

PROJECT: SDH COGEN LINCOLN
COMMUNITY ENGAGEMENT: November 29, 2023
MEETING PRESENTATION

Meeting Location: St. David's Hydroponics Ltd
4860 Martin Road
Lincoln, ON
L3J 1H1

Representatives: Toine vanderKnaap, Carolyn Payette
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Introduction of SDH Cogen Lincoln/St. David's Hydroponics Ltd representatives

Purpose of Meeting: To highlight our intended cogeneration expansion project and the economic benefit it brings to our community.

Meeting minutes will be posted on our website following the session. There will be time for questions at the end of the meeting.

Land acknowledgement:

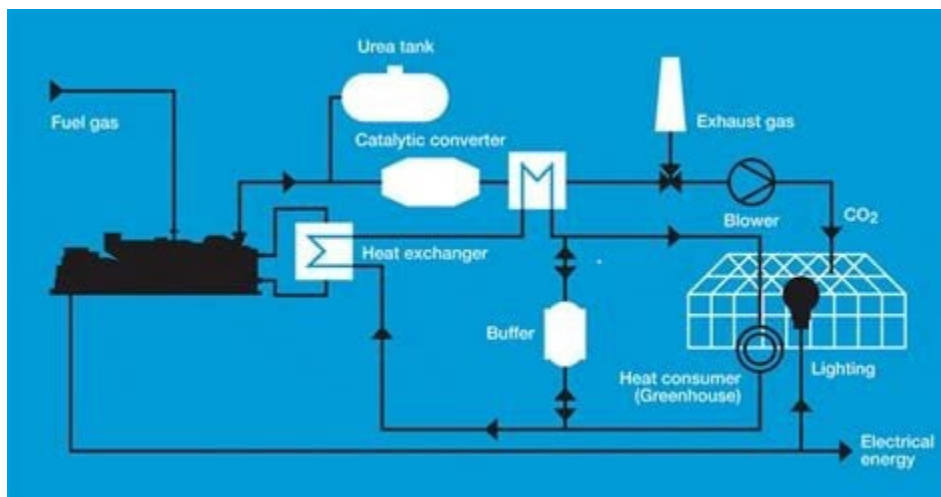
St. David's Hydroponics Ltd located in Lincoln, Ontario is situated on treaty land. This land is steeped in the rich history of the First Nations such as the Hatiwendaronk, the Haudenosaunee, and the Anishinaabe, including the Mississaugas of the Credit First Nation. There are many First Nations, Métis and Inuit peoples from across Turtle Island that live and work in Lincoln and Niagara today. St. David's Hydroponics stands with all Indigenous peoples, past and present, in promoting the wise stewardship of the lands on which we live.

Description of Project:

St. David's Hydroponics Ltd (SDH Cogen Lincoln) together with AB Energy Canada Ltd intends to participate in IESO's Procurement of Long-Term Electricity Reliability Services plan (LTIRFP) to build a cogeneration facility of 10 megawatts in total. This will help support increased electricity reliability to the Lincoln area. IESO is currently looking for 900MW of standby gas generation in Ontario.

Also called combined heat and power, (CHP) is the use of a reciprocating engine to generate electricity and produce useful heat at the same time.

- 1) Electricity-This project will deliver 10 megawatts of power which can be directed to the power grid.
- 2) Heat produced by the boilers and engine system will help to heat our greenhouse, which is both cost effective and environmentally friendly.
- 3) CO₂ generated will be a source for plant fertilization.



"After more than a decade of strong supply, Ontario is entering a period of emerging electricity system needs, driven by increasing demand, the retirement of the Pickering nuclear plant, the refurbishment of other nuclear generating units, as well as expiring contracts for existing facilities. Recognizing the necessity to address these needs in a timely, cost-effective and flexible manner, the IESO has engaged with stakeholders in the development of a resource adequacy framework. As Ontario's electricity system evolves to become more diverse and dynamic, procurement processes must evolve along with it. The

resource adequacy framework published on the IESO's website targets robust competitive processes that focus on cost-effective reliability, while more effectively balancing ratepayer and supplier risk in this changing environment."

At St. David's Hydroponics Ltd, Lincoln, participating in IESO enables us to off-set energy costs and is a source of CO2 for plant fertilization.

Benefits to the Lincoln Community:

Cogeneration in a greenhouse is very environmentally friendly, and will have the capacity to deliver 10 megawatts of energy back to the Ontario power grid, to power 10,000 Canadian homes.

Project Timeline:

In 2026 we plan on installing 3 gas-powered GE-Jenbacher engines. This system also includes heat recovery, exhaust treatment, and noise abatement technologies. This system will create:

- 1) Electricity-Each of the three 20-cylinder engines generates 3.3 Megawatts of electricity, which is directed to the power grid.
- 2) Heat produced by the boilers and Cogen engine cooling system will help to heat our greenhouses in an environmentally friendly and cost-effective manner.
- 3) CO2-A manifold system collects carbon dioxide from the engines and boilers, preparing it to help fertilize the crops in the greenhouse.



Questions and Answers