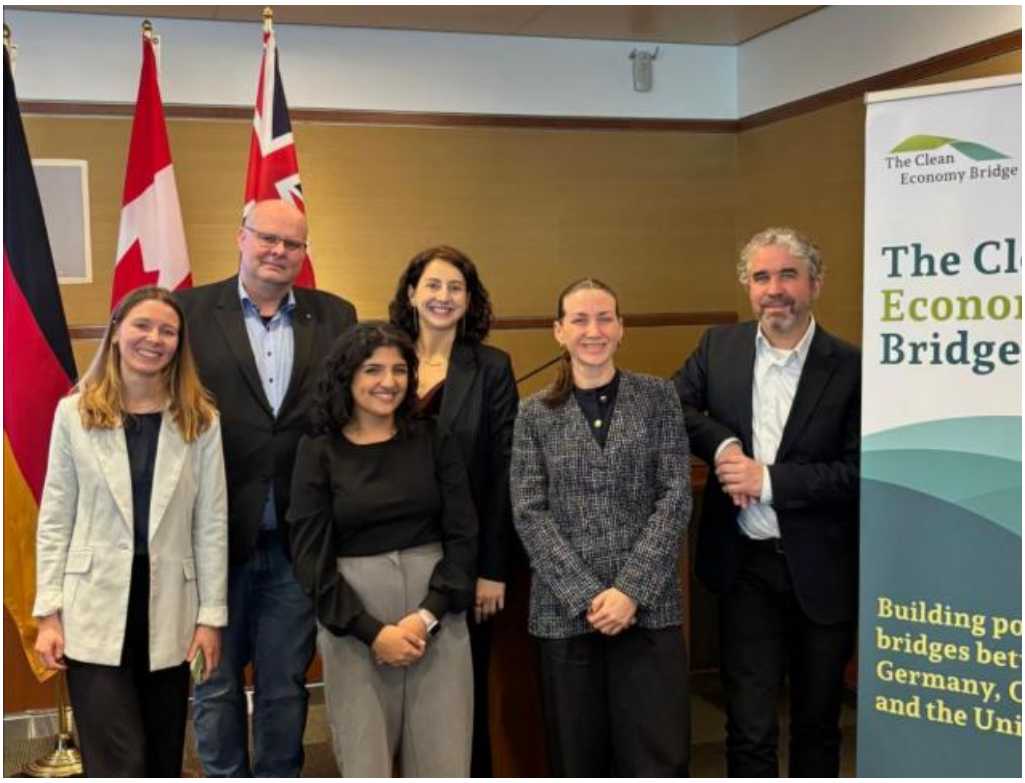
Wagner-Mitchell emphasized the central message of TCB: the partnerships forged, knowledge shared, and solutions developed across these nations ***stand as a beacon of hope***, demonstrating what is possible when like-minded countries commit to collective action. She further emphasized the unique and deepening relationship between Canada and Germany, noting that climate action is now central to their diplomatic ties. Wagner-Mitchell highlighted the **Canada-Germany Hydrogen Alliance** as a groundbreaking commitment to building a transatlantic supply chain for clean hydrogen.

The Clean Economy Bridge Conference, she explained, serves as a **vital platform for subnational collaboration and innovation**. It brings together a diverse array of stakeholders, including national and subnational actors, the private sector, civil society organizations, and youth, to catalyze tangible opportunities for cooperation that will shape the coming decades.




**"THE BUSINESS CASE FOR CLEAN TECHNOLOGIES IS STRONGER THAN EVER."**

**Toronto Consul-General Anne Wagner-Mitchell**

*Photo from left to right: Lea Boukroum, Dr. Hans-Jörn Weddige, Trisha Kershaw, Mary Hellmich, Jessica Guelmi and Dennis Taenzler*
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## Developing EV Curriculum and Workforce ready for the Clean Economy

The first event of the conference was a panel and roundtable discussion on **Electric Vehicle** (EV) **Curriculum & Workforce Development**, examining best practices from North America and Germany within the automotive sector.

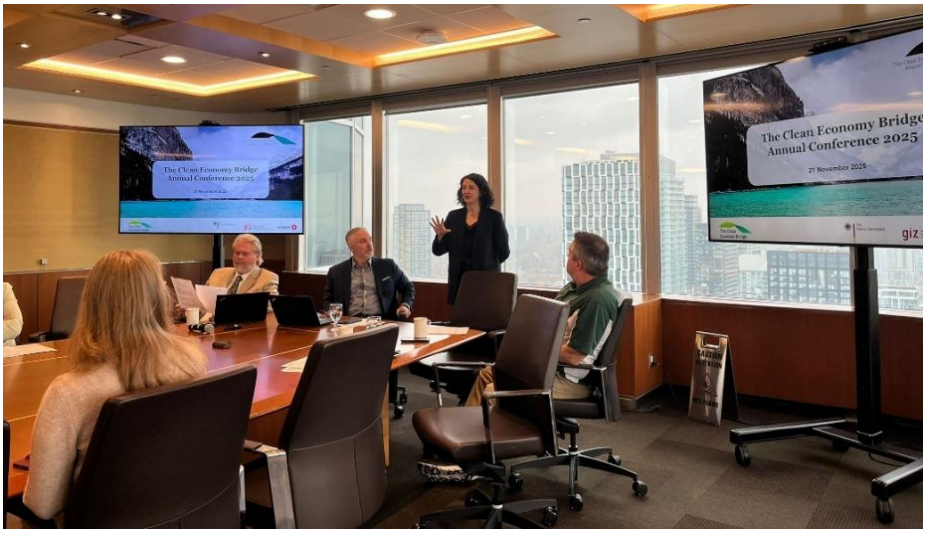


*Photo from left to right: Dan Ruby, Adam Thorn, Mary Hellmich, Jay Minard*
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**Adam Thorn**, Director of Transportation at the Pembina Institute, opened by emphasizing Canada's declining competitive position in this field. Whilst global EV demand rises 25% annually, **Canada's market share dropped from 9.7% to 9.2% in Q2 2025**, compared to **China's 50% EV market penetration**. Between 2014 and 2024, **total vehicle production in Canada declined by more than 50%.**

