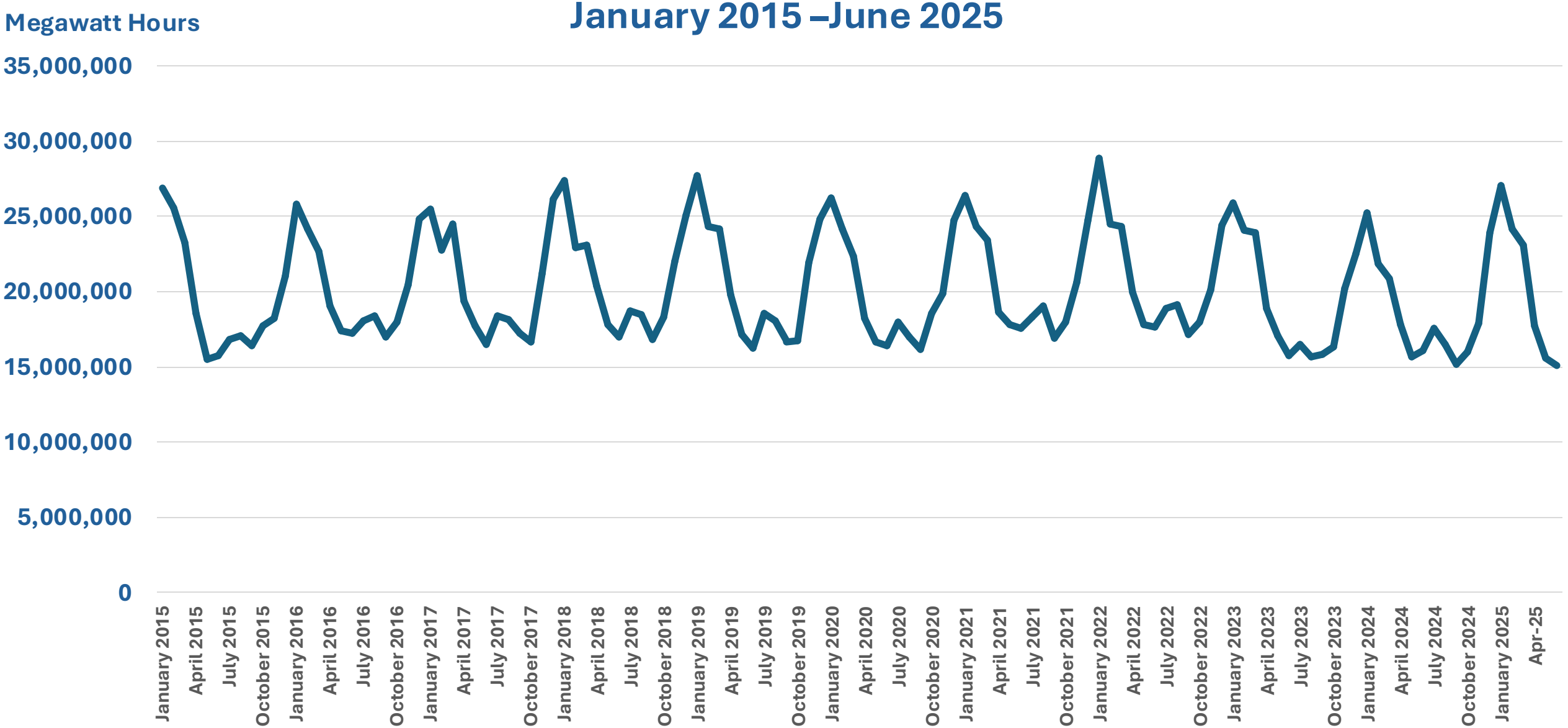


Quebec's Emerging Electricity Shortage and Its Urgent Need for Additional Power(V-1)



