



Committee Report

To: Warden Janice Jackson
Members of the Executive Committee

From: Mark Paoli
Director of Planning and Development

Date: August 5, 2021

Re: Bruce County Electric Vehicle Initiatives

Staff Recommendation:

The Bruce County Electric Vehicle Initiatives Report is for information.

Background:

In July 2021, the Nuclear Innovation Institute (NII) published the 'Plugging in: Why Bruce, Grey and Huron must prepare for an electric vehicle future' Report. The Report can be found on the [NII's website here](#). The report highlighted the results from a survey of 528 drivers who own electric vehicles (EVs) which asked them about their travel behaviours and the importance of EV charging station availability in deciding where to travel.

The top takeaway highlights in the Report include:

1. More than 83% of respondents believed it is difficult or very difficult to access public charging stations in Bruce, Grey and Simcoe Counties.
2. There are only 45 accessible charging stations in Bruce, Grey and Simcoe Counties.
3. For road trip vacations and weekend getaways, more than 70% of EV drivers stated they would only choose locations and would give preference to locations where they know they can access public charging stations.
4. 42% of EV drivers prefer highway stop locations (Level 3), 36% prefer Level 2 on street charging and 13% prefer overnight charging stations (Level 2 Chargers).
5. Global EV sales are increasing, 3 million EVs were sold worldwide in 2020.

Bruce County Involvement

Since 2017, various projects and initiatives have been undertaken across the organization related to EV charging stations, including:

1. County of Bruce EV Charging Stations:

Beginning in 2017, the Corporation of the County of Bruce purchased and installed two charging stations at County owned buildings (Walkerton Administration and the Peninsula Hub). Additionally, one charging station will be installed at the Bruce County Museum & Cultural Centre and two will be installed at Kincardine Penetangore Hub.

There will be 5 County owned charging stations (10 nozzles) in total by the end of 2021. Member Municipalities have also installed charging stations at their municipal buildings and in their downtowns. A map of the EV charging stations in Bruce County can be found in **Appendix B**. These stations are currently at Level 2 - requiring upwards of 8 hours of charging time. Most visitors are looking for a Level 3 charging station that can do 80% battery capacity within around 30 minutes.

2. Regional Electric Vehicle Charging Network Strategy:

On April 15, 2021, Corporate Services Committee endorsed the Memorandum of Understanding to establish an electric vehicle charging station network strategy with the County of Wellington and the amendment of the 2021 budget to transfer \$5,000 to Wellington County to support the grant application to the Federation of Canadian Municipalities (FCM).

The strategy development will be led by Wellington County but, in addition to Bruce County, includes Grey County, Huron County, Dufferin County, Perth County, Town of St. Mary's, City of Stratford, and the City of Guelph. The Strategy will include a plan to prepare and install a regional electric vehicle charging station network which will bridge the gap between Highway 401, Lake Huron and Georgian Bay. The plan will use a tourism lens to site the stations and encourage tourists to travel to the County with their EV while reducing the 'range anxiety' commonly associated with EV owners and long trips.

The research and data from the 'Plugging in: Why Bruce, Grey and Huron must prepare for an electric vehicle future' Report will be included as support for the Regional Electric Vehicle Charging Network Strategy grant application.

3. Tourism (Explore the Bruce) / Transportation Master Plan:

In 2019, 2.5M visitors travelled to Bruce County spending \$326.7M. As tourism is one of Bruce County's major industries, the NII Report researched visitor's travelling behaviours to Bruce County. The NII's Report can help inform the type of charging station and where the County and Local Municipalities can install EV Charging Stations in Bruce County. The increase of charging stations will encourage more EV owners to consider driving their EV to Bruce County.