***"Policy uncertainty has been the primary culprit impacting both supply and demand." - Adam Thorn***

This decline is particularly concerning given Canada's natural advantages: rare minerals essential for batteries, an educated workforce, and abundant clean energy. Despite these assets, **EV demand is declining rather than growing in Canada**. Thorn emphasized that predictability is critical, with better support needed for both capital infrastructure and human capital development.

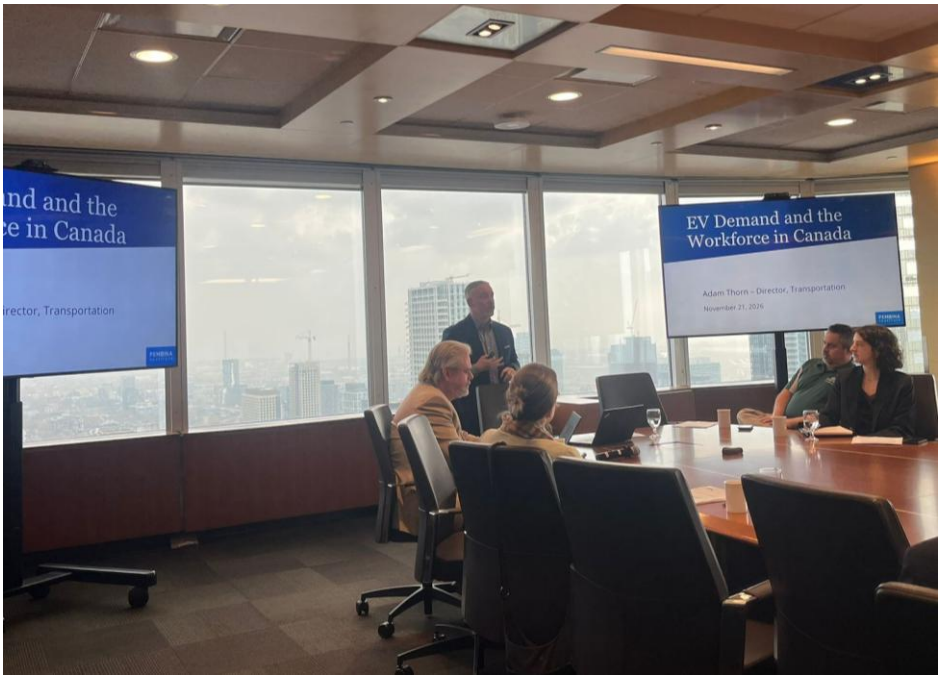
Central to Thorn's analysis was **Canada's Electric Vehicle Availability Standard** (EVAS), introduced in December 2023, which requires automakers to sell increasing shares of zero-emission vehicles. However, EVAS implementation has been delayed until at least 2027. Thorn's modelling showed dramatic impacts**: without EVAS, Ontario would reach only 54% EV sales by 2035; with EVAS, 100% is**

### KEY EVENT TAKEAWAYS

- **Canada is losing ground in the global EV race due to policy uncertainty, workforce development gaps, and infrastructure constraints.**
- **The employment potential in Canada for EVs is substantial, with current EV-related jobs at 130,000 potentially growing to 600,000 with the right policy support.**
- **Canada, Germany and the United States must act decisively to before the window of opportunity closes and the global EV industry consolidates around other manufacturing centers.**

**achievable.** The Pembina Institute's revised scenario also projects significant future price decreases in EVs.

The employment implications are substantial. Currently, the EV industry supports approximately 130,000 jobs in Canada, but with strong government support, this could grow to 600,000. However, without strong indicators of industry growth, workers will not seek relevant training pathways, potentially exacerbating labor shortages. Thorn stressed that **coordination between industry and post-secondary institutions is essential to align recruitment and training with future job availability**, and that federal regulation must be better integrated with local contexts.




*Adam Thorn presenting on EV Demand and Workforce in Canada*
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**Jay Minard, Assistant Professor of Automative Technology** from Delta College in Michigan, USA shifted focus to what he argued is critically missing from policy discussions: **the service industry.**

> ***There is a fundamental challenge: we can throw rebates at consumers, but who will fix EVs when technical expertise is missing? – Jay Minard***

Minard identified fear as a huge problem. He found that seasoned technicians were afraid to operate on EVs due to lack of electrical knowledge. Most major dealerships have only one technician qualified to work on EVs, creating severe service bottlenecks. Beyond skills gaps, storage solutions for batteries present another major problem, with widespread fear around lithium batteries and possible fires. Different

**"STUDENTS NEED CONFIDENCE THAT THERE WILL BE JOBS WAITING FOR THEM IN ORDER TO CREATE A WORKFORCE FOR THE EV INDUSTRY"**

**Adam Thorn**

safety protocols exist, but there are no consistent building code enforcement rules to guide facilities.