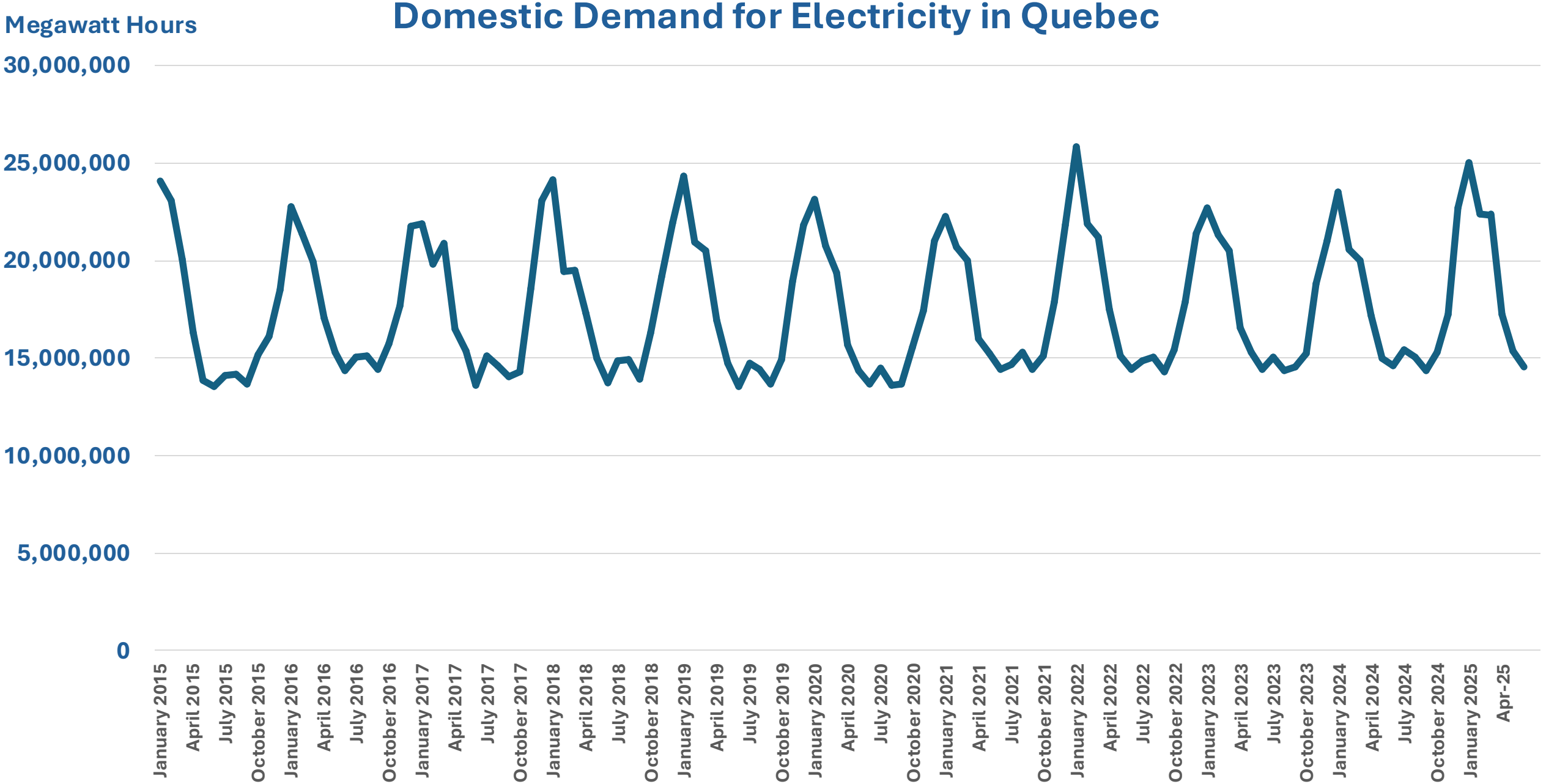
Doug May

Total Electricity Available to Quebec, Monthly, January 