

Jan 04, 2021

The Hydrogen Strategy for Canada

By Christian Nianiaris and David Stevens

On December 16, 2020, Canada's Minister of Natural Resources, the Honourable Seamus O'Regan, announced the *Hydrogen Strategy for Canada* (the Strategy). As stated in the announcement, Canada will be leveraging its position as one of the world's top hydrogen producers to stimulate the Canadian economy and reduce its annual greenhouse gas (GHG) emissions. Deemed by Natural Resources Canada to be one aspect of solidifying Canada as a global leader in clean renewable fuels, the Strategy purports to allow Canadians to meet the goal of net-zero carbon emissions by 2050 while creating around 350,000 jobs and participating in a nearly \$12 trillion global hydrogen market. This will be supported by a \$1.5 billion federal investment in a Low-carbon and Zero-emissions Fuels Fund for Canada's climate change strategy, which includes hydrogen.

The Strategy comes in the wake of provincial plans to spur investment in Canada's hydrogen energy economy, including the British Columbia Hydrogen Strategy, Alberta's Natural Gas Vision and Strategy, Hydro-Québec's Strategic Plan 2020-2024 and the Ontario Low-Carbon Hydrogen Strategy. You can read our article on the future of Ontario's hydrogen economy [here](#).

The Strategy asserts that Canada is uniquely positioned to realize its goal of supporting a nationwide hydrogen economy: it is rich in feedstock to produce hydrogen; it is a leader in hydrogen and fuel cell technology; its energy sector is strong, holding assets valued at \$685 billion as of 2019; it is involved in various international collaborations to assist with innovation; it has an established international energy network that allows for Canada to be an exporter of hydrogen - including to potentially key markets such as the United States, Japan, South Korea, China and the European Union; and it is a global leader in the hydrogen and fuel sector.

The Strategy explains that the production, end-use and export opportunities for Canada are expansive. Hydrogen production will take different "pathways" with varying degrees of carbon intensity, including electrolytic hydrogen, hydrogen from fossil fuels, hydrogen from biomass and industrial by-product hydrogen. Hydrogen energy will support numerous end-uses, with focus on "energy-intensive applications" in areas such as transportation, power generation, feedstock and heat for industry and housing. As emphasized in the Strategy, export opportunities abound given numerous importing countries' long-term decarbonization goals.

The Strategy details three time-frames of action. The initial five-year plan involves setting the foundation for a robust hydrogen economy via new hydrogen supplies, distribution infrastructure and end-uses. Regional hubs will be deployed in communities that already have the expertise in hydrogen or to meet local needs. Between 2025-2030, the main goal is to expedite growth and diversification of the initial hubs. The Strategy suggests that during that timeframe, Canada should be 10-20% of the way to its 2050 goals regarding deployment volumes and GHG mitigation. In the years to 2030, hydrogen use will focus on the "best value proposition," which may include technologies such as hydrogen separation. Between 2030-2050 and supported by the foundation established during the initial term, the Strategy forecasts that Canada will begin to reap the benefits of the hydrogen strategy as both the quantity and quality of deployments increase. Throughout this transition, engagement with private sector stakeholders, Indigenous organizations, non-Government organizations, and municipal and provincial governments will be emphasized.

The Strategy has 32 recommendations across eight "pillars". The recommendations will be used to guide the development of Canada's hydrogen economy, and are said to "maintain momentum for maximizing the benefits of hydrogen in Canada's future energy system mix." The "pillars" under which the recommendations are organized are as follows:

Pillar 1: Strategic Partnerships - reinforcing existing and creating new partnerships.

Pillar 2: De-Risking of Investments - encouraging industry and government investment.

Pillar 3: Innovation - supporting R&D and further collaboration between stakeholders.

Pillar 4: Codes and Standards - updating the regulatory environment to remove barriers to deployment.

Pillar 5: Enabling Policies and Regulation - ensuring hydrogen is part of clean energy strategies across Canada.

Pillar 6: Awareness - educate individuals and communities on all aspects of hydrogen.

Pillar 7: Regional Blueprints - facilitate government cooperation to ensure the development of regional hydrogen blueprints.

Pillar 8: International Markets - collaborate with international partners in a way that positions Canada's hydrogen industry to be part of the global push for clean fuels.

The Strategy emphasizes some remaining challenges that limit the efficacy of its implementation. One key challenge is that hydrogen is not yet cost-competitive with other fuel sources. However, as the Strategy explains, with the implementation of Canada's Clean Fuel Standard and other federal initiatives, this may change over time.

Authors



Christian Nianiaris
Student-at-Law
T 416.863.1500 x 2154
cnianiaris@airdberlis.com



David Stevens
Partner
T 416.865.7783
dstevens@airdberlis.com

This communication offers general comments on legal developments of concern to business organizations and individuals and is not intended to provide legal advice. Readers should seek professional legal advice on the particular issues that concern them.