In many community colleges**, EV training is not considered "core" curriculum, meaning it is not covered by student aid, which is a financial barrier for students.**

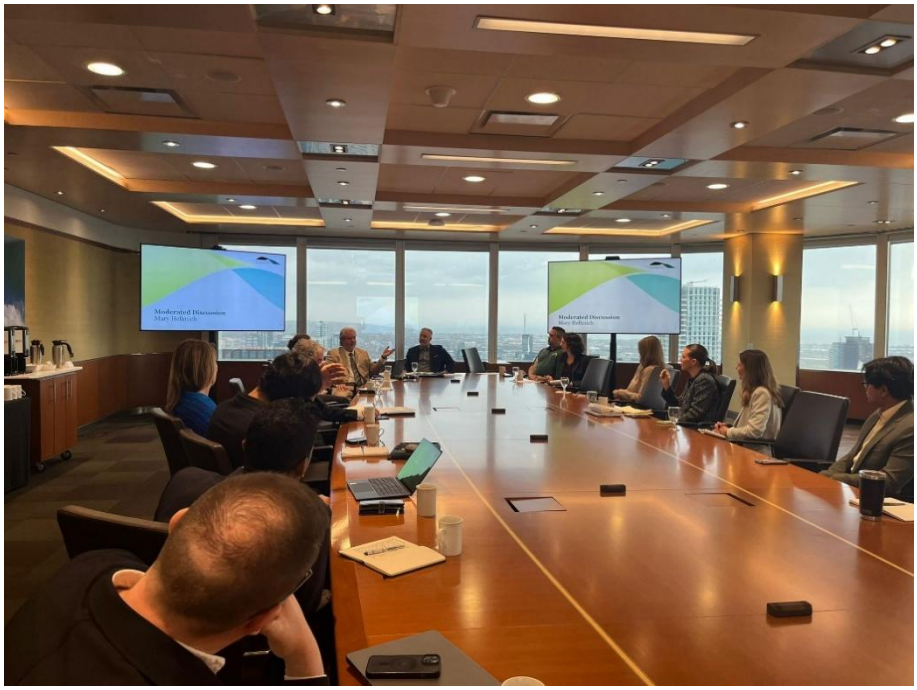
Minard proposed three solution elements: **certified workforce development, national safety standards (pointing to ASE certification as a model), and battery storage solutions**. He emphasized that education investments yield rewards much later and should be approached as such. In rural Michigan, the hardest challenge can be convincing people to pursue EV careers when, so few technicians currently exist. Cultural impacts from federal politics following recent elections can also affect student interest and will shape the workforce for years to come.

**"WHO WILL PAY FOR THE EDUCATION AND TRAINING NEEDED (TO DEVELOP EV CURRICULUM)?"**

**Jay Minard**

The key question Minard posed: *who will pay for the education and training needed?* The private sector is stepping in, but it remains unclear if this will be sufficient.

**Dan Ruby** from the Ontario Centre of Innovation provided context on Ontario's strategic position. Ontario is North America's second-largest vehicle assembler with five OEMs, over 700 suppliers, and the second-largest IT cluster after Silicon Valley. He emphasized that **Canada possesses critical minerals essential for battery production, positioning it well for the EV transition**.



*Dan Ruby addressing EV Curriculum and Workforce Development panel*
*© The Clean Economy Bridge*

However, Ruby identified critical barriers. The **grid lacks capacity to charge the EVs needed for full market transformation**. More fundamentally, the **"Death Valley"** between **technology development and markets persists –** technologies can be developed but lack support systems and funding for demonstration and commercial validation.

The Ontario Vehicle Innovation Network (OVIN), of which Ruby forms part, addresses these challenges through Regional Technology Development Sites, incubators, laboratories, and partnerships with industry leaders like Mercedes-Benz, providing companies direct access to integrate innovations into vehicles. To ensure effective use of taxpayer money, OVIN requires applicants for one-million-dollar funds to bring strategic primary partners, ensuring industry validation from the outset. International partnerships include Baden-Württemberg, Michigan, Georgia, Sweden, Korea, and Taiwan, building platforms for companies to showcase innovations internationally.

**"THE 'DEATH VALLEY' BETWEEN TECHNOLOGY DEVELOPMENT AND MARKET PERSISTS AND REQUIRES SUPPORT SYSTEMS AND FUNDING"**

**Dan Ruby**

Ruby noted that **most Canadian vehicle production for export will likely decline, making domestic demand development essential.** He observed Canada is ahead of Germany in AI integration but acknowledged US tariffs have hit hard, and Canadian resources and trade routes face geopolitical pressure.

The panel revealed that **Canada's EV transition faces interconnected challenges across policy, workforce, and infrastructure.**

