

Hydro-Québec's Production Profiles: Update, August 2025

Overview

Doug May

Is the Noose Continuing to Tighten on Hydro-Quebec?

- Electricity generation by HQ continues to fall. Down **8.4%** July 2025 to July 2024 or over **15%** since July 2022.
- Hydraulic turbine power in Quebec, the primary source of electricity **(>90%),** is down **10.6%** and **18.4%** over the same periods due to **drought**.
- Quebec **must** import electricity to meet its own domestic needs. This **need** is the greatest in January and February.
- **But** in the first **8** months of 2025, production was up about **4% compared with** the same period last year. It looks as though Quebec continues to import beyond its needs in winter (Dec-Feb) to export power to the USA at high prices.
- To answer the question in the title, we have to examine the entire year.

- In many recent months, even with the **import electricity** from Churchill Falls, electricity supply and demand for Quebec almost meet. **There's no breathing room**.
- Since meeting domestic demand is a **necessity**. In the short- and medium-term, Quebec must **curtail** exports and **increase** imports.
- Churchill Falls, the main source of imported power in Quebec, has reached its limits in exporting to HQ. The solution for HQ is turning to its traditional **export** markets in the USA for **imported** power.
- HQ's imported power from the USA is **much more** expensive than its imported power from Churchill Falls (CF)!
  - The MOU proposes a price of **1.63¢/kWh** for 2025. During the first half of this year, Quebec imported power from the USA at **7.56¢/kWh**. Cheap power from CF helps HQ to deliver cheap power to its households and industries.

Prices

- HQ has acknowledged that the reason why its electricity to households is the cheapest in Canada, is its access to very cheap hydro power. About **15%** this power traditionally comes from Churchill Falls. The current relative importance is publicly unknown, as far as I am aware.

- When imported power from CF provides surplus (beyond Quebec's needs) power to Quebec, HQ can **export** the surplus to the USA.
  - This situation occurred in Q1 2025. The average price of electricity HQ obtained was **16.59¢/kWh.** This price is about 10X the power price offered in the MOU. Note that HQ uses the profits from these export sales to **subsidize** its domestic prices, helping keep them amongst the lowest in Canada.

- There is reason to believe that CF power is generally the cheapest power available to HQ. CF is an older generating station, the Henri Bourassa (HB), and HB has to pay water royalties to Quebec, which are far higher than those paid by CF(L)Co to the Government of Newfoundland and Labrador.

Does the Drought Affect Water's Value?

- Yes, it does in two ways.
  - As water becomes **scarcer**, like any resource, its value increases.
  - As HQ has to increasingly turn to the USA markets for electricity, its costs keep rising because its US suppliers rely on more expensive natural gas-fired turbines. This increases the **differential rental** value of water.
  - Since CF depends on water to drive its hydraulic turbines, the value of the water in the Smallwood Reservoir implicitly increases. It's likely that the GNL (Government of Newfoundland and Labrador) does not capture this.
  - Quebec does a better job since the water royalty rate is set annually at the beginning of each year.

Water Reservoirs as Natural (Green) Storage Batteries.

- The demand for electricity varies throughout the day and over the year. In the Northeastern US and Canada, demand is the highest in the winter months. The pricing of electricity in competitive markets reflects this.
  - The Guaranteed Winter Availability Contract (GWAC) of CF(L)Co acknowledges this. Based on the 2004 contract, the price of CF power under this contract is 5.6¢/kWh
- The Smallwood Reservoir may be North America's greatest storage battery for electricity! Since the explicit and relatively fixed costs of hydroelectric power, given high seasonal prices in the winter, it's best to use the reservoir to generate power then.

Some questions for HQ

- When did HQ realize that they had a serious problem due to climate change?
- Are the reservoirs in Quebec maintaining their capacity?
- Is HQ or NLH able to predict reservoir capabilities over the next five years?
- If water levels are falling and electricity production is erratic from month to month but has not increased over the past eight years, what are the alternative sources in the short term?
- Are the infrastructure projects outlined in the MOU the only longer-term solution to HQ's increasing domestic electricity deficit?

