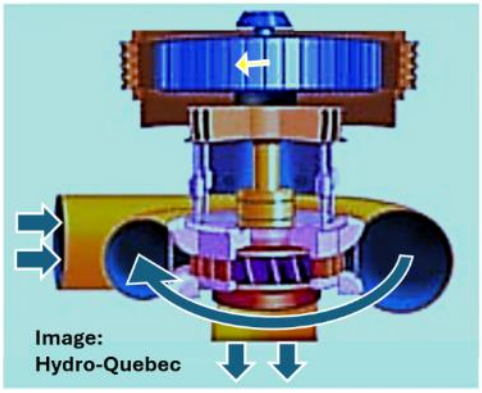


Start with hydropower... **Convert and distribute...** **And propel EV buses !**

Montreal Chalmerists have amazing power!

Welcome to our annual meeting June 4-7 2026, in Montreal, Quebec, Canada! Big thanks to our great onsite committee - Anders Folkesson E85, Helene Gamner V93 and Michael Otterstedt D03.

Hotel: Hilton Garden Inn Montreal Centre-ville, 4-star , 380 Sherbrooke St. west. Near rides, eating and fun. 37 stories, lower 11 is hotel. See booking details in the program.

Our technical theme this year is "Power". While there, you may want to take a ride on a **water powered bus!** *Yes, that is true!* The Quebec province has a natural asset of energy rich rivers and lakes. **94% of Quebec's energy comes from hydro power stations.** 5% is windpower and 1% others. New projects increase all renewables. We will tour the gigantic **Beauharnois 36-turbine, 1.9 GW Hydro-Quebec station**. It was built in the 1930's and expanded in size up to 1962.

Conversion and distribution of electric power is an energy bottle neck. We will visit **Hitachi Energy**. Need to keep long distance transfer effective by ultra high voltage - like 800 kV. Using huge transformers and turning AC to DC - or back.

At Nova Bus, you will see a great examples of new thinking of electric transport. Montreal has 4 million people where public transportation is critical. Nova Bus , a subsidiary of Volvo AB, has launched a large scale upgrade fleet to all-electric urban transport. This is a very dynamic company!

The Swedish National Day, Saturday June 6 will be celebrated in our Gasque. Heja Sverige! Further meeting info and registration will be emailed to all on our mailing list. See also our Chalmers Alumni USA-Canada website *Chalmersalumni.org* .

SHORT PROGRAM

Thur 6PM – Peasoup, Pancakes & Punsch (details to be announced)

Fri 8:15 AM – transport to Hitachi Energy
9:00 AM – 12 noon - Hitachi Energy
12:45 PM – Lunch at Nova Bus
1:30 PM - Nova Bus corporate presentation
3:00 PM – Open for our own presentations
4:00 PM -Transport back to inner city
6:00 PM -Beer & eats – 3 Brasseurs McGill

Sat 8:00 AM – Leave hotel for Hydro Power visit
9:00 – 10:30 AM Beauharnois Hydro station
11:30 Open lunch
1:00 PM Mosaic Culture Parc Jean Drapeau
4:30 PM – Transport to hotel
7:00 PM – Powerful Gasque (to be announced)!

Sun 10:00 AM – Formal Annual Meeting
Afternoon open for discovery
Sun 7:00 PM – Good-bye dinner at our hotel

Hejdå, vi ses i Montreal!
Åke Hellström F69 – Event Manager
ahellstrom@chalmersalumni.org +1 614 495 7312

Program details

Welcome to Quebec, the province with the most power in the natural water system. This has placed the province high on the list of natural self supporting energy and even exporting electric power. Montreal latitude is same as southern France. But feels often like Sundsvall.

Daily temp in Montreal early June is noon 23C / 73F and night 12C / 53 F. A light coat is useful.

Winters may get heavy snow like Feb 2025. …. **But we can stay under our Olympic size hat**!