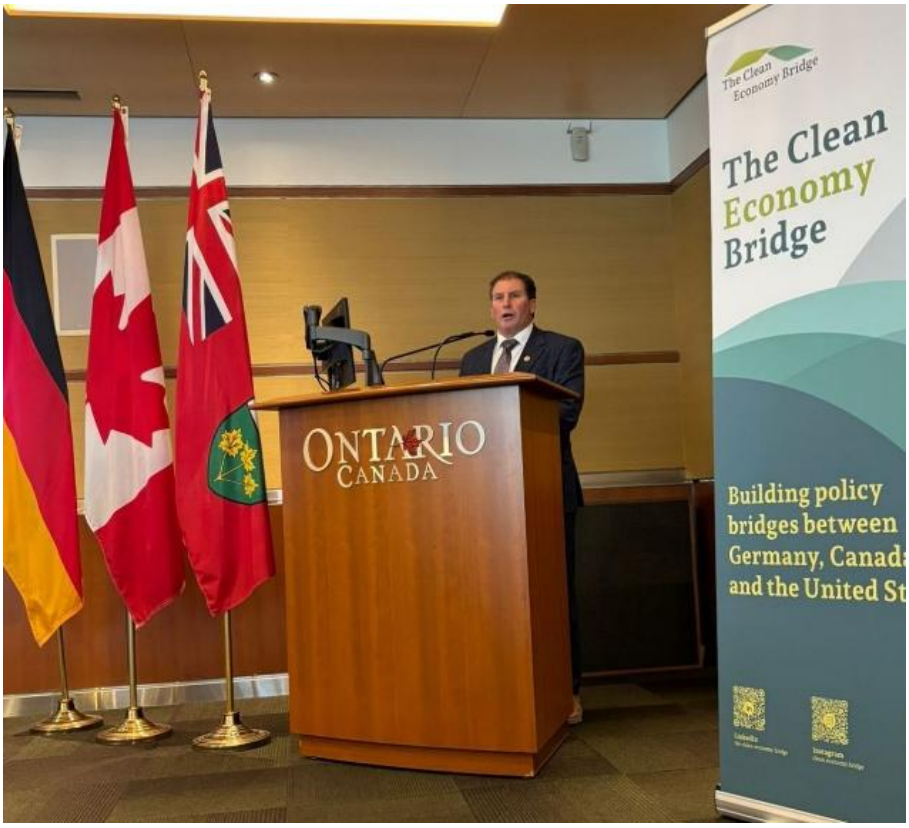
Despite significant advantages, policy uncertainty undermines investment and employment growth. The service gap threatens adoption regardless of manufacturing capacity. Infrastructure constraints limit scalability. Success requires implementing EVAS for market certainty, developing national safety standards and certifications, investing in grid capacity, creating clear education-to-employment pathways, and ensuring federal-local regulatory integration. ***With coordinated action, Canada could realize 600,000 EV jobs; without it, the opportunity will be lost to other manufacturing centers.***

## Innovations in Agriculture and Energy Nexus

The second event in Toronto opened with remarks from **Paul Vickers**, Ontario Member of Provincial Parliament and Parliamentary Assistant to the Minister of Agriculture, Food and Agribusiness. Drawing on his rural background and experience as a farmer, Vickers underscored Ontario's unwavering belief in its agricultural sector.

> ***"As one of Canada's largest producers, Ontario is investing in the future of farming."***

He highlighted the Ontario Agri-Food Research Initiative (OAFRI) as a leading example of how innovative approaches can promote climate resilience and sustainable agriculture.




*Paul Vickers opening the Innovations in Agriculture and Energy Nexus event*
*© The Clean Economy Bridge*

Moderated by **Kyle Volpi Hiebert** of Enterprise Machine Intelligence Learning Initiative (EMILI), the session brought together a diverse panel of experts and practitioners at the forefront of agri-food innovation. **Jacqueline Keena**, Managing Director at EMILI, described how the organization supports the growth of a sustainable digital agriculture industry through partnerships, skills development, and technology acceleration. EMILI's Innovation Farms Program, spanning 14,000 acres, exemplifies farmer-centric innovation, deploying advanced tools such as the AI-driven Crop Sentry platform for real-time

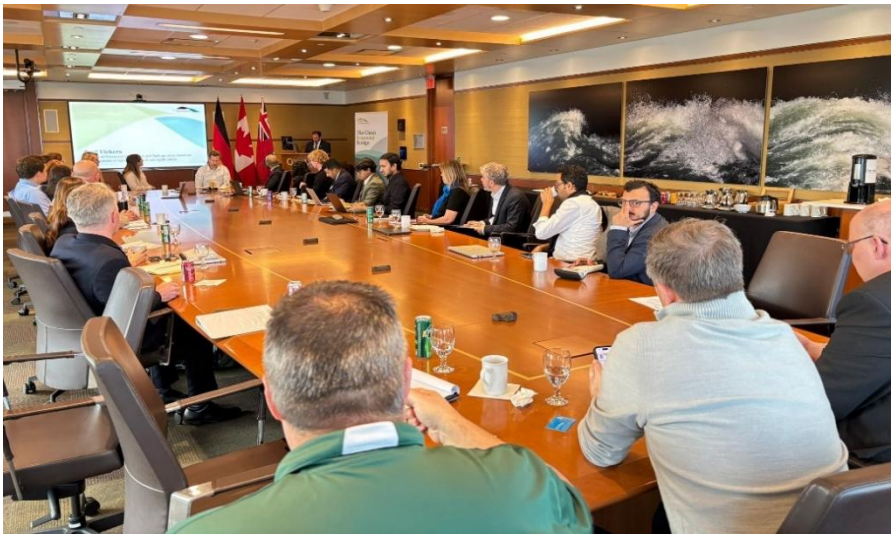
### KEY EVENT TAKEAWAYS

- **Digital innovation and artificial intelligence are transforming agriculture, enabling more precise resource use, improved crop monitoring, and targeted interventions for sustainability and resilience.**
- **Collaboration across sectors, linking farmers, industry, academia, and finance, is essential to accelerate the adoption of new technologies and address challenges such as water scarcity, workforce development, and climate adaptation.**
- **Scaling up proven solutions like biodigesters and agrivoltaics can significantly boost farm resilience, reduce emissions, and drive economic growth.**

crop monitoring and GECO for targeted, cost-effective weed management. ***Their guiding principle: use less for more.***