2015 –June 2025



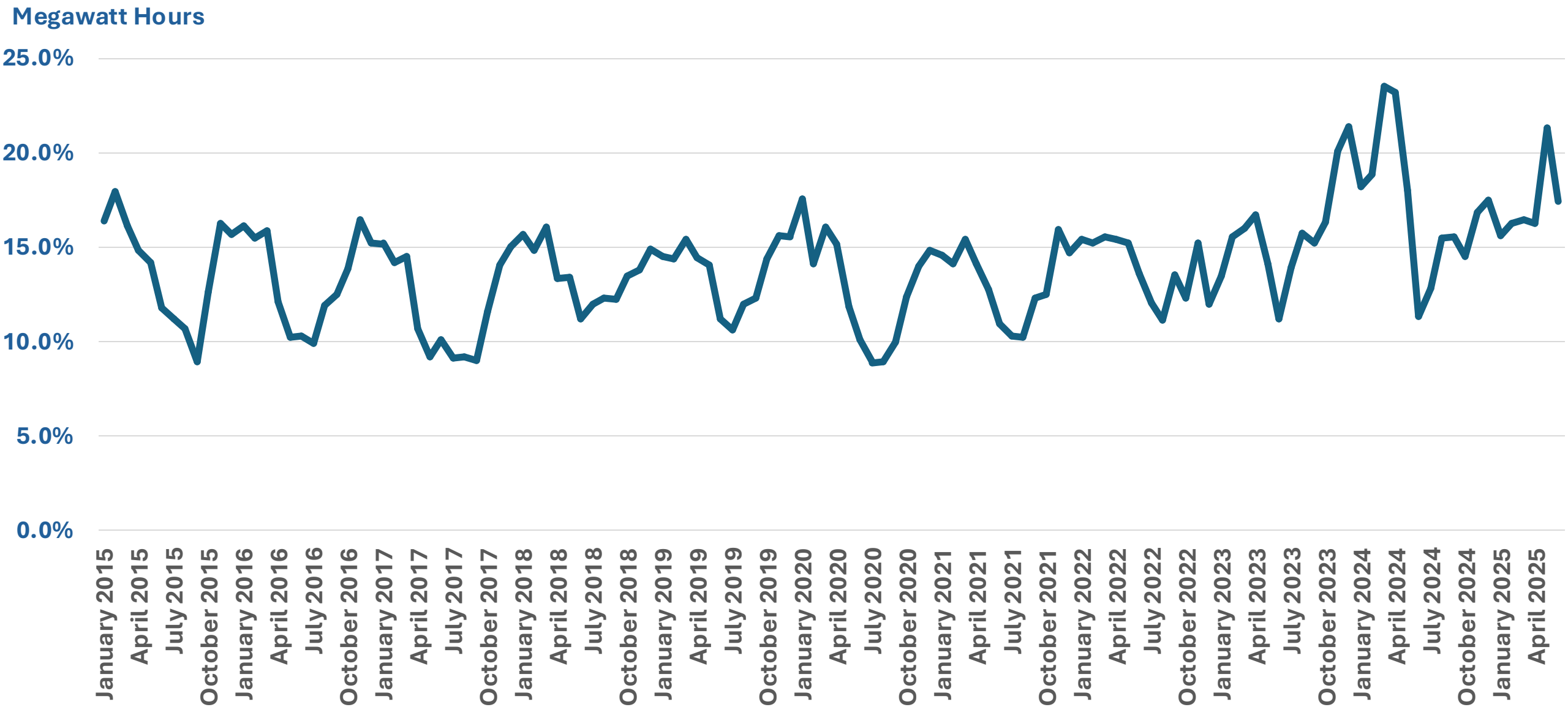
Source: Statistics Canada, Table 25-10-0016-01

