

## March 2021 – CSUR Technical Webinar #2

### Canada's Hydrogen Economy: Opportunity & Potential

**MAR**  
**23**  
**2021**



**TECHNICAL  
WEBINAR  
SERIES**



Devin Lacey



David B. Layzell

### **CANADA'S HYDROGEN ECONOMY: OPPORTUNITY & POTENTIAL**

PRESENTED BY

**DAVID B. LAYZELL, PH.D., FRSC, ENERGY SYSTEMS ARCHITECT -  
THE TRANSITION ACCELERATOR**

AND

**DEVIN LACEY, MBA, PMP, SENIOR BUSINESS ANALYST - GLJ LTD.**

With discussions around alternative fuel or energy sources heating up, CSUR invited a couple of experts in this space to discuss the merits, opportunity and potential of hydrogen as a fuel source. Dr. David Layzell, Ph.D., FRSC, Energy Systems Architect at The Transition Accelerator, and Devin Lacey, Senior Business Analyst at GLJ Ltd., were the guest speakers for this session. Bill Whitelaw, CSUR Director and Managing Director, Strategy & BD at geoLOGIC Systems Ltd. & JWN Energy, was on hand to moderate the session.

The session was titled: Canada's Hydrogen Economy: Opportunity & Potential. Indeed, the key points discussed during the webinar revolved around the science & engineering, logistics & infrastructure, economics & scaling opportunities, and acceptance & public perception of having hydrogen as an energy source and how to move forward. As Dr. Layzell indicated, Canada is one of the lowest cost producers of blue and green hydrogen. Therefore, it is well suited to implement a hydrogen economy, potentially starting with Alberta given that some infrastructure is already in place in this province. He also identified possible markets that could utilize and benefit from using hydrogen as a fuel – heavy transportation, municipal fleets and commercial & residential heating to name a few. In fact, plans are well underway to begin a pilot project prior to year's end in the Edmonton-Calgary transportation corridor.

Devin Lacey reiterated Dr. Layzell's points, but from a business perspective. His key indicators were based around 3 principles: Momentum & Interest, Canada's Unique Position and Attainable Implementation. In describing these principles in further detail, Devin also added the intricacies of developing structure for safety codes & standards, including policy & regulations within Canada. He also displayed a "scorecard" that indicated where Canada sits in comparison to other countries around the world in instituting a successful hydrogen economy. Not surprisingly, Canada, United States, Norway and Australia appear to have the necessary building blocks in place to invoke an effective hydrogen market.

Both speakers indicated the need for hydrogen hubs or nodes as an integrated & stepwise approach to scale and expand the required infrastructure. In closing out the session and during the discussion period, it also became very apparent that both the Alberta and Canadian governments need to remove the barriers in place currently in order to incentivize industry to make this concept a reality and build a vibrant hydrogen economy!

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### **Summary (presentation #1 – David Layzell, The Transition Accelerator)**

Not available.

### **Summary (presentation #2 – Devin Lacey, GLJ)**

GLJ walks us through their decision to become early entrants into the hydrogen sector, providing a relevant independent perspective into a process that many Canadian energy companies are currently undertaking – developing a diversified and sustainable growth strategy for a changing energy sector. GLJ has identified hydrogen as an important emerging energy carrier given the potential it presents in support of their client’s decarbonization and sustainability goals. Other countries and organizations have also identified this potential, as GLJ outlines the considerable global interest that hydrogen has received over the last few years as being a key driver in their decision to invest in their own hydrogen business.

Other key drivers that propelled GLJ into the hydrogen space include Canada’s opportunity to lead and leverage unique advantages, including the attainability of implementing early hydrogen demonstration projects given the mature state of much of the associated technology, existing infrastructure and an existing skilled workforce. The anticipation of interest from Canadian energy companies with respect to hydrogen has quickly translated into a series of projects for GLJ in 2020 and 2021, as their network of oil & gas operators, tech start-ups, infrastructure companies, utilities and government agencies came looking for their early insights and the potential of hydrogen to support decarbonization across a variety of asset portfolios.

If you would like to learn more about how GLJ can support your organization’s sustainability efforts, Devin Lacey can be reached at (403) 266 9561 or [dlacey@gljpc.com](mailto:dlacey@gljpc.com).

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**PRESENTER #1:** David B. Layzell, Ph.D., FRSC, Energy Systems Architect - The Transition Accelerator / Professor and Director, Canadian Energy Systems Analysis Research (CESAR) Initiative.

David Layzell is a University of Calgary Professor and the Energy Systems Architect for the Transition Accelerator, a non-profit focused on the net-zero energy system transition in Canada. His research uses analytical and modeling tools to explore how existing or new technology, business model, policy or social innovations could transform or disrupt the systems that Canadians use for societal provisioning. His work has been instrumental in identifying the opportunity and transition pathways for Canada to deploy a vibrant hydrogen economy based on the production, use and export of hydrogen made from both low carbon electricity sources and fossil fuels coupled to carbon capture and geological storage.

Before assisting in the launch of the Transition Accelerator in 2019, and starting the Canadian Energy System Analysis Research (CESAR) Initiative at the U of C in 2013, Layzell was Executive Director of the Institute for Sustainable Energy,



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Environment and Economy (ISEEE) at the U of C (2008-12), and the Executive Director of BIOCAP Canada, a research foundation focused on biological solutions to climate change (1998-2008). As a Professor at Queen's University between 1981 and 2008, he also founded a scientific instrumentation company called Qubit Systems Inc. and was elected 'Fellow of the Royal Society of Canada' (FRSC) for his research contributions.

**PRESENTER #2:** Devin Lacey, MBA, PMP, Senior Business Analyst - GLJ Ltd.

Mr. Lacey is a strategy, finance and project controls adviser with a diverse background working across the oil, gas and power generation sectors before joining GLJ as Senior Business Analyst in the Summer of 2020. He supports the research and development of the firm's expanding services across a variety of emerging energies and clean technologies, with a particular focus on hydrogen. Mr. Lacey is the co-lead of GLJ's hydrogen team which has grown to reach over a dozen team members across engineering, geoscience and business strategy disciplines. The team focuses on leveraging their multidisciplinary skill-set and strategic partnerships to address client needs across the entire hydrogen value chain.

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# TECHNICAL WEBINAR

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presented by  
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The Transition Accelerator**  
AND  
**Devin Lacey, MBA, PMP, Senior Business Analyst - GLJ Ltd.**

Tuesday, March 23rd, 2021 | 10:00am MST  
**\*\*pre-registration is mandatory\*\***

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