The Bottom Line

- In the last two years, Quebec could have just met its own needs by reducing its exports. The reason for this situation is its very heavy reliance on hydroelectric power, which has been reduced by drought.
- Quebec **must** "import" power to meet its needs. The ideal long-term solution for Quebec is to increase its imports of very cheap, stable, **secure** power for as long as possible. Quebec is relying on traditional sources, namely the Churchill River and CF, to **subsidize** and support its lowest electricity prices in Canada. This is a sensible strategy for HQ and Quebec. Does this process make sense for Newfoundlanders and Labradorians? That's the question.
- *Note: Statistics Canada has designated power from CF as an export from NL and an import into Quebec. HQ tends to consider CF electricity as its own production (not an import) since it owns 34.2% of CF(L)Co, and CF is viewed as primarily delivering power to Quebec.*

Interested in The Evidence?

Follow this link:

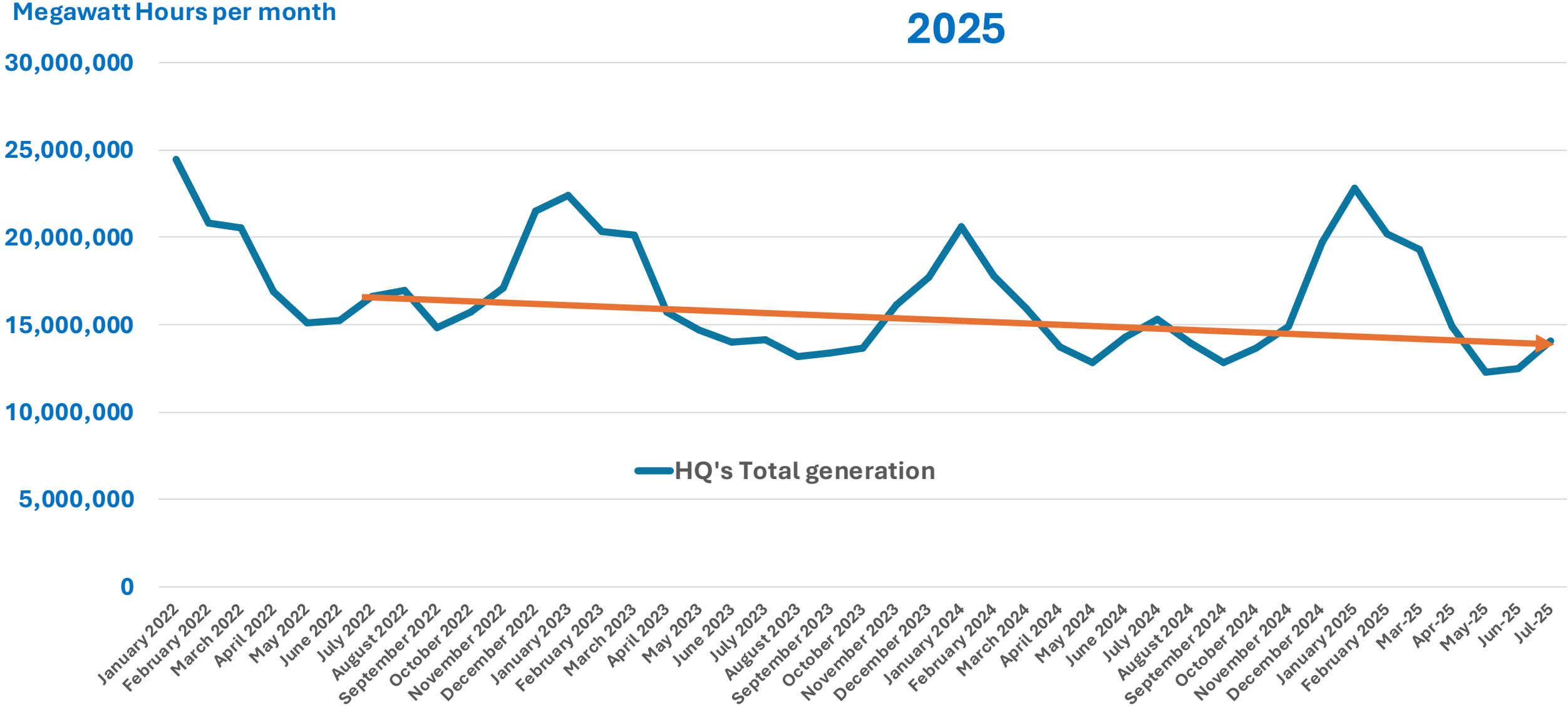


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The Statistical Evidence

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HQ’s Monthly Domestic Production , January 2022- July 2025

