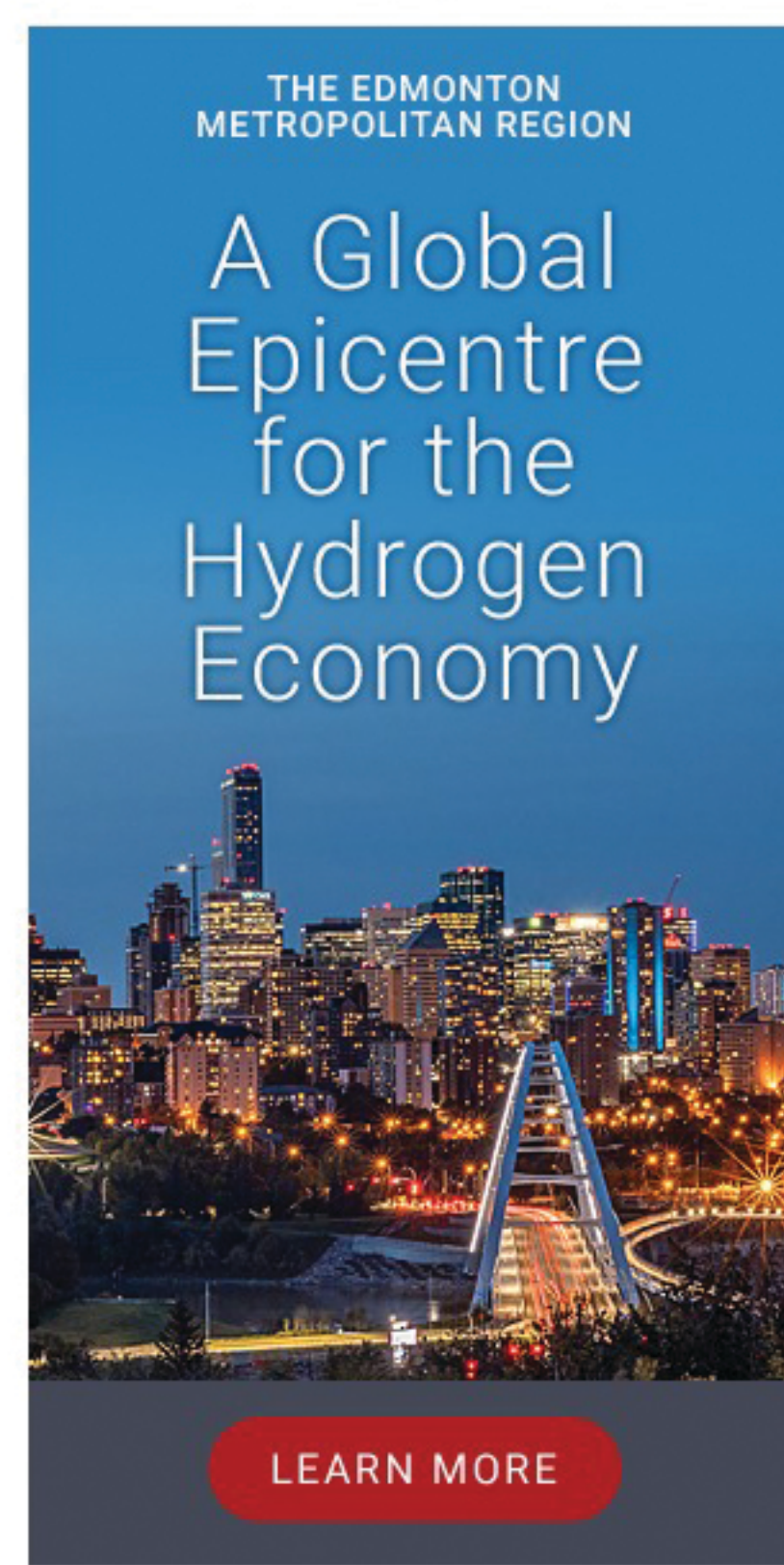


Leland Oberst
President and CEO - Innovative Fuel Systems
[Bio & Org](#)

← Part of the Spotlight on Edmonton's Hydrogen Economy

Talent and Infrastructure for Edmonton's Hydrogen Future

[Cleantech](#) / [Investment Attraction](#)
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Takeaways

- Edmonton's energy sector has nurtured and trained its workers with the specialized skills needed for the city's emerging hydrogen economy.
- The educational institutions in Edmonton and Alberta have tuned into the needs of the energy industry and are consistently producing top talent.
- Edmonton has the right resources and existing infrastructure to facilitate the city and province's transition to cleaner fuels.

Action

Corporate and government stakeholders will need to make large investments to build the infrastructure to build Alberta's hydrogen economy. Once the infrastructure is built, the rest will follow.

Tell us about Innovative Fuel Systems and what it does.

Our company basically has a technology to help the heavy-duty diesel tractor truck industry get rid of up to 50% of diesel burn and run on natural gas. Natural gas and diesel fuels combust at the same rate.

“Natural gas is a cleaner burning fuel, allowing us to reduce greenhouse gas emissions.”

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The attraction for our customers is two-fold. Firstly, this presents huge savings for them in fuel costs as natural gas is in abundance in North America and is quite a bit cheaper than diesel fuel. The other huge benefit is natural gas is a cleaner burning fuel, allowing us to reduce greenhouse gas emissions. In the last year and a half, excitement has really picked up around natural gas and what our technology can do.

What are Alberta and the Edmonton region's competitive advantages in attracting cleantech investment?

There are a few of them but one of our key advantages is our skilled workforce. We have tremendous engineers and scientists in Canada and in Alberta in particular. That comes from an extremely strong post-secondary educational system. Workers from Alberta's energy industry can use their skills to help us transition from a carbon industry to a zero-carbon industry.

