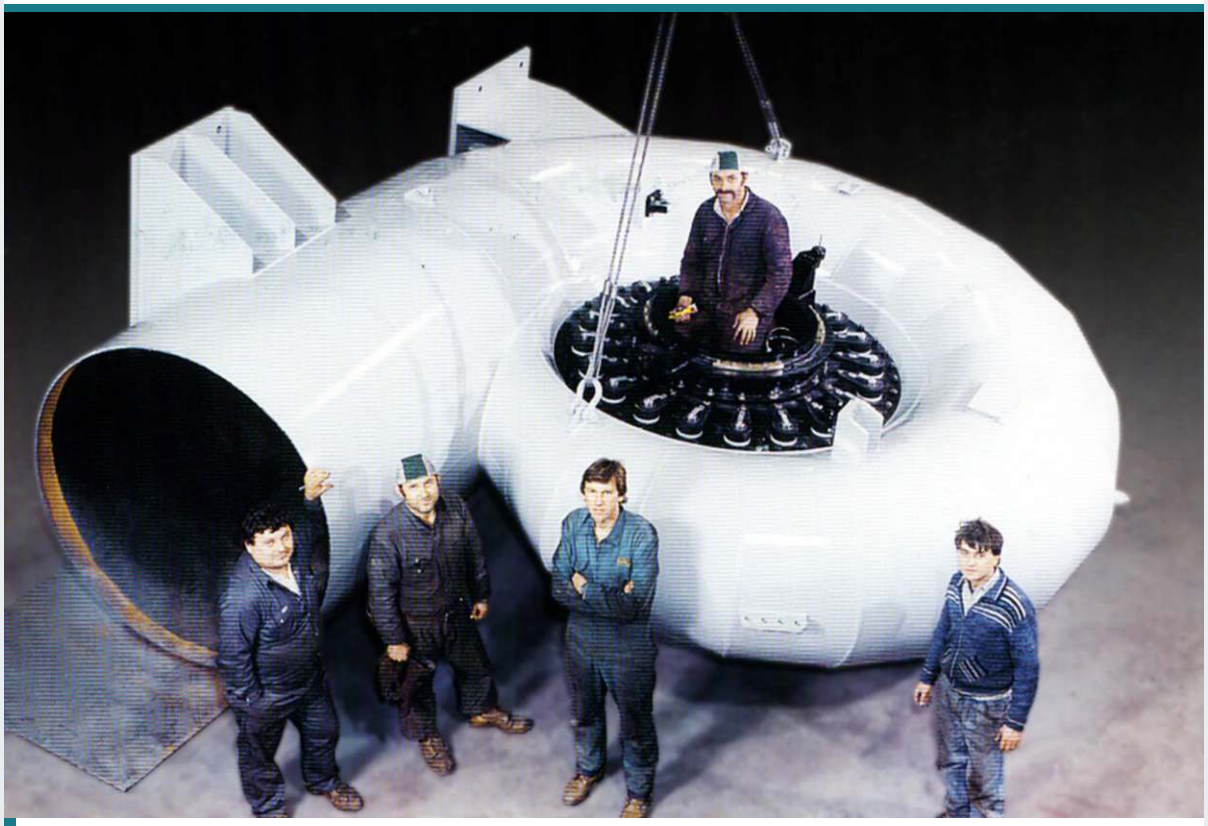
KUBES STEEL

VOLUME 1 · ISSUE 14 FALL 2026



THE QUIET GIANT

While Everyone Chases Nuclear and Defence, Hydro Keeps the Lights On.

Canada’s hydro fleet is the quiet backbone of the economy — and it’s old enough that the work is already on the calendar.

Nuclear and defence get the headlines, and for good reason. But more than 60 percent of Canada’s electricity still comes from moving water. The photograph above was taken in our shop decades ago: a crew standing around a turbine scroll case. Hydro has been part of our work for many decades, and the industry has been quietly busy the whole way through.

THE GIANT, IN NUMBERS

60%+
OF CANADA'S ELECTRICITY COMES FROM HYDRO

600+
HYDROELECTRIC FACILITIES COAST TO COAST

82,000+
MEGAWATTS OF INSTALLED CAPACITY

130,000
JOBS SUPPORTED, $35B+ ADDED TO GDP EACH YEAR

Source: WaterPower Canada. Job and GDP figures are approximate.

Hydro is also why provinces like British Columbia, Manitoba, Quebec and Newfoundland and Labrador can offer some of the lowest electricity rates in the country. Cheap, reliable power is a manufacturing input in its own right, and it shapes where industry chooses to build. It is a giant, and it is quiet: no ribbon cuttings, few headlines, and a fleet that mostly just works.

THE FLEET IS OLD. THE WORK ISN'T OPTIONAL.

53
YEARS, ON AVERAGE

Industry estimates put the average age of Canada's hydro plants at about 53 years. Many are far older. Sir Adam Beck 1 on the Niagara River first went into service in 1922, and in 2025 Ontario Power Generation began environmental screening to refurbish three of its units.

A 53-year-old plant isn't failing. It is being kept alive, and that means turbines, generators, bearings and the heavy steel around them get taken apart, refurbished and put back, one unit at a time. From the outside the cycle is nearly invisible. From inside the supply chain, it never really stops.

WHY HYDRO MOVES WHILE OTHER SECTORS WAIT

01

02

03

EXISTING ASSETS

Refurbishing a station that is already there generally clears lighter approvals than building a new one. Ontario, for example, has a screening process designed for retrofits and refurbishments at existing facilities.