Our hotel:

Hilton Garden Inn Montreal Centre-ville, 380 Sherbrooke St. West, tel: +1 514-840-0010. - Our **Centre-ville hotel** is located in the central city area full of attractions, transport and services. Rates : **King -CAD 285 = USD 208**, **or Queen x2 beds -CAD 290 = USD 212** , **incl all tax and fees.**

Booking Link:
https://www.hilton.com/en/book/reservation/deeplink/?ctyhocn=YULCVGI&groupCode=700&arrivaldate=2026-06-04&departuredate=2026-06-08&cid=OM,WW,HILTONLINK,EN,DirectLink&fromId=HILTONLINKDIRECT

Cancellations – If booked more than 21 days before arrival:
We can cancel or reduce the booking up to 21 days before arrival with no fees.
After this cut-off, rooms that have reservations are confirmed; any other rooms are released at no charge.
Cancellations - Booked less than 21 days before arrival:
We have 48 hours from booking to make their reservations. Rooms not reserved within this time are released

Airport travel – "747 bus" to our hotel …$11.25 CA$ / pers, 24 hr valid pass, 45…70 minuutes
Uber or Taxi – CA$ 40-50, 45 min. Rental car – US$ 160…300+ for 4 days

Event travel –Hotel to Hitachi , 30…40 min , CA$ 45….80 . Hitachi – Nova Bus 48 min, CA$ 50-80 **Nova Bus to hotel** , 40 min, CA$ 48, Hotel to Beauharnois hydropower – 45 min, CA$ 55…70

Beauharnois to Parc Jean Drapeau 40…65 min, CA$ 50…70 . ….*Thursday*
Peasoup, and Saturday Gasque locations – To be announced

Hitachi Energy's Varennes Transformer Factory

1600 Blvd Lionel-Boulet, Varennes

Powering North America's Grid

Hitachi Energy's high-voltage transformer factory just north of Montreal in Varennes, Quebec, is one of North America's most critical sites for large power transformer production. Built in 1971 to support the North American market and "especially the Hydro-Québec utility," the facility has since produced more than 2,250 power transformers and nearly 400 shunt reactors, equipment that "transmit power from generating stations to thousands of homes and businesses" across the continent.

Located at 1600 Bd Lionel-Boulet, the plant is the only facility in North America capable of manufacturing transformers up to 1,200 MVA and 800 kV, and it is a global leader in HVDC transformer technology. It also holds CSA N299 nuclear-grade certification, serving major clients such as Hydro-Québec and Bruce Power.

The site is currently undergoing a major $410 million CAD expansion supported by the governments of Canada and Quebec. This investment includes a new manufacturing building and a 130,000-sq-ft testing and certification laboratory that will allow "immediate on-site verification and customer acceptance," eliminating the need to ship units to Hydro-Québec's IREQ lab. The project will create roughly 500 new jobs at the plant and 70 specialized positions tied to the new lab, with full operational capacity targeted for 2032.

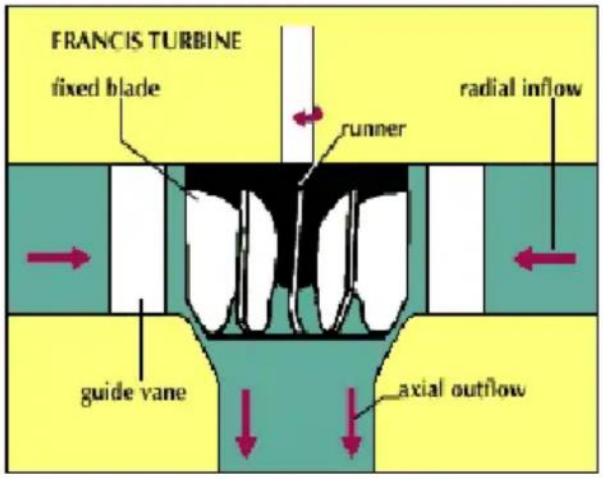
As part of the Chalmers Alumni Meet 2026 in Montreal, participants will visit the Varennes factory, which has long complemented Hitachi Energy's Ludvika, Sweden facility. This visit offers a firsthand look at a site that has played a central role in North America's grid development for over five decades and continues to expand its capabilities to support clean-energy integration and long-distance transmission.

