

VARENNES, QUEBEC, CANADA • 2023

Varennnes: dimming streetlights to help the grid through winter peaks

Varennnes had already converted its streetlights to LED by 2019. In 2023 it partnered with Hilo, Hydro-Québec's demand-response subsidiary, to dim its roughly 900 streetlights to 50% overnight and further during winter peak-demand events.



A residential street in Varennes, Quebec, with its streetlights – photo by Gaétan Veillette, CC BY-SA 4.0

PUBLISHED OUTCOMES

900

LED STREETLIGHTS ON THE DIMONOFF |
SCMS DIMMING PILOT [➤](https://www.ville.varennescq.ca/actualites/hilo) ([HTTPS://WWW.VILLE.VARENNESCQ.CA/ACTUALITES/HILO](https://www.ville.varennescq.ca/actualites/hilo))

50%

OVERNIGHT DIMMING LEVEL FROM SUNSET
TO SUNRISE, SINCE JANUARY 25, 2023 [➤](http://lareleve.qc.ca/2023/02/15/900-lampadaires-de-rue-a-varennesc-contribueront-a-leconomie-denergie/)
([HTTP://LARELEVE.QC.CA/2023/02/15/900-LAMPADAIRES-DE-RUE-A-VARENNESC-CONTRIBUERONT-A-LECONOMIE-DENERGIE/](http://lareleve.qc.ca/2023/02/15/900-lampadaires-de-rue-a-varennesc-contribueront-a-leconomie-denergie/))

The situation

Varennesc had already converted its street lighting to LED by 2019, and had the remote dimming capability sitting unused for anything beyond routine energy savings. When Hydro-Québec's demand-response subsidiary Hilo began running winter peak-demand challenges, asking large consumers to cut load during the coldest hours, the City saw an asset most municipalities do not think to offer: a lighting network it could dim on command.

What was deployed

Starting January 25, 2023, Varennesc set its roughly 900 LED streetlights, managed on Dimonoff | SCMS, to dim to 50% of full output every night from sunset to sunrise, with a further reduction from 6 a.m. to sunrise and from sunset to 9 p.m. specifically during Hilo peak-demand events. The City became the first to participate in Hilo's challenges using its street lighting rather than building or HVAC load, a use of the asset that has nothing to do with the original reason it was converted.

Why it matters for your network

Varennnes is the grid-support case: proof that a lighting network built for energy savings and maintenance visibility has a second, unrelated value once it can be dimmed on schedule and on demand. If your utility runs or is considering a demand-response program, a remotely dimmable lighting network is an asset you likely already have and have not yet offered.

Every kilowatt-hour saved or shifted during peak periods counts! Reducing non-essential consumption is the most effective way to ensure grid support.

Sabrina Bouchard, Manager, Energy Products and Business Development, Hilo [\(https://www.dimonoff.com/resources/case-studies/controlling-varennnes-municipal-lighting-power-grid-requirements/\)](https://www.dimonoff.com/resources/case-studies/controlling-varennnes-municipal-lighting-power-grid-requirements/)

DEPLOYMENT

Platform	Dimonoff SCMS remote lighting management
Baseline dimming	50% of full output, sunset to sunrise, year-round
Peak-event dimming	Additional reduction 6 a.m. to sunrise and sunset to 9 p.m. during Hilo challenges
Grid partner	Hilo, a Hydro-Québec subsidiary

PARTNERS

- Hilo (Hydro-Québec)
- Fédération québécoise des municipalités

SOURCES

- Ville de Varennes – Grâce à ses lampadaires, Varennes devient la première ville à participer aux défis Hilo (<https://www.ville.varennes.qc.ca/actualites/hilo>)
- La Relève – 900 lampadaires de rue, à Varennes, contribueront à l'économie d'énergie (<http://lareleve.qc.ca/2023/02/15/900-lampadaires-de-rue-a-varennes-contribueront-a-leconomie-denergie/>)
- Dimonoff – Controlling Varennes' Municipal Lighting to Support the Power Grid Requirements of Hydro-Québec (<https://www.dimonoff.com/resources/case-studies/controlling-varennes-municipal-lighting-power-grid-requirements/>)