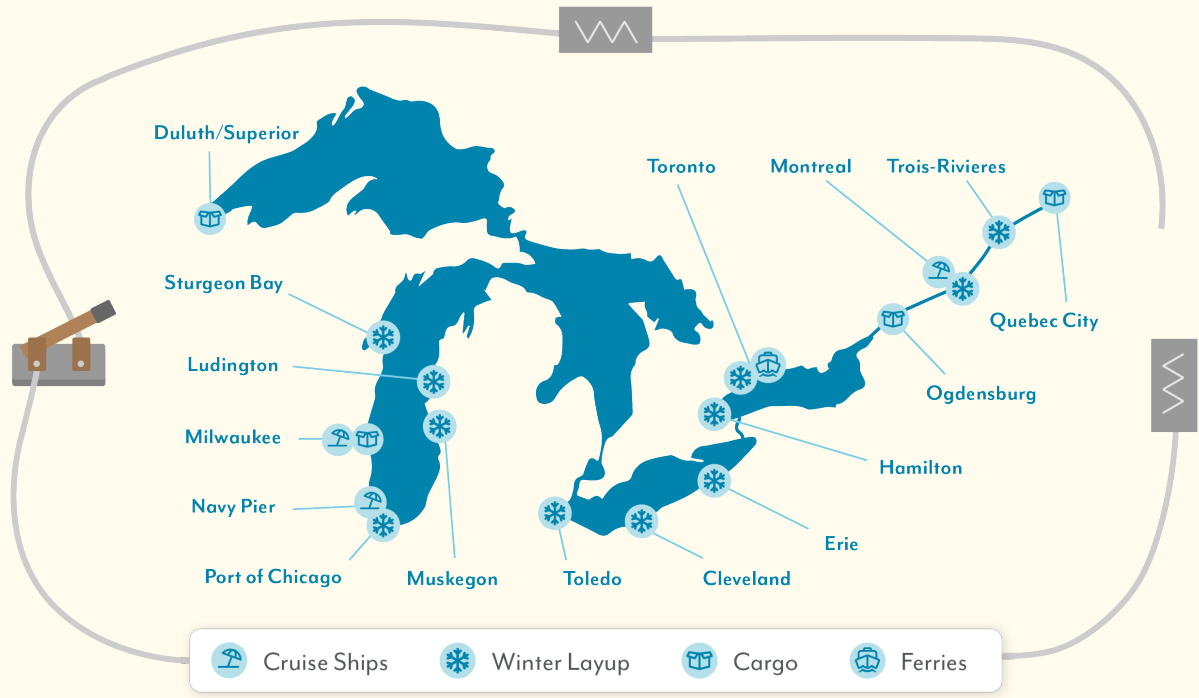


# THE “GREAT LAKES ST. LAWRENCE CIRCUIT”

## Electrification Opportunities for the Regional Maritime System



The Great Lakes St. Lawrence region is developing a diverse mix of fuel and power options to help its maritime industry meet environmental and efficiency goals. As illustrated in the graphic above, shoreside electrical power is already in use in many locations and for different purposes. Shore power provides ships a way to connect to the municipal power grid when in port, operate with zero on-site emissions, and effectively meet vessel power needs. Regardless of the type of power plant, electricity derived from the municipal grid is almost always a “greener” option than running a ship’s onboard generators. A grid connection also opens the door for ships to connect to renewable energy sources (wind, hydroelectric, etc.).

As shore power and onboard technology continue to develop and grow, a number of factors make some ships operating on the Great Lakes and St. Lawrence particularly strong candidates for electrification. Most notably are ships with predictable routes and those with relatively short distances

between their ports of call. These characteristics particularly apply to cruise ships. Almost all the ports currently offering shore power provide either the US (480v, 3-phase) or Canadian (600v, 3-phase) standard, which presents an opportunity for ports to expand their plug-in services to other types of activities in the future. Of course, not all ships can currently access all the benefits of shore power, which itself is a nascent technology on the Great Lakes. Shore power installations are capital-intensive, and the provision of new hookups will require collaboration between governments, shipowners, utility providers, ports, and private terminals.

The Great Lakes St. Lawrence Governors & Premiers are actively working to support the region’s maritime system to meet its power needs in an environmentally responsible way. The Governors and Premiers continue to evaluate how electrification can deliver power to ships for the entire region’s benefit.

*\*Graphic informed by a 2021 survey of 33 ports conducted by GSGP*