Domestic Demand for Electricity in Quebec



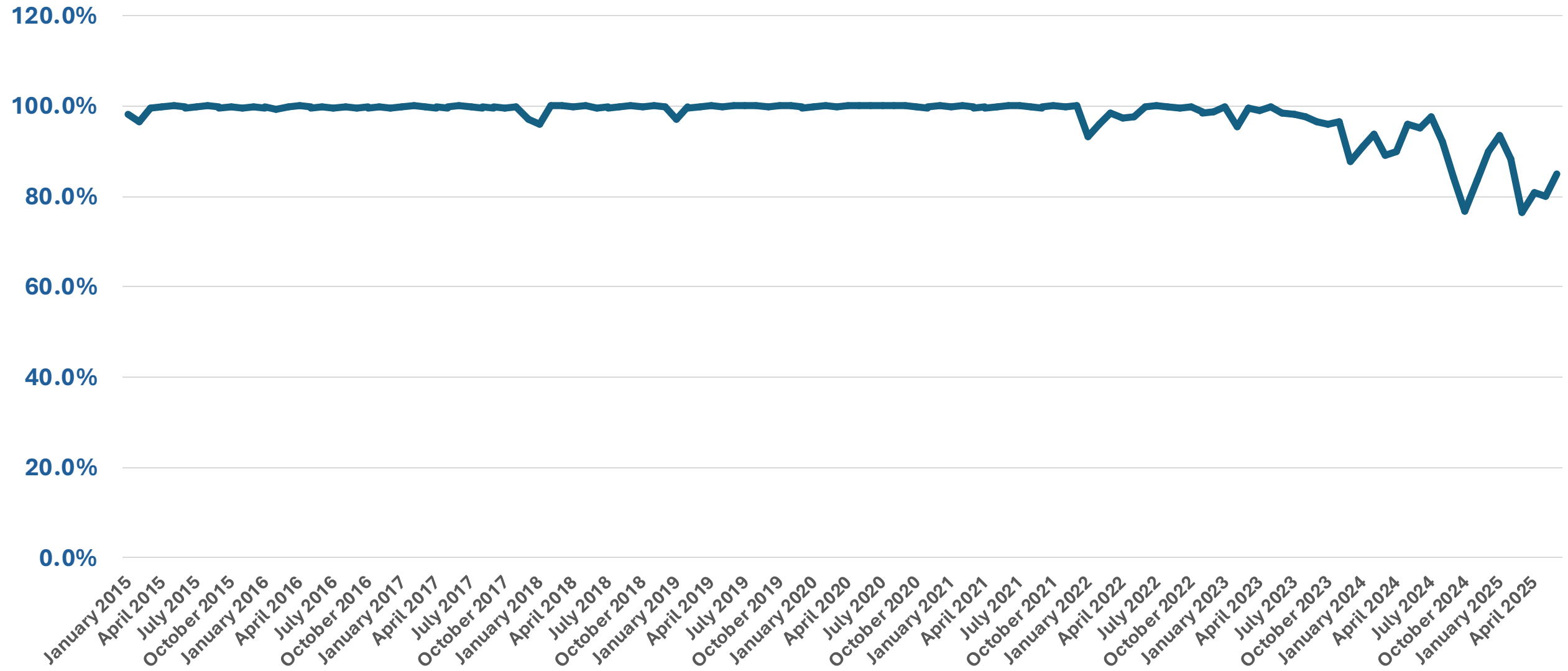
Source: Statistics Canada, Table 25-10-0016-01

Percentage of Imports to Total Electricity Available in Quebec.



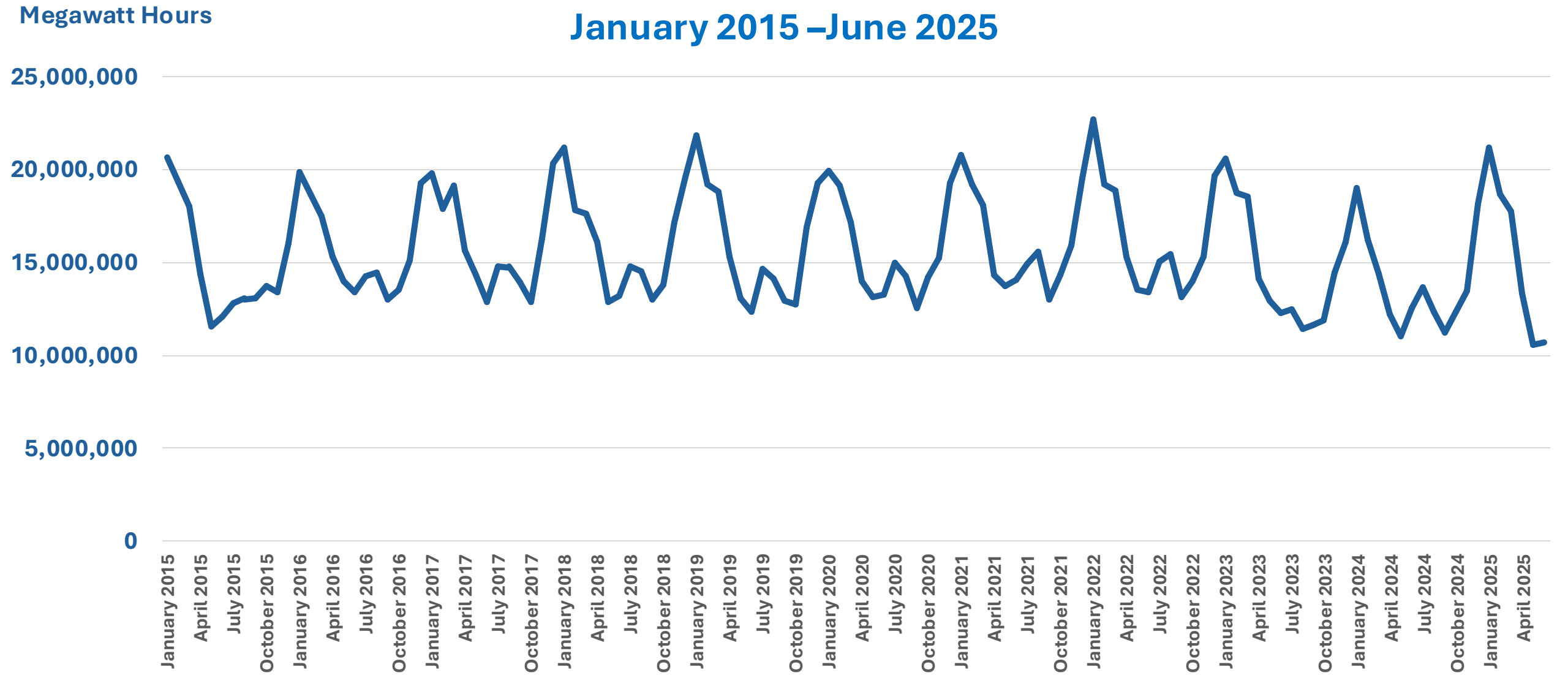
Source: Statistics Canada, Table 25-10-0016-01 and author's calculations

