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**Subject: COTTFN Comments on the Initial Project Description for the Hydrogen Ready Power Plant Project**

To the Impact Assessment Agency of Canada,

Chippewas of the Thames First Nation is an Anishinaabe Nation located along Deshkan Ziibiing (also known as the Thames River). Our Treaties, Lands and Environment Department welcomes the opportunity to provide comments on Eastern Power Inc.'s proposed Hydrogen Ready Power Plant, which would be located within COTTFN's Traditional Territory.

**Values**

There are several values that guide our comments on the Initial Project Description. These values include:

- Protecting spaces where inherent and Treaty rights are exercised
- Preserving the land, water, and air, including habitats for other species
- Fostering responsible economic development
- Looking ahead for the wellbeing and rights of future generations, including taking actions to adapt to, mitigate, and combat climate change

**Preserving Air Quality**

While the reserve lands are not located near the project, COTTFN has a strong interest in the Nation's entire Traditional and Treaty Territory. In Eastern Power Inc.'s response dated June 29<sup>th</sup> to COTTFN's comments on air emissions, the company stated that "since COTTFN is yet further geographically distanced from the HRPP project (78km east) no, i.e., negligible cumulative impacts would be expected." While there are other First Nations closer who may have a greater interest, Eastern Power Inc.'s response does not demonstrate the full understanding that COTTFN has interests in air quality throughout the Traditional and Treaty Territory.

We acknowledge that Eastern Power Inc. revised their assessments to include federal standards – the Canadian Ambient Air Quality Standards. We urge the IAAC to use the most stringent provincial and federal standards in assessing project impacts.





## **Protecting Ecosystems and Indigenous Rights**

Eastern Power Inc.'s information on species at risk focuses on the site itself. While this is standard, we would like to highlight that the site is located close to the Clay Creek Woodland and Bickford Oak Woods Wetland Complex. Eastern Power does not anticipate any direct impacts to these areas. However, we would like to highlight the significance of these areas, both for ecosystem health and the exercise of Aboriginal and Treaty rights.

The project's EIS was completed in 2012, which is generally considered out of date. Eastern Power has provided rationales as to why the results are still considered valid – that the site has been cleared and managed to prevent the presence of species at risk. However, we do not believe that the information regarding migratory birds is sufficient or reliable. We concur with the Ministry of Environment and Climate Change Canada's (MECCC) comment that additional information should be collected at the appropriate time on the presence of birds at the site. Proper surveillance and mitigation measures for all species at risk will be followed.

## **Combating Climate Change**

Eastern Power Inc. frames the Hydrogen Ready Power Plant as a solution on the path to decarbonizing Ontario's electrical power generation. COTTFN urges the IAAC to take a lifecycle approach when assessing this project. Eastern Power Inc. intends to increase the hydrogen content of its fuel source over the life of the Project. In the beginning, the facility would essentially be a natural gas power plant.

In a letter dated Oct. 7<sup>th</sup>, 2021, the Honourable Todd Smith, Minister of Energy, directed the Independent Electricity System Operator (IESO) to "evaluate a moratorium on the procurement of new natural gas generating stations and develop an achievable pathway to zero emissions in the electricity sector."

Increasing the supply of gas power plants in Ontario would hinder the ability of Ontario and Canada to achieve stated climate targets for greenhouse gas mitigation on science-based timelines. Following Eastern Power Inc.'s Initial Project Description, as the percentage of hydrogen content increases, the power plant's expected greenhouse gas (GHG) emissions would decline, eventually reaching zero if running on 100% hydrogen. According to the Initial Project Description, the plant is assumed to use "blue" hydrogen acquired through autothermal reforming (ATR) with carbon capture and storage (CCS). In this scenario, natural gas is used as a primary feedstock to produce the hydrogen, resulting in byproduct carbon dioxide that must be managed. It is not clear what assumptions Eastern Power Inc. is making about the commercial viability and availability of carbon capture and storage (CCS) to support this project. Downstream impacts from potentially using the carbon dioxide to enhance fossil fuel recovery are also not addressed.





We urge the IAAC to thoroughly assess the energy efficiency and emissions associated with the lifecycle of using hydrogen produced in this manner. How energy efficient is using natural gas to produce hydrogen as a replacement for natural gas? What are the net GHG impacts when considering the cycle of activities involved in the production of hydrogen and the generation of electricity? Peer reviewed analysis published by Cornell University researchers in 2021 demonstrated that blue hydrogen resulted in *higher* GHG emissions than natural gas for producing heat, partly due to fugitive methane emissions and the energy needs of the carbon capture and storage process.<sup>1</sup>

There are alternative ways of producing hydrogen using electrolysis powered by renewable energy sources. In response to COTTFN's concerns on this topic, Eastern Power Inc. responded that "we fully agree and share your concern regarding hydrogen production associated GHGs, i.e., upstream from our use. While we are not hydrogen producers we understand that energy producers and distribution companies are actively working to introduce decarbonized hydrogen."

Despite this statement, the Initial Project Description provides no indication that the supply of hydrogen to the power plant would be "green". If the project is ultimately approved, there must be assurances that (1) the hydrogen content schedule will be adhered to, and (2) the hydrogen will not substantially contribute to GHG emissions through the supply side procurement of natural gas and/or reusing captured carbon dioxide for fossil fuel recovery. In comments submitted to the IAAC, the MECCC noted that "if this schedule [increasing hydrogen content] is not adhered to then this project may potentially impede Canada's ability to achieve its 2030 and 2050 GHG emissions target." We share this concern and additionally urge the IAAC to carefully consider the cumulative impacts of GHG emissions associated with the full lifecycle of this project, including supply side procurement and downstream impacts. The provincial assessment processes are inadequate to conduct this assessment and Ontario's climate commitments are inconsistent with the federal targets.

Thank you for considering these comments. If you require any clarification, please contact the undersigned.

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<sup>1</sup> Howarth, R. W., & Jacobson, M. Z. (2021). How green is blue hydrogen? *Energy Science & Engineering*, 9(10), 1676-1687.