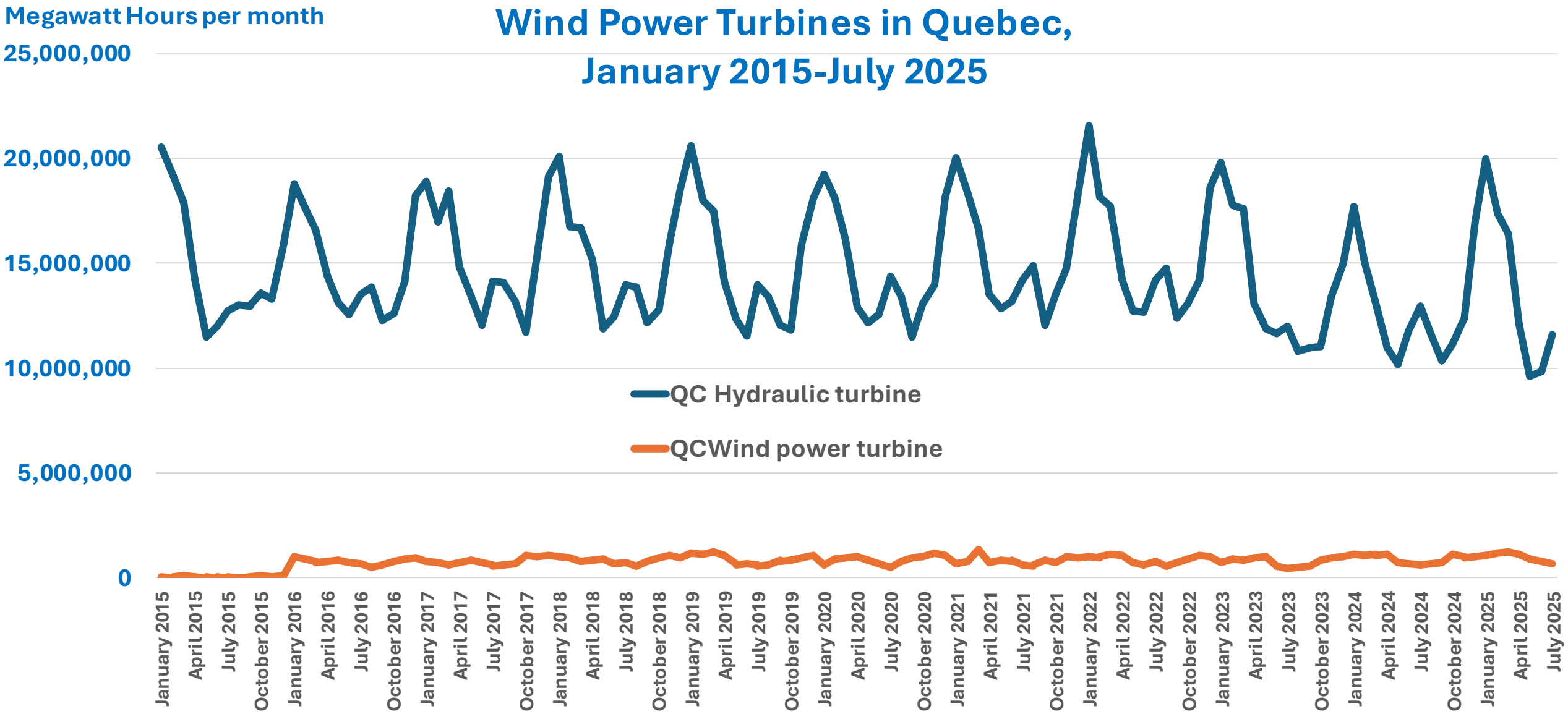


Source: Statistics Canada, Table 25-10-0016-01

Talking Note (TN) 1

- HQ's Quebec production in July declined by **8.4%** from the same month a year earlier and over **15%** over the past three years.
- Note the seasonal pattern. Hydroelectricity is well-positioned to meet this pattern, as reservoirs act as giant storage batteries. Unlike gas turbines, costs do not typically increase as more water is used from one season to another.
- CF likely has a similar production pattern.