## Young People in Agriculture and Talent Outreach

**Katherine Festeryga**, founder of Edie Farming, then presented Ontario's first urban commercial rooftop greenhouse: a pioneering response to food scarcity and urban land constraints. The initiative is powered by solar energy and uses AI and water capture technologies, demonstrating how technology can drive urban food production. The 2025 Greenhouse, a testbed at Western University, and the forthcoming 2026 pilot site in London, Ontario, signals the scaling of these innovations. **By 2026, the project aims to produce 120,000 lettuce heads monthly and by 2027, will utilize waste heat for closed-loop ecosystems.**



*Paul Vickers opening the Innovations in Agriculture and Energy Nexus event*
*© The Clean Economy Bridge*

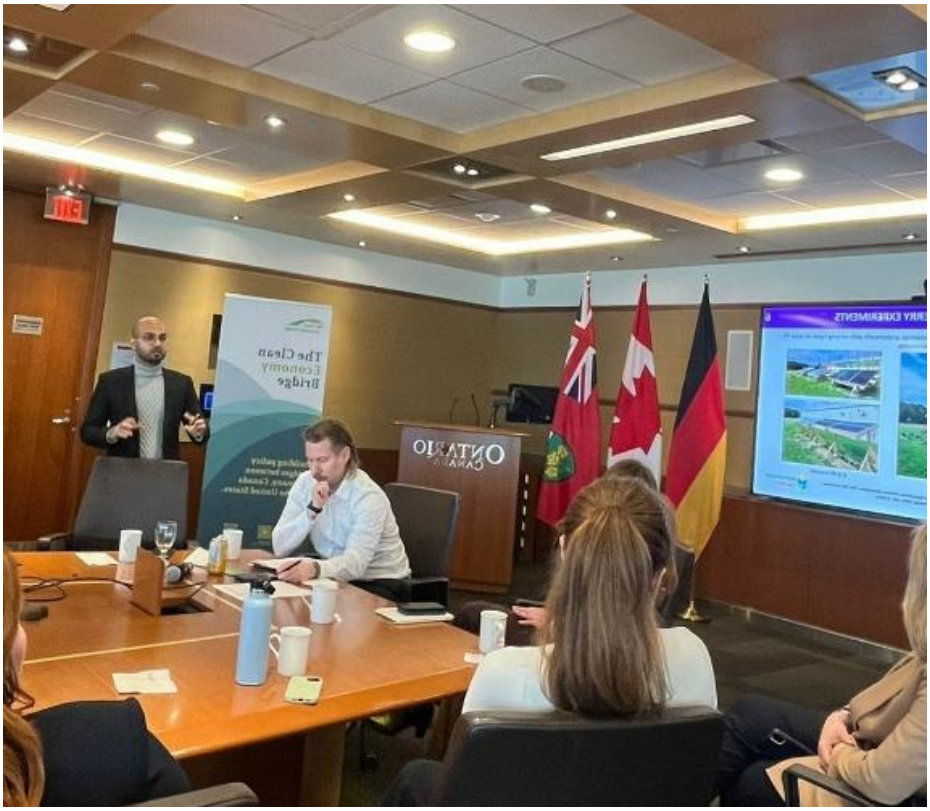
This conversation was followed by **Lisa Ashton**, from RBC Thought Leadership, who spoke on the need to promote talent within the agri-tech industry. There is a great need to engage a broader talent pool in agri-food technology, impacted by the sector's declining R&D diversity and Canada's fall in global agri-tech investment rankings. Storytelling and experiential learning are of immense importance in order to attract young Canadians, especially those from STEM and business backgrounds to agricultural careers. With **less than 1% of STEM and business graduates choosing occupations in agriculture**, having more talent engage within the sector could boost innovation.

**"LESS THAN 1% OF STEM AND BUSINESS GRADUATES IN CANADA ARE CHOOSING OCCUPATIONS IN AGRICULTURE"**

**Lisa Ashton**

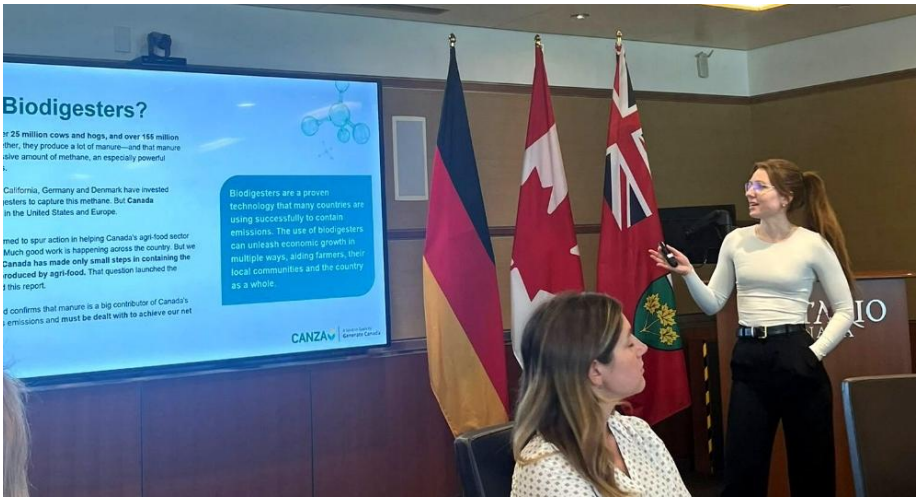
## Innovative Agri-Tech in Canada

**Uzair Jamil** discussed the promise and challenges of agrivoltaics, dual use of land for both solar energy and agriculture. With ***Canada's solar capacity having grown by 92% in five years***, integrating solar with farming offers a pathway to decarbonization and economic resilience. Of importance is the fact that less than 1% of farmland in Canada could meet a significant share of the country's electricity needs. To ensure widespread adoption, however, significant improvements need to be made in social acceptance, clear communication, and policy alignment.