We are lucky enough at Innovative Fuel Systems to have some of these tremendous engineers. Again, there is an abundance of experience within the energy industry. Alberta has had more experience in the energy industry over the last 70 years compared to anywhere else in Canada. This will help us transition with bridge technologies to ultimately a zero-carbon industry.

How do you see the alternative fuel industry evolving globally and in Canada?

The chief executive officer (CEO) of [Total](#) spoke about three or four months ago on how the revenue streams of current oil and gas products are being used to drive green technologies with the goal of getting us to our goal in 2050. Support is definitely out there and the money is being spent today to help us make the transition.

“There is a copious amount of investment made by Alberta's energy companies and the provincial government to help us diversify to cleaner burning fuels.”

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In Edmonton, Alberta, there is a strong focus on diversifying to cleaner burning fuels and bridge technologies. There is a copious amount of investment made by Alberta's energy companies and the provincial government to help us diversify to cleaner burning fuels. Some of the projected expenditures in the next 12 to 18 months are phenomenal.

Edmonton by nature is quite understated. That is both good and bad but the money is there and we need to do a better job of broadcasting that. Money is not only being spent locally and provincially. It is coming in from overseas as well to help Alberta make these changes.

How do you see the hydrogen space growing in Edmonton and Alberta?

Edmonton plays a huge role in hydrogen production, both grey and blue, from natural gas. As you know, initial infrastructure announcements have already been made. Corporate and government task forces in Alberta have solid plans for future hydrogen infrastructure builds. This will take a large investment, both from the government and the corporate world, but the money has already been earmarked. Once the first few builds are made, everything else will follow.

“Hydrogen can be introduced as a fuel source for heavy-duty diesel trucks once the infrastructure is built.”

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Speaking for my company, based on the patents we filed, our technology is not only applicable to natural gas-diesel blends. We can introduce other fuels and we specifically have identified hydrogen as one of them. Obviously, the infrastructure is not built right now but once it is built, hydrogen can be introduced as a fuel source for heavy-duty diesel trucks once the infrastructure is built.

What are Edmonton's advantages that will help it take a leading role in the burgeoning hydrogen sector?

I am passionate about talent because that drives everything. The [University of Alberta \(U of A\)](#) and other Albertan universities have robust educational offerings. It is not just that they bring great students in; universities in Alberta are helping produce highly skilled engineers and scientists. We are lucky to have some of this talent as they are the key to success.

The identified infrastructure builds that we have, which other areas of the country or world do not have, will give us a head start. The momentum will steamroll from there. We have so much talent out there that has been in the energy industry that we are going to be able to transition into this easily. This is an advantage we have over other jurisdictions in both Canada and the world.

We also have an abundance of natural gas in this province which gives us an advantage over other areas. Alberta can create both blue and grey hydrogen from our natural gas resources. That is an obvious natural resource that we have below our feet that other areas do not have.

What are the supports that enable companies to develop cutting-edge technologies for clean energy in Alberta?

From a provincial perspective, [Alberta Innovates](#) has been fantastic for us. They have a number of programs that we were involved in where they have given us financial support. Recently, [Emissions Reduction Alberta \(ERA\)](#) sponsored us on a project with [KAG Canada](#). That is over the next year and a half.

Federally, the [National Research Council of Canada Industrial Research Assistance Program \(NRC IRAP\)](#) has been with us from the beginning. We are well into our fourth project with them. Our technology also gets a lot of support from them. We are looking at some opportunities with [Western Economic Diversification \(WD\)](#) because we are into the commercialization phase of our technology and it looks like they are going to come to the table for us.

There is a lot of support out there. It is a lot of work to win those but once you do, the provincial and federal government has been very supportive to see our projects through and make sure we are successful.

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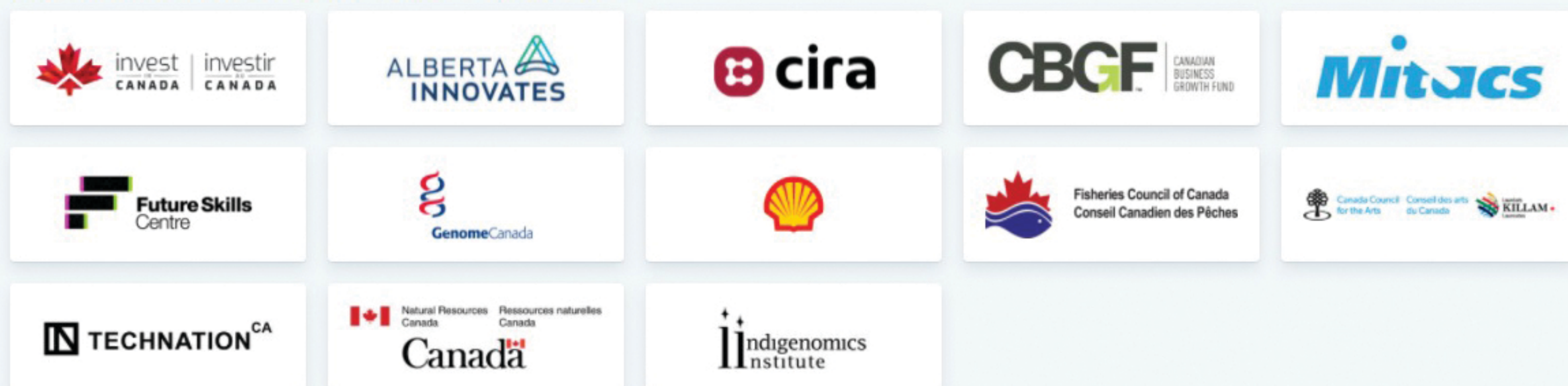
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