Monthly Production of Electricity by Hydraulic and Wind Power Turbines in Quebec, January 2015-July 2025



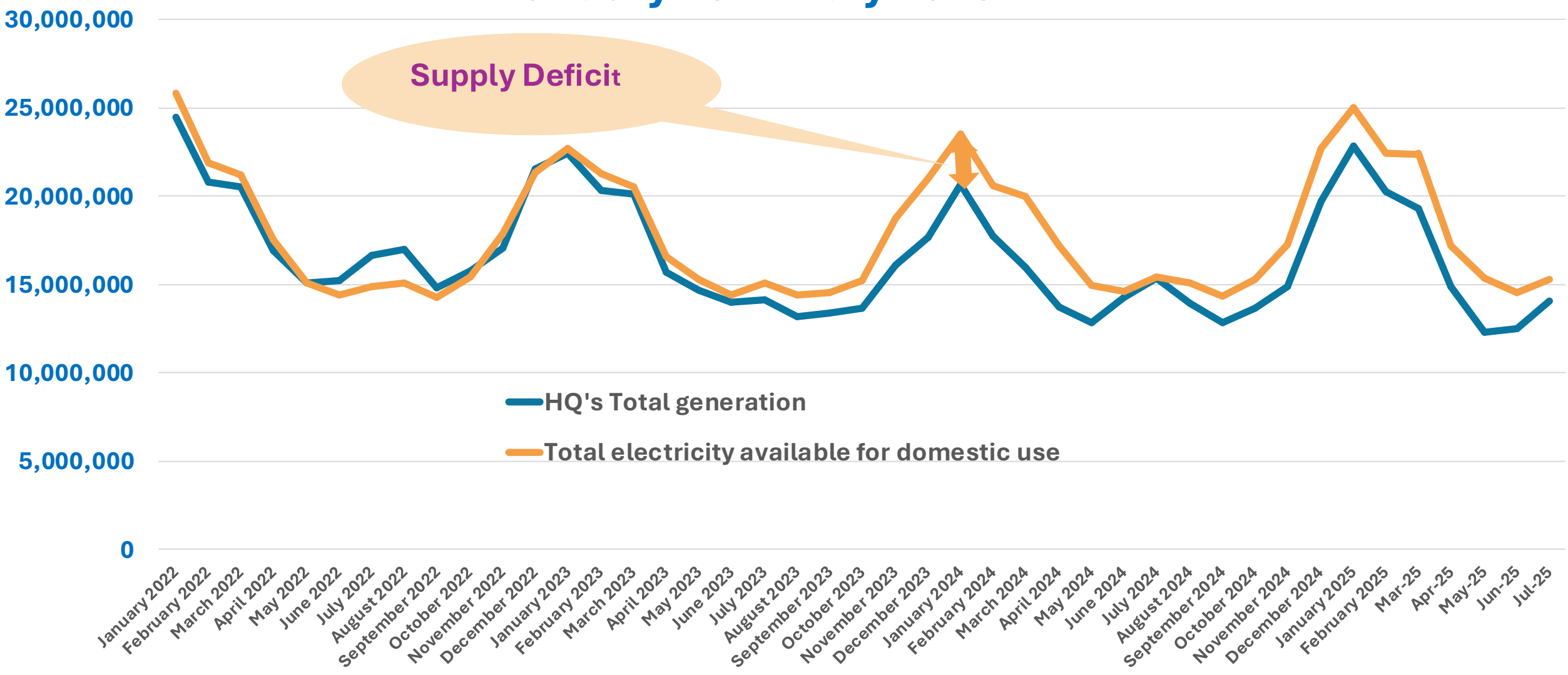
Source: Statistics Canada, Table 25-10-0015-01

Talking Note (TN) 2

- HQ's Hydraulic Turbine Production (HTP) in July decreased by 10.6% compared to the same month last year and has fallen over 18.4% in the past three years.
  - HTP consistently accounts for over 90% of total production. In the first half of 2025, HTP made up about 93% of HQ's total domestic production.
  - Wind power turbine production has not offset the decline in overall production.
  - Hydro power is generally less than other electricity generation methods, including wind, nuclear, oil, or gas. It is also cleaner than coal, oil, or gas.

- CF and Gull Island power are hydroelectric projects.