*Uzair Jamil presenting on Agrivoltaics*
*© The Clean Economy Bridge*

**Emily Robinson** introduced CANZA's National Biodigester Initiative, a collaborative effort to scale up the use of biodigesters in Canada. Despite the country's vast agricultural sector, only 4% of biogas potential is currently captured. Biodigesters present a proven solution for reducing methane emissions, producing renewable energy, and strengthening farm resilience. Key barriers to achieving this include economic challenges, infrastructure limitations, and the need for tailored policy support.




*Emily Robinson presenting for the Innovations in Agriculture and Energy Nexus event*
*© The Clean Economy Bridge*

**Throughout the discussion, speakers agreed on the need for experimentation, risk management, and improved communication.**

Whether through rooftop greenhouses, digital agriculture, or agrivoltaics**,** the sector's future hinges on innovation, cross-sector partnerships, and empowering producers to adopt new technologies with confidence.

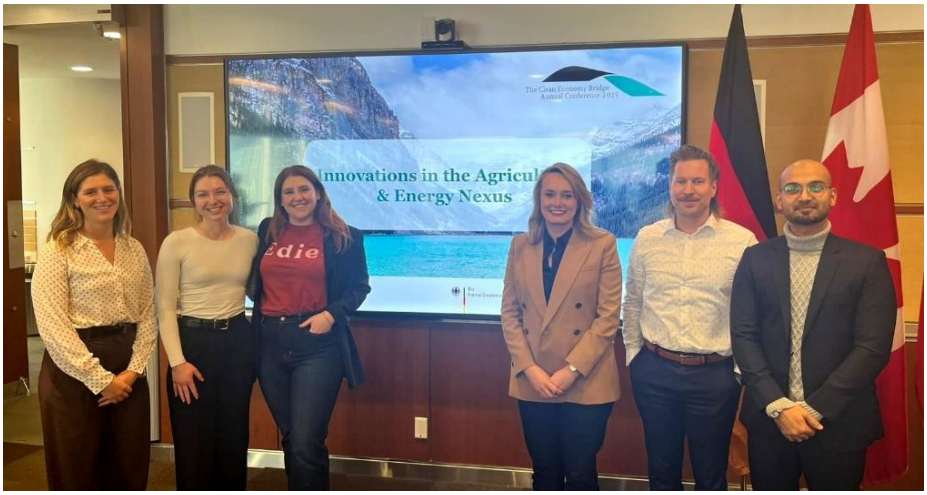
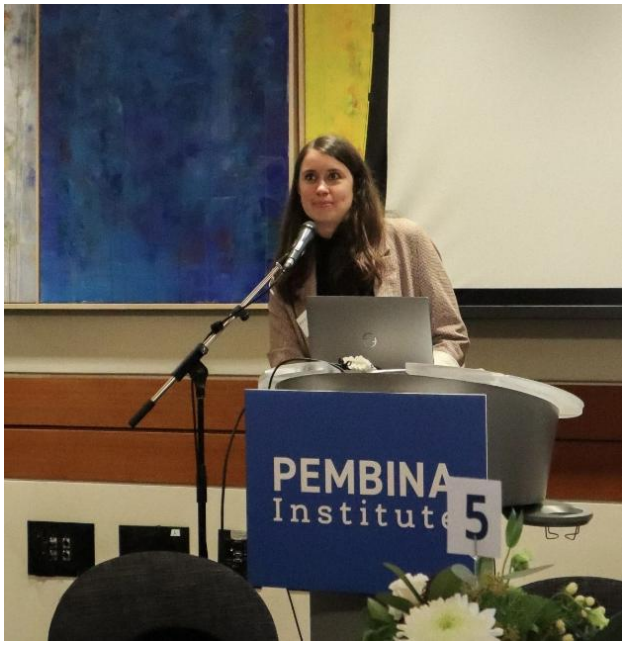



*Photo from Left to Right: Lisa Ashton, Emily Robinson, Katherine Festeryga, Jacqueline Keena, Kyle Volpi Hiebert, Uzair Jamil © The Clean Economy Bridge*

## Pembina Summit: Pathways to Decarbonizing British Columbia and Alberta's Energy Systems

For Day 2 of the TCB Annual Conference, the German expert delegation went to Vancouver for the Pembina Summit. The summit focused on the importance of fostering open and candid discussion among cross-sectoral experts to discuss the prospects for electrification to lead to economic development and nation-building. Anne-Mareike, Head of Division for International Climate Policy at the German Federal Foreign Office, highlighted that the Summit was particularly urgent, considering the accelerating climate crisis and the need for international actors to act on their commitments in the wake of COP30. Vanselow mentioned that while major international gatherings can remain abstract, ***this event brought together a diverse delegation to focus on concrete, actionable pathways for decarbonizing British Columbia's and Canada's energy systems.***




