

# HBC Hydrogen, Sustainability and Finance Conference 2020

Thursday, Nov 19

08:30 AM - 09:00 AM

## Welcome Session

**Lester Anogot**  
Chief, Saugeen Nation

**Brad Chittick**  
President & CEO, Hydrogen Business Council

**Robyn Collver**  
Senior VP, Canadian Tire Corp

Welcome to the 2020 HBC Hydrogen and Sustainability Conference! In this session: Welcome Talk - Brad Chittick, HBC CEO Gratitude and Responsibility by Chief of Saugeen First Nations - Lester Anogot Keynote address, Hydrogen and Sustainability - Robyn Collver, Canadian Tire Corporation

Thursday, Nov 19

09:00 AM - 09:45 AM

## Keynotes: Hydrogen Energy Development NOW

Session A, Keynotes

**Aaron Hoskin**  
NRCAN

**David Furman**  
President, Marketing, Hyster-Yale Group

**Moataz Eldib**  
Product Manager, Nuvera Fuel Cells

**Matthew Fairlie**  
Vice Chair, Next Hydrogen

Welcome to Keynote Session A! This session will be hosted by David Furman, President of Hyster and will contain the following talks: Aaron Hoskins, NRCAN; Hydrogen Road-Map; Moataz Eldib, Nuvera/Hyster-Yale Mathew Fairlie, Next Hydrogen

Thursday, Nov 19

09:45 AM - 10:15 AM

## Jeff Yurek, Minister of the Environment of Ontario

**Jeff Yurek**  
Minister of Environment, Conservation and Parks, MPP, Legislative Assembly of Ontario

Thursday, Nov 19

10:15 AM - 10:30 AM

## Break Session

Take some time to go visit the Virtual Exhibitor Booths and connect with peers!

Thursday, Nov 19

10:30 AM - 11:30 AM

## Keynote: Connecting Climate Change, Environment and Carbon Avoidance

Session B, Keynote

**David Arkell**

President and CEO, 360 Energy

**David Haberman**

H2

**Dr. Shashi Kant**

Professor, Institute for Management & Innovation , UTM

**Richard Carlson**

Director, Energy Policy and Energy Exchange, Pollution Probe

Welcome to Keynote Session B Keynote: Connecting Climate Change, Environment and Carbon Avoidance  
Session Chair: David Haberman of Game Change Energy  
This session will include Keynote presentations from: &nbsp; Dr. Sashi Kant, U of T  
Richard Carlson, Pollution Probe  
David Arkell, 360 Energy

Thursday, Nov 19

11:30 AM - 12:30 PM

## Keynote: How does Hydrogen fit SDG globally?

Session C, Keynotes

**Daryl Wilson**

Executive Director, Hydrogen Council

**Joanne McMillin**

Associate Vice President Business Sustainability, Canadian Tire

**Chris Norris**

Director, Business Development, New Energy Business, Siemens Energy

**Glen Martin**

Co-Founder and CEO, Maker Hydrogen

**Matthew Blieske**

Global head of Product development and engineering, Shell Hydrogen

Welcome to keynote Session C: How does Hydrogen fit SDG Globally  
Session Chair: Joanne McMillin from &nbsp; Canadian Tire Corporation. &nbsp; This session will include presentations from: &nbsp; Daryl Wilson, CEO of Hydrogen Council: "The Case for Global Transformational Change" Chris Norris, &nbsp; Siemens Canada: &nbsp; "Global Initiative in Hydrogen" Mathew Blieske, &nbsp; Shell Hydrogen: &nbsp; "Decarbonizing With Hydrogen" Glen Martin, CEO of Infrastructure Energy: "The Hydrogen Wave in California" TBD: "Closing the Circle &ndash; making technology choices in an SDG framework, technology advocacy in sustainability"

Thursday, Nov 19

12:30 PM - 01:00 PM

## Lunch Break

Thursday, Nov 19

01:00 PM - 01:15 PM

## The National View on Hydrogen and Fuel Cell Deployment

Address from Mark Kirby, Canadian Hydrogen and Fuel Cell Association:

**Mark Kirby**

President and CEO, Canadian Hydrogen and Fuel Cell Association CHFCA

Address from Mark Kirby, Canadian Hydrogen and Fuel Cell Association:&nbsp; The National View on Hydrogen and Fuel Cell Deployment