PROGRAMS IN MOTION

Utilities plan refurbishment in multi-year programs, and many are structured as long-term agreements with equipment suppliers. One Ontario framework runs 15 years and covers up to 25 units.

AN AGE THAT WON'T WAIT

At 53 years on average, maintenance isn't a policy debate. Units come out of service in planned outage windows, and those windows are fixed long before anyone hears about the work.

TWO HONEST QUALIFIERS

"Lighter" isn't "none." Work that adds capacity does get reviewed. BC Hydro's proposed sixth unit at Revelstoke, for example, went through a full environmental assessment.

Fast approvals aren't an open door. Because so much of the work sits inside long-term programs, a fabricator's way in is usually through the equipment suppliers and Tier 1 contractors who hold those programs. It is the same lesson as the defence issue: the time to be known is before the purchase order.

AND A NEW-BUILD WAVE ON TOP OF IT

- **Hydro-Québec.** Its Action Plan 2035 targets 8,000 to 9,000 MW of new capacity by 2035, backed by well over $150 billion in planned investment. Desjardins notes that the hydro portion leans heavily on refurbishing and rehabilitating existing works rather than only building new dams.
- **British Columbia.** BC Hydro's 1,100 MW Site C finished commissioning all six generating units in 2025, a reminder that large hydro projects still get built in Canada.
- **Labrador.** A framework agreement announced in August by Newfoundland and Labrador, Québec and Ottawa would add a 2,700 MW station at Gull Island and upgrade Churchill Falls, with up to $10 billion in federal financing and support. As of this writing it is not yet binding; final agreements are targeted for year-end. This one is worth watching rather than counting on.

THE RIPPLE: WHAT A HYDRO DOLLAR BUYS IN MANUFACTURING

INSIDE THE STATION

Every generating unit is a catalogue of heavy fabrication: scroll cases and draft tubes, penstocks and gates, liners and

BEYOND THE STATION

Low-cost, reliable power is a competitive advantage for any manufacturer. Quebec's aluminum smelters in Saguenay–Lac-Saint-

embedded parts, bearing housings, service platforms, lifting rigs.

Around each of those sits the same ecosystem we described in Issue 9: machine shops, painters, heat treaters, inspection firms, riggers and heavy haulers.

Jean run on hydro, and more of industry — mining, metals, processing — is looking to electrify.

Every one of those plants is also a steel customer. The ripple goes a long way past the powerhouse.

FROM OUR SHOP FLOOR: THEN AND NOW

THEN · DECADES AGO

Decades of Hydro Experience

The photograph at the top of this issue shows our crew with a turbine scroll case, the spiral steel casing that carries water into the turbine. We have been building for hydro for many decades, and the crew around it is part of that history. The tools, the safety practices and the paperwork have all moved on since. The craft of making heavy steel fit has not.

NOW · CURRENT HYDRO WORK



SERVICE PLATFORM

A large circular platform that gives crews safe access to the machinery during maintenance. It is heavy plate, formed and welded to close tolerances, with openings cut for every access point.



TURBINE GUIDE BEARING

The heavy fabricated frame that holds the turbine shaft in line. Accuracy here is the difference between a smooth-running unit and a vibrating one.



BEARING HOUSING ASSEMBLY

The housing that carries the weight and rotation of the shaft. Large, ribbed and flanged, finished and ready to be bolted into a unit.



SERVICE LIFTING DEVICE

The purpose-built rig that lets a crew lift heavy rotor and stator components out of a unit and back in. Refurbishment depends on the tooling as much as the parts.



SLIDE BEARING SLIDES

Precision slide components for large bearings, fitted with wear pads and loaded for delivery. Heavy steel, handled carefully.

WHAT IT TAKES TO WORK IN HYDRO

Hydro work isn’t high volume. It is high consequence. A refurbished unit has to fit the machine it came out of, on the day the outage window closes. That rewards a particular kind of shop:

- ✓ **Dimensional accuracy** on large welded and machined assemblies
- ✓ **Heavy handling** — crane capacity, rigging experience, careful shipping
- ✓ **Documentation** that stands up to a utility’s quality requirements
- ✓ **Schedule discipline** — if the outage window is fixed, the steel arrives before it opens

✓ **Partners you trust** — the ecosystem that surrounds every job, as described in Issue 13

The Lights Stay On Because Somebody Does the Unglamorous Work.

Nuclear and defence will keep making news, and they deserve the attention. Hydro will keep making electricity, and the fleet that makes it will keep needing heavy, precise steel work for as long as there are rivers and plants to maintain.

Both waves can be true at once. The shops that do well in the next decade will be the ones that notice the quiet one too.

Refurbishment Work That Needs Heavy Precision?

If a scope includes heavy plate fabrication, rolling, bending or machined assemblies, we would be glad to talk. Our shop is busy right now, so earlier conversations are better conversations.

START A CONVERSATION →

1-877-327-8357

Sources: WaterPower Canada (sector size, jobs and GDP); Hydro-Québec Action Plan 2035 and Desjardins Economic Studies; BC Hydro (Site C); Ontario Power Generation (Sir Adam Beck 1 screening notice, 2025); BC Environmental Assessment Office (Revelstoke Unit 6); Government of Newfoundland and Labrador (Churchill Falls and Gull Island, August 17, 2026).

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