Quebec's Percentage of Electrcity Imports from Other Provinces to Total Imports



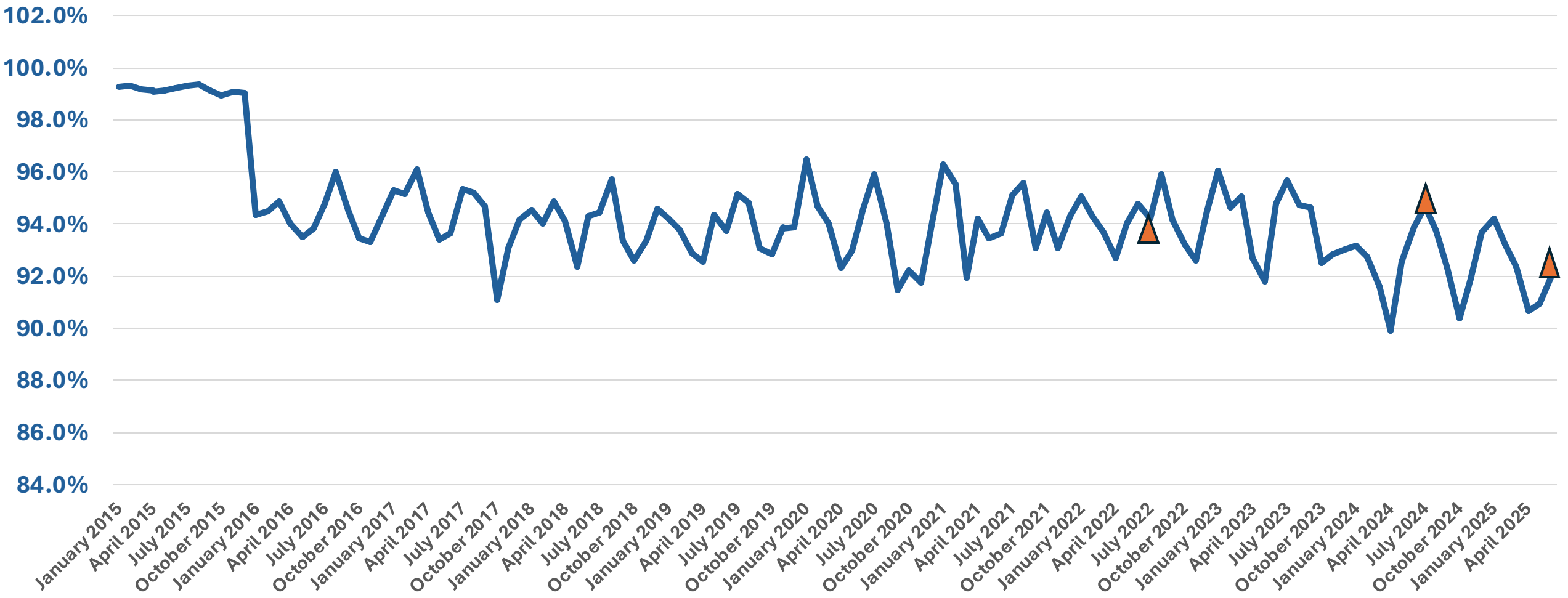
Source: Statistics Canada, Table 25-10-0016-01 and author’s calculations

Electricity Generation By Utilities in Quebec, January 2015 –June 2025



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

Percentage of Total Utility Generation Using Water Power (Hydraulic Turbines) Quebec, Jan. 2015- June 2025