Thursday, Nov 19

01:15 PM - 02:15 PM

## Goods Movement

Session A - Track 1

Track 1

**Craig Knight**

CEO, Hyzon Motors

**Rob Campbell**

Chief Commercial Officer, Ballard Power Systems

**Dave Schaller**

Industry Engagement Director, NACFE

**Brad Chittick**

President & CEO, Hydrogen Business Council

**Rob Harvey**

Director, Energy Infrastructure, Hydrogenics/Cummins Inc

This session is moderated by Brad Chittick, President and Acting Chair, Hydrogen Business Council "The Push for Hydrogen Fueled Truck Engines"- Rob Harvey, Cummins/Hydrogenics "Developing Hydrogen Systems to replace Diesel" - Rob Campbell, Ballard "Putting Hydrogen Trucks on the Road" -&nbsp;Craig Knight, Hyzon Motors&nbsp; "Status of H2 as a fuel for trucks" - David Schaller, NADFE

Thursday, Nov 19

01:15 PM - 02:15 PM

## The Promise of Bulk Production, Supply and Uptake in Ontario

Track 2, Session A

Track 2

### Heather Kleb

Director, Next Generation Nuclear Technology, Bruce Power

### Alex Simakov

Associate, Sussex Strategy Group

### Edward Arlitt

Supervisor, Advanced Technology Research, IESO

### Robert Stasko

CEO and Principal, Science Concepts Inc.

### Jack Simpson

Director Business Development, Electrification, Ontario Power Generation

Track 2, Session A - The Promise of Bulk Production, Supply and Uptake in Ontario  
Session Chairman - Robert Stasko, Hydrogen Business Council "The OPG Vision on Bulk Hydrogen Supply in Ontario" - Jack Simpson, Director at OPG  
&nbsp; "The Case for Green Hydrogen from Nuclear" - Heather Kleb, Bruce Power "Ontario's Evolving wholesale electricity market: Opportunities for flexible loads, including hydrogen" - Edward Arlitt, Independent Electricity System Operator (IESO) "Addressing Regulatory & Market Barriers to Producing Bulk Electrolytic Hydrogen with the Ontario Grid" - Alex Simakov, Sussex Strategy Group

Thursday, Nov 19

01:15 PM - 02:15 PM

## Green Financing and the Role for Private Sector Investments

Track 3, Session A

Track 3

### Paul Stevers

President, Think Renewables Group

### Brian Petersen

Managing Partner, Fort Capital Partners

### Rupert Merer

Managing Director, Equity Research, National Bank

### Peter McArthur

VP Tech & Innovation Banking- Cleantech Lead, RBC

Track 3, Session A: Green Financing and the Role for Private Sector Investments  
Session Chairman: Paul Stevers, President & CEO of Think Renewables Group and Co-founder of ClimateSAN "Green Finance and Canada" - Rupert Merer, National Bank "Investing in Clean Energy Startups" - Paul Stevers, President & CEO, Think Renewable Group "Funding programs for hydrogen technologies: Challenges and Opportunities" - Peter McArthur, RBC Fort Capital - Brian Petersen

Thursday, Nov 19

02:15 PM - 03:15 PM

## People Movement

Session B - Track 1

Track 1

### **Sujin Wren**

Hydrogen Technologies Lead, Hatch

### **Mitchell Foreman**

Director, Advanced Technology Business Development, Toyota

### **Rymal Smith**

President, Change Energy

### **Bob Oliver**

CEO, Tech-K.O., Inc.

### **Dr. Josipa Petronic**

President and CEO, Canadian Urban Transit Research & Innovation Consortium (CUTRIC)

Session B, Track 1 : People Movement  
Session Chairman: Ry Smith, Change Energy "Bus Demonstration Projects Across North America" -Josipa Petronic, CUTRIC  
"Hydrogen and Rail " -Bob Oliver, Tech-KO "Toyota and Hydrogen" - Mitchell Foreman, Toyota  
"Enabling Clean Transport with Clean Hydrogen" - Sujin Wren, Hatch

Thursday, Nov 19

02:15 PM - 03:15 PM

## Industrial Uses for Electrolytic Hydrogen and Oxygen

Track 2, Session B

Track 2

### **Tariq Qurash**

Enbridge

### **Vinod Embrandri**

Product Application Specialist, WAJAX

### **Greg Vezina**

Chairman and CEO, Hydrofuel Inc.

