THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF DEVELOPMENT SERVICES

MISSION STATEMENT: Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.

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Author's Phone: 519 736-0012 ext. 2137	**Date to Council: October 23, 2023**
Author's E-mail: mosborne@amherstburg.ca	**Resolution #:**

To: **Mayor and Members of Town Council**

Subject: **Considerations regarding Environmental Advisory Committee recommendation**

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1. RECOMMENDATION:

It is recommended that:

1. Council **NOT APPROVE** the recommendation from the Environmental Advisory Committee as presented, and;

2. Council **DIRECT** Administration to ensure the current Official Plan update includes policies to allow for the introduction of various climate friendly development requirements to ensure the Town is creating the necessary means in which to require these types of investments in development.

2. BACKGROUND:

At the August 16, 2023 Environmental Advisory Committee meeting the following motion was made and approved:

> "Council to DIRECT staff to investigate whether future commercial or residential developments can be mandated to have in place electrical capacity to support access to fast charging stations."

This report is to provide Administrations comments on this motion as presented for Council's consideration.

3. DISCUSSION:

There are generally three types of Electric Vehicle charging stations:

- Level 1:
    - Common residential power source 120V AC outlet (what you use to plug in a toaster or television)
    - For an EV it takes about 40-50 hours to charge to 80% and for a Hybrid 5-6 hours
- Level 2:
    - Generally, a 240V in residential (same as a stove or dryer) or 208V in commercial applications;
    - Common for homes, workplace and public charging
    - For an EV it takes about 4-10 hours to charge to 80% and for a Hybrid 1-2 hours
- Level 3:
    - Electric Vehicle Charging Stations are commonly referred to as “fast charging stations”;
    - They use a 480 volt system and are Direct Current (DC) rather than Level 1 and 2’s which are AC;
    - Generally used at fueling stations and are not recommended for homes;
    - For an EV it takes about 30 minutes to charge to 80%.

It is also important to note that the cost to install a Level 3 charging station is also significantly higher than a level 1 or 2. The cost range for the level 3 infrastructure alone is approximately $100,000 to $150,000. Factoring in the cost of the unit at a range of $40,000 to $175,000 results in cost range of $140,000 to $325,000. The infrastructure for these units is also not compatible with a Level 1 or 2 as it runs on DC not AC.

While gas vehicles have one means of fueling, EV have many types of fueling which are generally installed based on how they best fit with the usage. For examples Level 1 units are generally not seen outside of residential areas as the duration of time for a charge is significant. Level 2 units provide for a reasonable charge which can assist the user in ‘toping up’ on their battery life while shopping or getting a full charge while they are at home or work. Level 3 units are usually found at fueling stations, particularly ones along major high ways, where a driver needs to be in and ‘fueled’ as quickly as possible as well as commercial /industrial sites where fast charging is more of a requirement for their operations rather than a ‘convenience’ for the EV vehicle owner to charge up faster. Level 3 units also pull more electricity from the grid reducing availability for higher demand users such as industrial and commercial businesses.
It is equally important to note that the technology surrounding EV and EV charging stations is rapidly changing.

Chargers installed as recently as 2014-2016 which are still functional are being upgraded as they are outdated to the technology now being used. Solid-state batteries are in development, others are studying sodium as a replacement for lithium, others are studying swappable batteries, etc. Change is inevitable and this can go any number of directions from here. When you consider the EV market is only around 5% of the total market to date, the mandated installation and cost of the infrastructure for a level 3 unit may not be used before it becomes obsolete.

With these factors in mind Administration is not able to support the Environmental Advisory Committee's recommendation as presented. To mandate such infrastructure would likely result in the halt of residential and commercial development in the community as the cost to create the infrastructure would significantly drive up housing costs and reduce commercial business profit margins such that it would not be viable for them to open up in Amherstburg.

Administration does agree that further measures should be taken to encourage climate friendly programs, including EV's as well as well as many others such as solar roofs. Further that those investments should not just be for residential and commercial but for all types of development investment in the community. This is why the work currently being completed on the Official Plan includes a requirement to embed in the OP over arching policy statements on climate friendly investments in development, allowing for flexibility in how and what is required as the landscape and new technology continues to evolve.

Should Council support the recommendation as presented Administration will proceed with investigation of mandating fast charging infrastructure into the Official Plan and Zoning, noting that it would not be recommended by Administration for all of the reasons stated herein.

4. RISK ANALYSIS:

Risks associated with proceeding with the motion as presented have been identified in the discussions section.

5. FINANCIAL MATTERS:

Not applicable.

6. CONSULTATIONS:

Marco Calibani, Project Manager – Renewables & Sustainability – Essex Energy Corporation

7. CONCLUSION:

The specific nature in which the recommendation was put forward is recommended to be amended allowing for more flexibility around climate friendly development options rather than one specific direction which has significant implications if approved.

Melissa Osborne
Director of Development Services / Deputy CAO

Report Approval Details

Document Title:	Fast Charging EV Infrastructure.docx
Attachments:	
Final Approval Date:	Oct 17, 2023

This report and all of its attachments were approved and signed as outlined below:

Tracy Prince

Valerie Critchley

Kevin Fox