*Anne-Mareike Vanselow at the Pembina Summit*
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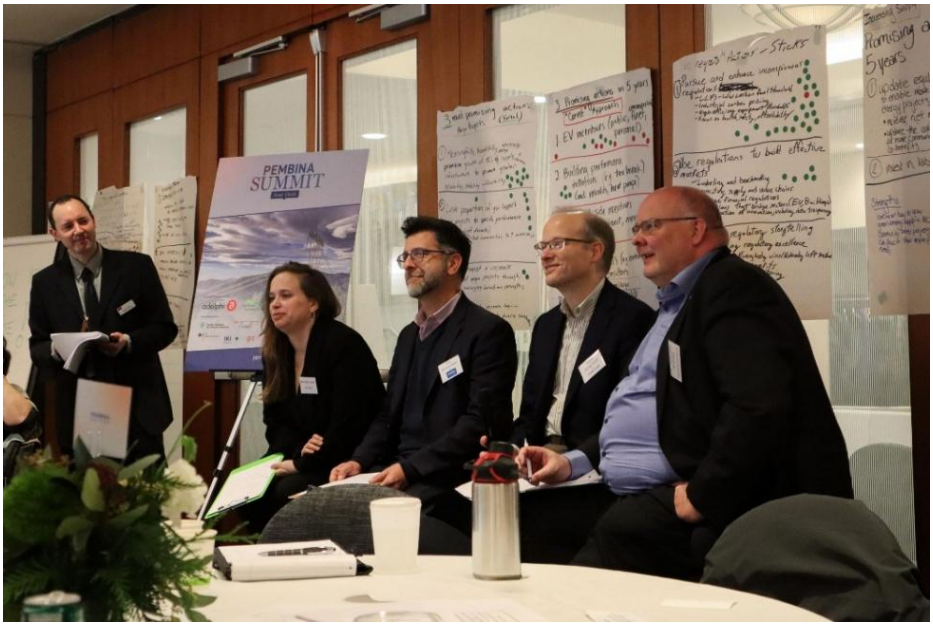
Participants noted that, despite significant progress and innovation across various sectors, there is often a lack of dialogue connecting these efforts. The Summit sought to bridge this gap by facilitating collaboration between government, indigenous communities, think tanks, private sector, academia, industry, and international experts. ***A special delegation from Germany, brought by adelphi, provided valuable external perspectives, broadening the outlook on BC's energy transition.***

### KEY EVENT TAKEAWAYS

- **Cross-sectoral collaboration and open dialogue are crucial for identifying actionable pathways to decarbonize British Columbia's and Alberta's energy systems.**
- **Balancing large-scale infrastructure projects with local, distributed solutions and integrating both technological and market-based innovations are essential for a resilient and equitable energy transition.**
- **International knowledge exchange provides practical strategies for advancing clean energy, carbon management, and workforce development.**




*Meredith Adler, Chris Severton-Baker, David Sanguinetti and Hans-Jörn Weddige at the Pembina Summit*

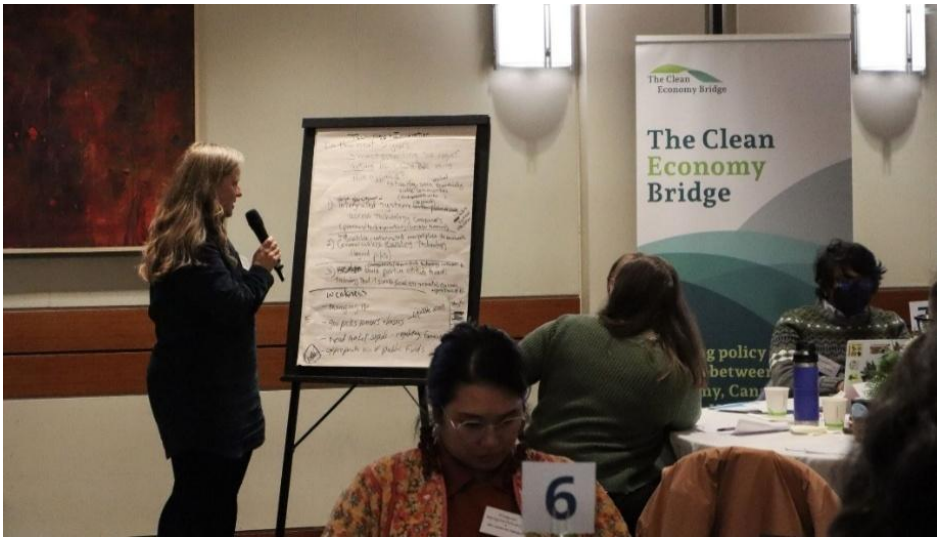

Discussions centered on several key themes and trade-offs shaping the path to decarbonization:

- **Energy Supply and Demand:** Balancing the expansion of new energy supply with efficiency and electrification measures that lower emissions and build resilience.
- **Policy Tools:** Weighing compliance-driven climate action against incentive-based approaches and considering the roles of both “stick” and “carrot” in driving change.
- **Project Scale:** Debating the merits of large-scale export-oriented projects versus local, distributed initiatives that prioritize domestic needs.
- **Technological and Market Innovation:** Exploring the interplay between technology-focused product/process innovation and market or behavioral solutions that shift energy use patterns.

Participants cautioned against ***an overemphasis on technological “widgetism” at the expense of robust business cases and market viability***. Decision-making was guided by four lenses: supporting Canada’s economic and political imperatives, maintaining BC’s climate leadership, delivering social benefits to local communities, and diversifying the provincial economy.