### **David Bangma**

Senior Manager, Technical Services & SD, Ash Grove (CRH)

### **Sam McDermott**

Enbridge

Track 2, Session B: Industrial Uses for Electrolytic Hydrogen and Oxygen  
Session Chair: Sam McDermott, Enbridge  
"Compelling Case for Hydrogen Forklifts" - Vinod Embrandri, Wajax Corp  
"Alternative uses for hydrogen and oxygen as valuable co-products,"  
Tariq Qurashi, Enbridge  
"Green ammonia from Green Hydrogen"- Greg Vezina, HydroFuel Inc.  
"Electrolytic Oxygen in Cement Production" - David Bangma, CRH

Thursday, Nov 19

02:15 PM - 04:30 PM

## New Business Opportunities in Hydrogen

Track 3 Session B and C

Track 3

**Paul Stevers**

President, Think Renewables Group

**Calvin Johnson**

Head of Commercial, Proton Energy

**Chris Reid**

EkonaPower

**Brian Petersen**

Managing Partner, Fort Capital Partners

**Tyler Hamilton**

Director, Ecosystem Development, Cleantech, MaRS DD

**Mark Kirby**

President and CEO, Canadian Hydrogen and Fuel Cell Association CHFCA

**Canon Bryan**

CFO, Terrestrial Energy

**Juergen Puetter**

renewableh2canada

**Arthur Potts**

True Energy

**Raveel Afzaal**

President, Next Hydrogen

**Alexandra Tavasoli**

CEO & CTO, Solistra Corporation

**Edward Stuart**

Manager of Technology and Business Development, Co-Founder, Hydrogen Optimized

**Colin Armstrong**

HTEC

**Joe Williams**

President, Innovative Hydrogen Solutions Inc.

Moderator: Paul Stevers, Think Renewables  
Panelists: Brian Petersen, Fort Capital; Tyler Hamilton - Director, Cleantech, MaRS DD; Mark Kirby - President of CHFCA; This "New Business Opportunities in Hydrogen" session is designed to help companies introduce their respective business opportunity or opportunities to conference attendees. We will highlight the rapidly growing business opportunities in hydrogen and then we would focus each opportunity with the company's representative and followed by Q&A with the online audience. Presenters: Raveel Afzaal, President, NextHydrogen; Colin Armstrong, President and CEO of HTEC; Alexandra Travasoli, CEO, Solistra Corporation; Canon Bryan, CFO, Terrestrial Energy; Edward Stuart, Manager of Technology, Co-Founder Hydrogen Optimized; Juergen ...

Thursday, Nov 19

03:15 PM - 03:30 PM

## Networking Break

Thursday, Nov 19

03:30 PM - 04:30 PM

## Community Led Projects in Hydrogen

Track 1, Session C

Track 1

### Jonathan Bayne

KulGroup

### Jill Roote

Economic Development, Bruce County

### Ana Maria Suknovic

Senior Account Executive, Industry and Sector Strategy – Advanced Manufacturing Industries, Ministry of Economic Development, Job Creation and Trade, Government of Ontario

### Shane Day

President and COO, CleanFuel Systems Inc.

### Rupp Carriveau

Director, Environmental Energy Institute

Track 1, Session C: Community Led Projects in Hydrogen  
Session Chairman: Ana Maria Suknovic "Bruce County Development of Bulk Hydrogen Storage" -Jill Roote, Bruce County "Zero Carbon Corridor In Ontario" - Rupp Carriveau, U of Windsor Clean Fuel Systems - Shane Day KulGroup, Jonathan Bayne

Thursday, Nov 19

03:30 PM - 04:30 PM

## Future Sources of Bulk Renewable Hydrogen

Track 2, Session C

Track 2

### Steve Kay

Enbridge

### Canon Bryan

CFO, Terrestrial Energy

### Patrick Carr

Bus. Development Manager - Canada, 2G Energy

### Richard Bower

Managing Director, ReCarbon

### Ron Oberth

President & CEO, Organization of Canadian Nuclear Industries

Track 2, Session C: Future Sources of Bulk Renewable Hydrogen  
Session Chair: Steve Kay, Manager CNG, LNG and Renewable Hydrogen, Enbridge  
Speakers: "Hydrogen from Municipal Waste Streams" -Richard Bower, ReCarbon Inc "The Nexus of Hydrogen and New Nuclear" - Ron Oberth, OCNI "CHP with H2 - Scalable Steps to NetZero" Patrick Carr - 2-G energy "The role for "New Nuclear" in future hydrogen production" -Canon Bryan, Terrestrial Energy

Thursday, Nov 19

04:30 PM - 05:00 PM

## Day One Wrap up / Going Forward

Closing Remarks

### Robert Stasko

CEO and Principal, Science Concepts Inc.