Quebec's Electricity Supply Deficit, January 2022- July 2025

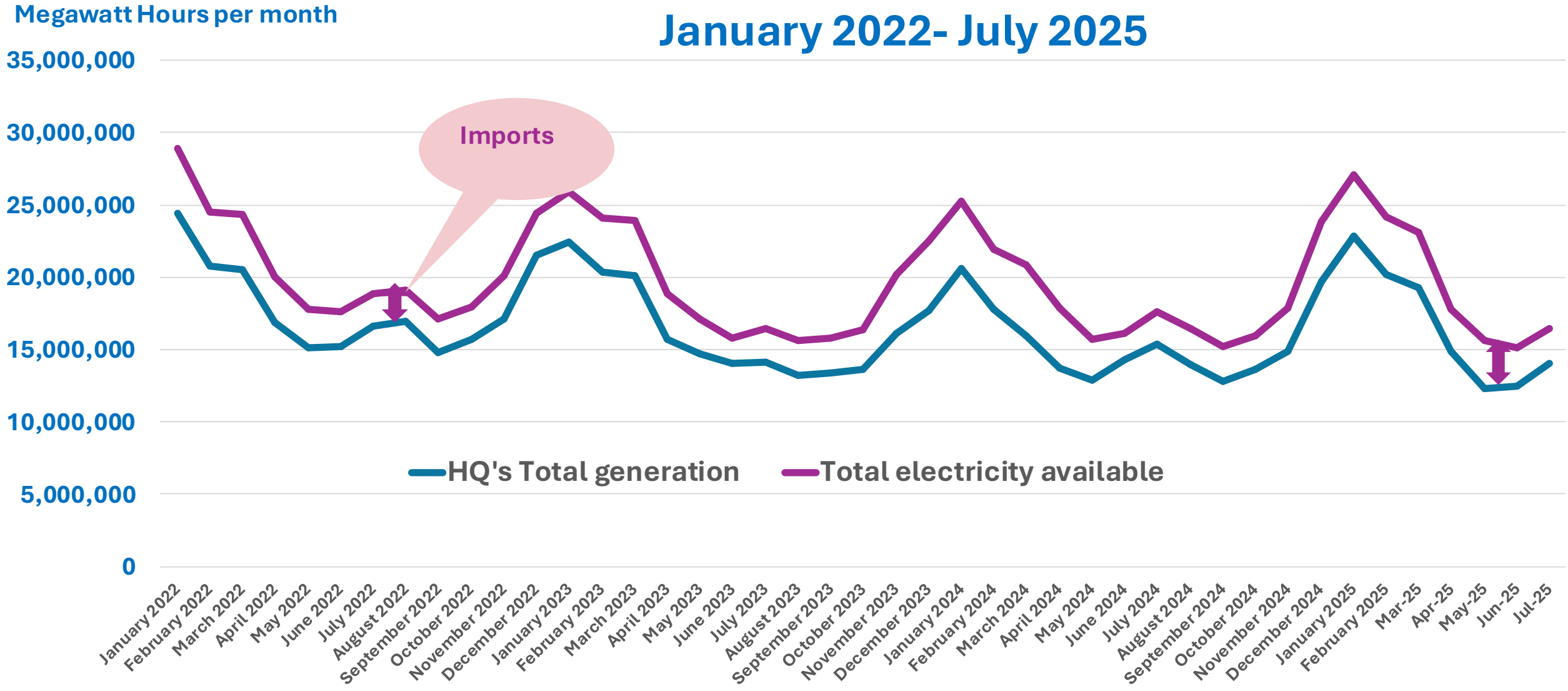


Source: Statistics Canada, Table 25-10-0016-01

Talking Note (TN) 3

- "**Domestic availability**" is essentially **internal demand,** since Quebec must have sufficient power available to meet its own needs. Households cannot freeze!
- Falling domestic production (internal supply) combined with slightly increasing internal demand from Quebec's households and industries is resulting in an increasing **supply deficit (a gap)**.
- "Mind the Gap!" which is increasing!
- *Please note: Possible confusion*: StatsCan data has CF as an import to Quebec. HQ sees CF power not as an import but as power from a subsidiary.