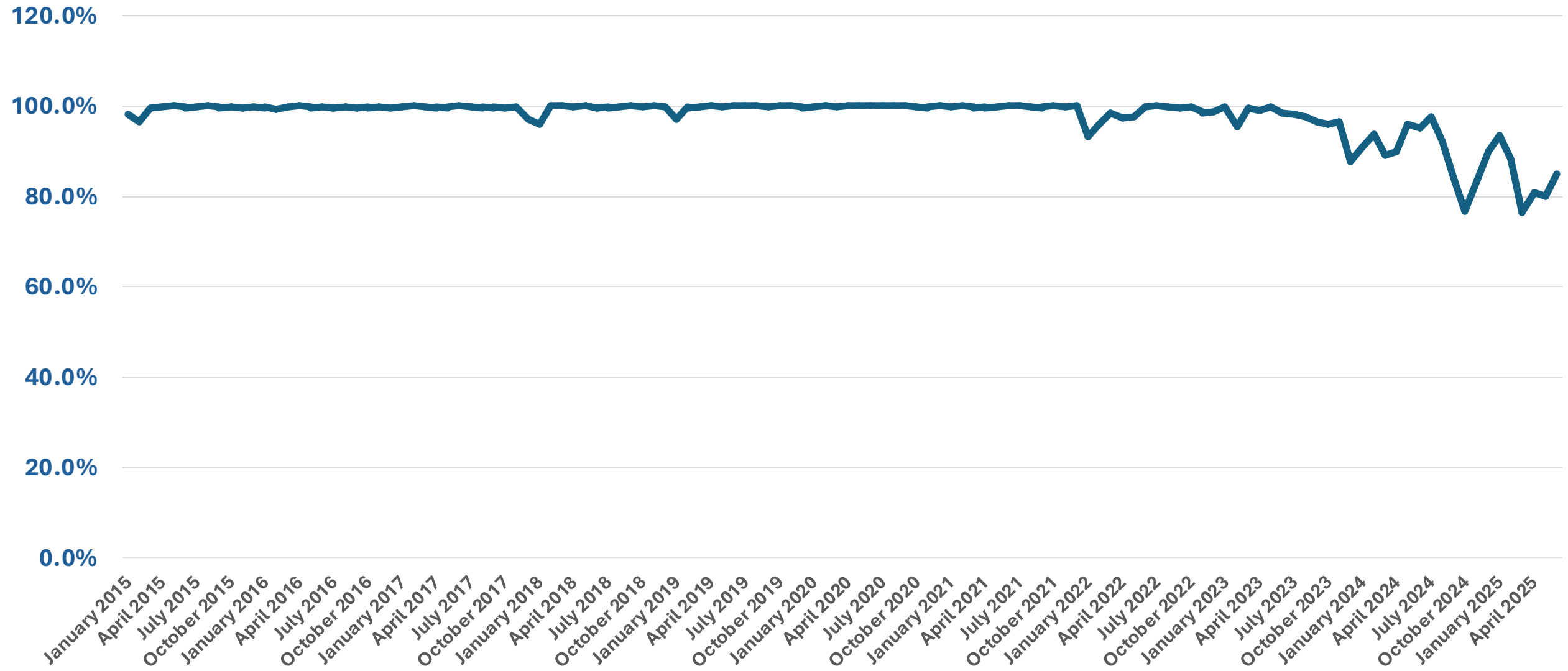


Source: Statistics Canada, Table 25-10-0015-01 and author's calculations

How does Churchill Falls fit into the existing picture?