*From Left to Right Dennis Taenzler, Trisha Kershaw, Claudia Schütz, Mary Hellmich, Dr. Hans-Jörn Weddige, Jessica Guelmi, Anne-Mareike Vanselow, Lea Boukroum, Sandra Wappelhorst*

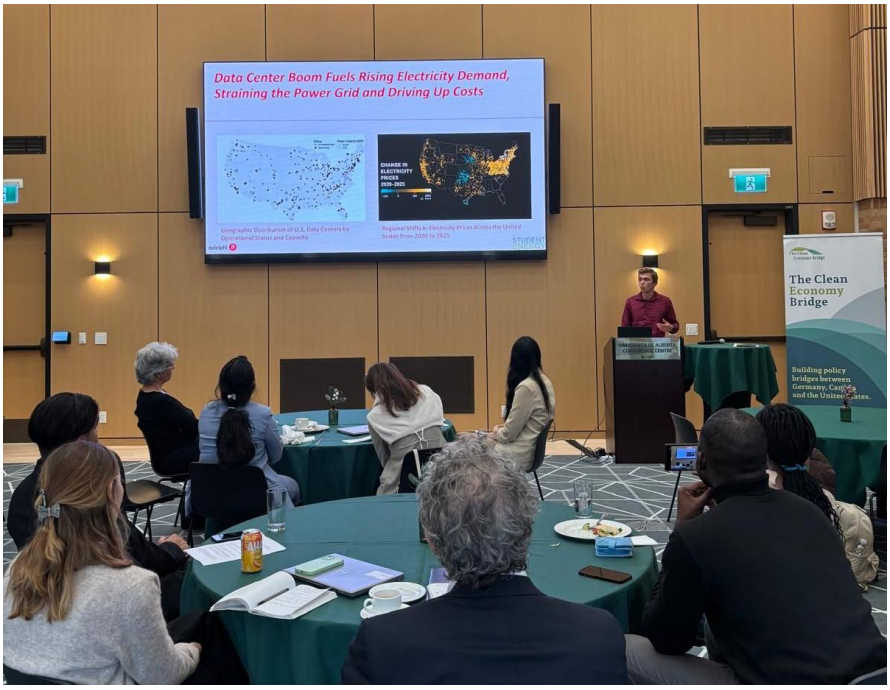

A key outcome of the Summit was ***the identification of multiple policy actions that could be implemented within the next five years to accelerate decarbonization in BC's energy system.*** These will be detailed in a forthcoming white paper, reflecting the collaborative spirit and cross-sectoral engagement of the event.




*The Pembina Summit*

## Youth Voices in Clean Energy: Shaping the Future through Research and Innovation

This event at the University of Alberta in Edmonton marked the final stop of the TCBC2025 conference tour, providing a platform for young people to address some of the world's most pressing energy and climate challenges. The session highlighted the importance of empowering youth to share and develop their ideas in a supportive environment. Fresh and innovative insights are essential to driving innovation and systemic change.




*Evan Park presenting at Youth Voices event*
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Launched in partnership with **Student Energy**, the TCB Research Program supports young leaders in developing research projects that tackle real-world issues at the intersection of energy, technology, and sustainability. Over several months, participants worked collaboratively to design and present projects that reflect the complexity and urgency of the energy transition.

The event showcased four standout youth-led research initiatives:

- **Just Transition Strategies for Fossil Fuel Dependent Economies:**
  This project analyzed workforce reskilling and training programs in North Rhine-Westphalia (Germany), Alberta (Canada), and Alaska (US), focusing on strategies for transitioning oil and gas workers, public attitudes, and socio-economic impacts. The team evaluated the transferability of just transition approaches across different regions.

- **Farmers, Artificial Intelligence, and the Water Nexus:**
  Addressing the growing competition for water between

### KEY EVENT TAKEAWAYS

- **Youth-led research brings fresh perspectives – also from a transatlantic perspective - and innovative solutions to complex challenges in the clean energy transition, from just transition strategies to the water–energy nexus.**
- **Research Fellows presented on the growing demand for data centers to power AI and innovative ways to reduce emissions and conserve water.**
- **Fellows also explored the necessity to find market mechanisms to fund the just transition and focused on skill development and innovative financing**

agriculture and data centers, this research compared high-stress regions in the US with similar contexts in Germany. The team examined water demand, regulatory frameworks, and the role of artificial intelligence in optimizing resource use.

- **Techno-Economic Analysis of Renewable Energy Amid Data Centre Growth:**
  This group investigated the impact of expanding data centers on US energy grids, focusing on whether solar energy paired with storage can reliably meet rising demand while ensuring grid stability and advancing decarbonization goals.

- **Transatlantic Development Finance for Climate-Resilient Infrastructure:**
  Exploring innovative financing mechanisms, this project looked at how development finance can facilitate participatory, climate-resilient infrastructure investments across the Atlantic, integrating sustainability, resilience, and resource security.


*Photo from Left to Right: Evan Park, Raian Zaman, Mary Hellmich, Trisha Kershaw and Ifeanyi Ohanyere*


Throughout the event, youth participants engaged in constructive dialogue with a panel of experts, receiving valuable feedback to refine their research and amplify their impact. **The session underscored the critical role of young people in shaping the clean energy transition, bringing forward new perspectives, fostering cross-border collaboration, and developing solutions that are both ambitious and grounded in real-world challenges.**

## Imprint

This report was prepared under The Clean Economy Bridge project, which is supported by the German Federal Government. The report is the independent work and sole responsibility of adelphi and was neither commissioned by nor necessarily reflects the views of the Federal Government.

**adelphi** is the leading independent think-and-do tank in Europe for climate, environment and development. We are some 350 strategists, thought leaders and practitioners working at the local and global levels to find solutions to the most urgent political, economic and social challenges of our time. As a policy consultancy, we support a just transition towards carbon neutrality and sustainable, livable societies. Our work is grounded in transdisciplinary research, evidence-based consulting and stakeholder dialogues. With these tools we shape policy agendas, facilitate political communication, inform policy processes and support decision-makers.

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