It should be noted that the draft Master Transportation Plan (MTP), endorsed in July 2021, will support clean energy for transportation solutions and a move to net zero emissions. In addition to electricity, the County MTP will support hydrogen and recycled natural gas solutions but did not include the sighting of EV charging stations. In addition to electricity, the County MTP will support hydrogen and recycled natural gas solutions. NII's report in conjunction with the outcome of the Wellington led grant application could be incorporated into the TMP's framework.

4. Spruce the Bruce:

The Spruce the Bruce Community Development Review Report will be presented at PDC on August 12, 2021. One of the recommendations is to enhance the program so that it does not solely focus on communities, but to cohesively develop the County as a whole by developing a stream that supports major industries.

Two structural changes will assist in repositioning Spruce the Bruce for the future:

- **Community Stream:** Continuing to encourage mindful and detailed collaboration between Bruce County and the municipalities to maximize the value of all programs supporting the public realm and the private sector, and to eliminate any confusion.
- **Industry Stream:** Enhancing and adding an “Industry Stream” for agricultural, tourism and other priority industry sectors (e.g., affordable housing) to the existing community-oriented stream focusing exclusively on downtown cores, using a sustainability lens.

The Enhance Spruce the Bruce Program will be looking at how the program can support sustainable and net zero emissions initiatives (i.e., EV Station Installations) in both the Community and Industry Stream.

5. Fuel Cell Electric Vehicles

It should be noted that in addition to EVs, Fuel Cell Electric Vehicles will round out the electrification of transportation. An additional solution to reduce vehicular emissions is the development of hydrogen, especially for large vehicles. The Bruce Innovates Foundational Hydrogen Infrastructure Project Feasibility Report shows the breakdown in emissions by various vehicle types and that the larger vehicles emit the most emissions. Specifically, 24% light trucks, 8% freight light trucks, 17% heavy trucks, shows the largest emitters are the heaviest vehicles to electrify. Hydrogen can be considered for larger vehicles such as buses, freight transportation, and industrial vehicles. The use of hydrogen fuel cells in larger vehicles will last longer without having to recharge.

The above initiatives are a starting point in preparation for the increase in EV owners. In the NII report, according to Canada’s Energy Regulator (CER) data by Strategic Policy Economics, by “2035 there could be \$2.8M zero-emission vehicles on the road in Ontario”. It is evident that Bruce County and the region will need to prepare for the transition to EVs by providing the correct infrastructure in the appropriate locations.

Next Steps

The research and data from the NII’s “Clean Energy Frontier EV Report” will help inform the various efforts to transition to clean energy solutions that the County is working on.

In summary, next steps include:

1. Clean Vehicle Strategy - The County's Corporate Services Department is currently collecting information, conducting research on data such as vehicle usage and gas consumption which will help form a County's Clean Vehicle Strategy (for all County owned vehicles).
2. Look at potential enhancements that include a clean energy incentive to the Spruce the Bruce Community Development Program in 2022.
3. Consider including an implementation strategy for EV and other clean energy transportation solutions into the MTP and the supporting policy framework in the new Bruce County Official Plan.
4. Use a clean energy and sustainability lens in 2022-2025 Economic Development Plan (Plan the Bruce: Business).
5. To support the move to clean energy with respect to transportation and other aspects of the County's operations, consideration for the development a clean energy / net zero emission / addressing climate change plan and policy could also be considered.

Financial/Staffing/Legal/IT Considerations:

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

Interdepartmental Consultation:

The Corporate Services Department - the research and data from the 'Plugging in: Why Bruce, Grey and Huron must prepare for an electric vehicle future' report will be included as support for the Regional Electric Vehicle Charging Network Strategy grant application. The Transportation and Environmental Services Department - to include EV Charging stations and other clean energy applications in the County's Master Transportation Plan framework.

Link to Strategic Goals and Elements:

5. Eliminate our own red tape:
 - C. Eliminate all duplication of services and data
 - E. Focus on internal and the external customer/client needs first
7. Stimulate and reward innovation and economic development:
 - D. Vocally support all industry in Bruce County

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