Importing Electricity to Increase Available Supply, January 2022- July 2025

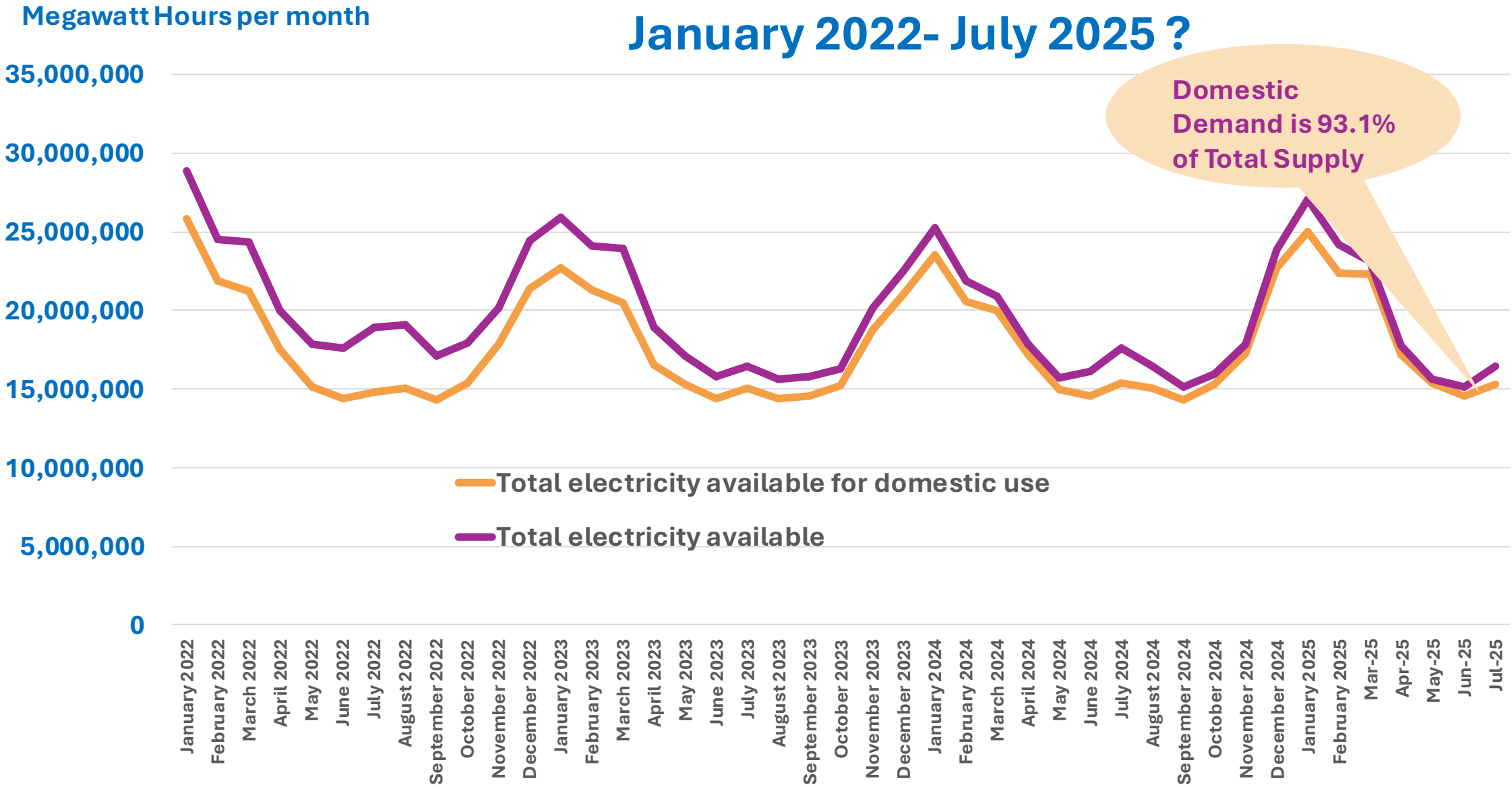


Source: Statistics Canada, Table 25-10-0016-01

Talking Note (TN) 4

- Total **Electricity Available** equals domestic production plus all imports, including those from the USA and other provinces, mainly Churchill Falls.
- **Imports** into Quebec have increased by **6%** between July 2024 and July 2025, mainly from the USA, boosting the **available supply** in Quebec.
- See Import video to see that the increased supply is coming from the USA.

Does Available Supply Meet Domestic Demand, January 2022- July 2025 ?



Source: Statistics Canada, Table 25-10-0016-01

Talking Note (TN) 5

- In July 2025, *domestic demand* was **93.1%** *of available supply.* Three years earlier, this figure was **78.6%**. The result is that there is decreasingly the opportunity to export data.
- One can argue that the data that Quebec has available is greater than its needs and therefore available for export, has been primarily due to its imports of electricity from Churchill Falls.
- Note that in many months there is almost no gap! In this case, *Internal Demand = Available Supply*!

Thanks for Watching