



## Committee Report

**To:** Warden Mitch Twolan  
Members of the Planning and Development Committee

**From:** Kara Van Myall  
Director of Planning and Development

**Date:** October 17, 2019

**Re:** Bruce Innovates: Foundational Hydrogen Infrastructure Update

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### Staff Recommendation:

The “Bruce Innovates: Foundational Hydrogen Infrastructure Update” report is for information.

### Background:

A significant opportunity exists for Bruce County to produce clean hydrogen from clean nuclear and renewable electricity, and in doing so, position the region to not only contribute to, but also to benefit from, the transition to a low-carbon economy. To take advantage of this opportunity, Bruce County has launched an initiative called “Bruce Innovates: Foundational Hydrogen Infrastructure”. Bruce Innovates marks the first major transformational project of a broader umbrella initiative called “Project Innovate”, the goal of which is to transform the County into an innovative energy leader within ten years.

The project aims to transform Bruce County into the Clean Energy Capital of Canada by establishing a world-class region for collaboration and training in clean technology development and innovation. Bruce Innovates has the potential to be a ground-breaking and innovative way to pursue multiple objectives simultaneously, including:

1. Developing, testing and scaling-up hydrogen-based energy systems - by undertaking pilot projects before eventually progressing to larger-scale commercial technologies;
2. Diversifying and boosting the economy - by growing a hydrogen economy and creating export opportunities, whilst supporting entrepreneurship, clean-tech business development, job creation and next generation career development;
3. Supporting Saugeen First Nation (SFN) and other First Nation communities in building capacity towards greater energy self-sufficiency - by developing hydrogen-based on- and off-grid energy systems; and
4. Accelerating the commercial deployment of Canadian-based hydrogen technologies both nationally and abroad - by marketing utility-scale hydrogen production and energy storage technologies.

At the July Planning and Development Committee meeting, staff brought forward the acknowledged need to advance funding to support foundational work that would include an execution plan that builds support, develops a compelling business case and outlines how to fully realize the economic development opportunities within the over-arching framework to advance Bruce County as the Energy Capital of Canada.

To this end, the work undertaken with the help of Ernst and Young has assisted the development of a strong application to the Green Municipal Fund; Feasibility Plan development and a Bruce Innovates Project Overview document necessary to share with potential project funders. See the attached Project Overview for an outline of the submission.

### **Bruce Innovates Update:**

Grant Applications to Support Large Scale Deployment submitted to date:

- Saugeen Sustainability Energy Centre - submissions made to the Low Carbon Economy Challenge Fund (LCEF) - Not successful.
- Underground Storage / Dynamic Electrolyzer - submission made to the Strategic Innovation Fund (SIF) - advanced to stage two, under review.
- An application to NRCan's NICE program submitted for both the SSEC and Storage / Electrolyser initiatives. NICE may not support the specifics of the intended project, so staff are working inside the Ministry with OCNI to find a suitable funding opportunity that acknowledges the connection between nuclear and hydrogen. This opportunity is not an option at this time.
- FCM application to Green Municipal Fund Submitted in August. In stage 1 of review.

Steering Committee, Outreach and Connections:

- The initial areas of focus for foundational projects include four key areas; Synthetic Natural Gas (SNG), Transportation, and Industrial Uses.
- The Committee has engaged one commercial partner and is in discussions with a potential second partner to become members of the Steering Committee and discuss options for potential pilot projects.
- A Communications plan is in the works to connect the Project Overview (attached) with potential funding partners and/or investment partners. These include staff and political members of both the Provincial and Federal government Ministries in addition to outreach to private sector companies and individuals. This plan includes tactics such as video to promote the objectives of Bruce Innovates and the broader goal of positioning Bruce County as the Energy Capital of Canada.
- The project Steering Committee acknowledges there are several interested parties in both the private and public sector that want to support the hydrogen agenda. These individuals are included in the communications / outreach plan.
- A Terms of Reference (TOR) for the Committee was drafted to acknowledge a number of key roles and activities including:
  - o Defining and outlining the vision, purpose and roles of steering committee members.

- Noting founding partners, Bruce County and Saugeen First Nation, and Project Partners. Project Partners engage in specific pilot projects through the various opportunities in transportation, heating and industry.
- Establishment of potential working groups to include Power-to-Gas Working Group, Foundational Large-Scale Infrastructure Working Group and Innovation Centre Working Group.
- Members of the Committee will attend the October 28<sup>th</sup> MaRS think tank event on Hydrogen (providing support to Canada's most promising leading-edge innovators). This collaborative workshop is designed to ignite open dialogue with prospective hydrogen adopters to understand how to enter and develop this new opportunity in energy transition in Canada.

#### **Financial/Staffing/Legal/IT Considerations:**

There are no financial, staffing, legal or IT considerations associated with this report.

#### **Interdepartmental Consultation:**


None

#### **Link to Strategic Goals and Elements:**

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| Goal #6 | Explore alternate options to improve efficiency, service:<br>C. Look for economy of scale or shared services among our departments and our communities |
| Goal #7 | Stimulate and reward innovation and economic development   |

Written by: Jill Roote, Manager of Economic Development, Planning and Development

#### **Approved by:**



Bettyanne Cobean  
Acting Chief Administrative Officer