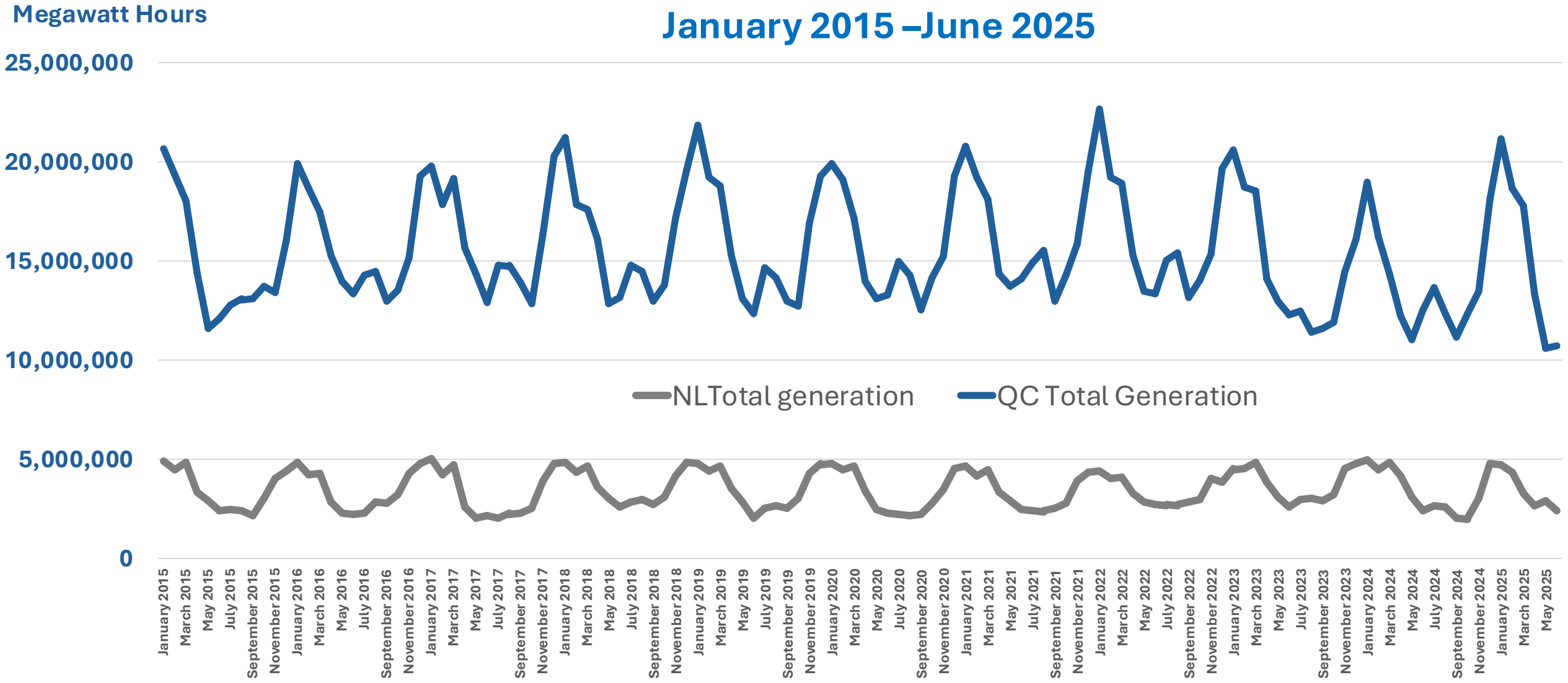
How could the proposed infrastructure projects come to Hydro-Québec's rescue?

Quebec's Percentage of Electrcity Imports from Other Provinces to Total Imports



Source: Statistics Canada, Table 25-10-0016-01 and author’s calculations

Electricity Generation by Utilities in Quebec and NL, January 2015 –June 2025



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

How does Churchill Falls fit into the existing picture?

Answer: CF contributes about 17% of the available electricity in Quebec.

How could the proposed infrastructure projects come to Hydro-Québec's rescue?

Gull Island: + 2,250 MWh
CF Upgrade: + 550 MWh
CF Extension: +1,100 MWh

Some Takeaways

- Electricity demand is seasonal. It rises in January, the coldest month.
- Supply must meet peak-load demand; otherwise, people will die.
- The domestic supply of electricity from hydroelectric generation depends on the water supply, which can be affected by climate change. This is the case in Quebec beginning in 2023 due to **drought**.
- Quebec needs to import power to meet its domestic demands for electricity.
- Most of Quebec's imported power comes from the Churchill Falls generating station using water from the Smallwood Reservoir in Labrador.
- Quebec is increasingly relying on wind turbines; the opportunities for new water generation within Quebec at competitive costs may be limited or nonexistent.
- Since the cost per kWh of electricity from wind turbines is generally higher than that of water turbines.

- Given the situation outlined, Quebec officials have acknowledged that a low-cost solutions to obtaining the necessary power are upgrades and an expansion of existing facilities, as well as a new generating facility downriver at Gull Island.
- The proposed increases in generation would increase installed capacity by 72%. Some of the power would go to NLH.
- From the Quebec perspective, long-term contracts at set prices would be ideal.



Next Video: Imports and Exports