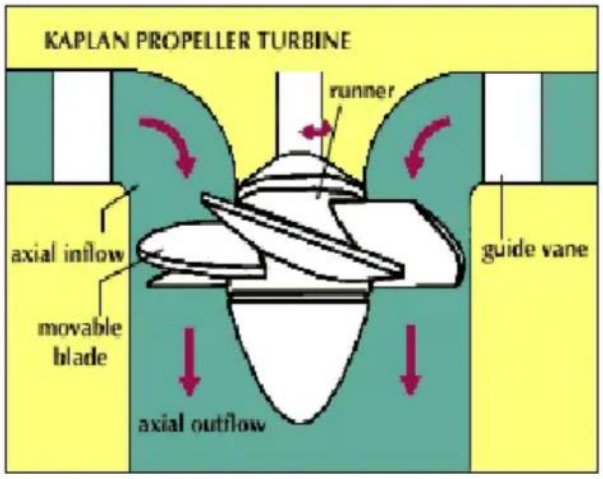
Beauharnois Generating Station

80 Boul de Melocheville, Melocheville

The Beauharnois Generating Station is a massive, long, hydroelectric plant on the St. Lawrence River south of Montreal, operated by Hydro-Québec. It features 36 turbine generators with a total capacity of over 1,850 MW— enough for 400,000 homes.

- 36 Generators, each with 300-ton rotor.
- 26 Francis turbines plus10 propeller turbines
- Structure: 926 meters long, featuring Art Deco architecture.
- Water source: 24.5 km long canal, diverting water from lake
- Flow Rate total 8,200 m3 / sec.
- Construction stages: 1929–1932, 1948–1953, and 1956–1961





Nova Bus factory 1000 Bd Industriel, Saint-Eustache

Inside the Engineering Driving Québec's Leading Bus Manufacturer

In an era where cities worldwide are racing to electrify public transit, Québec-based **Nova Bus** has emerged as one of North America's most influential engineering powerhouses. Nova Bus is a real-world study in **systems integration**, **energy storage**, **manufacturing automation**, and systainable **transport.**

From Diesel to Electric: A Systems Engineering Shift

Over the past decade, Nova Bus—a member of the Volvo Group—has undergone a transformation from primarily **diesel platforms hybrid, battery-electric, and hydrogen-ready** vehicles. Its flagship electric model, the **LFSe+**, has become a reference point in system-level engineering design. **Key strategies:**

- Long-range battery architecture built around NMC (nickel-manganese-cobalt) chemistry
- Redundant high-voltage systems designed for urban reliability
- Regenerative braking calibrated for dense city traffic
- Lightweight composite structures that reduce energy consumption

One of Nova Bus's competitive advantages is its familiarity with harsh northern climates.

- Extreme cold-start performance
- Anti-corrosion materials resilient to salted winter roads
- High-torque drivetrains for hilly, icy routes
- Heating systems optimized for energy efficiency in EVs

These considerations form part of what engineers refer to as "**climate-responsive design"**

Connected Buses: The Rise of Software and Telematics

Modern public transit vehicles are as much rolling computers as they are modes of transportation. Nova Bus integrates telematics and predictive maintenance systems capable of:

- Monitoring battery health
- Analyzing real-time vehicle load
- Predicting component failure before it occurs
- Optimizing routes based on energy efficiency

NOW REGISTER for our Montreal meeting 2026. Already done?

https://forms.gle/DPuGeMC3ZxU7i7oa6

BOOK YOUR ROOM It is important that you book it now and not too late. – We may lose your room! Did you already reserve a room? Here is the link

https://www.hilton.com/en/book/reservation/deeplink/?ctyhocn=YULCVGI&groupCode=700&arrivaldate=2026-06-04&departuredate=2026-06-08&cid=OM,WW,HILTONLINK,EN,DirectLink&fromId=HILTONLINKDIRECT

NOW BECOME A MEMBER! Chalmers Alumni Association connects you to our dear Chalmers again, shares Chalmers research news , the great AVANCONS magazine , reports, connect you with other alumni. Help with meetings and fun. Only US $ 60 / yr! Click for membership. Not mandatory for Montreal but please be a member!

https://docs.google.com/forms/d/e/1FAIpQLSddbFJVGO9rNO4y756x6PzEfeAu0oT1qj4DGXcCYrMKT9AMAw/viewform

WEBSITE: https://chalmersalumni.org

Any questions or comments? Contact Åke Hellström F69

+1 614 495 7312 (Columbus, Ohio, -Ret. ABB)

akehellstr@gmail.com

ahellstrom@chalmertsalumni.org

*N*ow practice bending your arm and shouting a 120 dB ***CHALMERS SKÅL****!*

Ake Hellström

CHALMERS ALUMNI ASSOCIATION USA-Canada

Keeping the Chalmers spirit alive and thriving among Chalmers graduates in North America!