Closing remarks by Bob Stasko, HBC

Friday, Nov 20

09:00 AM - 09:15 AM

## Day 2 Opening Remarks

Overview of the Previous Day

**Robert Stasko**

CEO and Principal, Science Concepts Inc.

Opening Remarks and Overview of the Previous Day, Presented by Robert Stasko, HBC

Friday, Nov 20

09:15 AM - 10:30 AM

## University R&D - Support of Hydrogen Deployment

Session 5A

Track 1

**Roydon Fraser**

UWaterloo

**XiaoYu Wu**

Assistant Professor, University of Waterloo

**Ivette Vera-Perez**

National Team Lead, Account Management, Mitacs

**Michael Fowler**

Professor, U of Waterloo

**Paul O'Brien**

Professor, York University

Day Two, Track 1 Session A: University R&D - Support of Hydrogen Deployment Session Chair: Ivette Vera-Perez, MITACS "Outlining 9 recommended priority areas for utilization of hydrogen produced from renewable or nuclear energy sources in Ontario" -&nbsp;Prof. Michael Fowler, University of Waterloo "Research & Development Opportunities for Long Term (e.g., H2/CO2 to valued products)" -&nbsp;Prof.&nbsp;XiaoYu Wu, - U of Waterloo "Upstream health impacts of hydrogen powered goods movement" Prof. Roydan Frazer &ndash; U of Waterloo "LCA impact of implementation of some of the 9 hydrogen-related priority areas in Ontario that were recommended by Prof. Michael Fowler. &nbsp;In addition, ...



Friday, Nov 20

09:15 AM - 10:30 AM

## Emergent Transportation Modes that can benefit from Hydrogen Fuel

Session 6B

Track 2

**Ryan Sookhoo**  
Cummins

**Barry Prentice**  
President, Bouyant Aircraft Systems Int.

**Robert Stasko**  
CEO and Principal, Science Concepts Inc.

**Nirmal Gnanapragasam**  
Senior Process and Modeling Scientist, Canadian Nuclear Laboratories

Day Two, Track 2, Session A: Emergent Transportation Modes for Hydrogen Fuel Session Chair: Robert Stasko, CEO, Science Concepts International &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; "Marine Applications using Hydrogen or Green Ammonia" Nirmal Gnanapragasam, CNL &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; "H2 Fueled Planes and Helicopters" - Ryan Sookhoo, Cummins &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; "Airship Goods Movement in the Far North using Hydrogen as Fuel" - Barry Prentice &nbsp;

Friday, Nov 20

11:00 AM - 12:00 PM

## Talent Development and Career Opportunities in Hydrogen

Session 6A

Track 2

**Brittany Berry**  
Communications Strategist & Advisor, SCI / WIRE

**Joanna Osawe**  
WiRE

**Mark Chapaskie**  
Director, EHRC

**Sarah Fairlie**  
Business Development Director - Social Innovation, Mitacs

Day two, Track 2, Session A: Talent Development and Career Opportunities in Hydrogen Session Chair: Joanna, President of Women in Renewable Energy, (WiRE) "Developing Needed Talent in Green Industries" - Sarah Fairlie, MITACS "Programs for New Grads in Green Energy Jobs" - Mark Chapeskie, ESHR "Bringing More Women into Clean Energy Careers" - Brittany Berry, &nbsp; WIRE/SCI

Friday, Nov 20

11:00 AM - 12:00 PM

## New Hydrogen Generation & Commercialization Technologies

Session 5B

Track 1

**margaret mcbeath**

Director, Company Strategy, NPX

**Padraic Foley**

Ontario Centres of Excellence

**Bharath Nangia**

Chief Innovation Catalyst, Nuclear Promise X (NPX)

**Kamiel Gabriel**

Professor and Founding AP Research & Graduate Programs, Ontario Tech University

**Micheal Fowler**

Professor, U of Waterloo

Session Chair: Padraic Foley, Ontario Centres Of Excellence (invited) "Developing Needed Talent via Recommended Research Projects" Michael Fowler, U of Waterloo. "Next Generation Hydrogen Production" Kamiel Gabriel, Ontario Tech University "From Innovation to Implementation: Making Change and Disruption a Reality in the Energy Sector" -Margaret McBeath, NPX

Friday, Nov 20

12:00 PM - 12:14 PM

## Day two Wrap up and closing

**Robert Stasko**

CEO and Principal, Science Concepts Inc.