Drought Conditions, Evolving Operational Context, and Potential Implications for the Churchill Falls Memorandum of Understanding

Executive Summary

• Hydro-Québec's quarterly reporting and 2025 Annual Report increasingly suggest that drought conditions and reduced hydraulic inflows are becoming important operational and strategic considerations within Québec's hydroelectric system.

• References to prolonged low runoff conditions and "persistent low hydraulicity" became more prominent beginning in 2023 and intensified throughout 2024 and 2025. The reporting indicates a growing emphasis on reservoir preservation, energy-reserve management, imports, system optimization, and operational flexibility.

• Although Hydro-Québec continues to publicly frame these developments in terms of prudent management and resilience rather than crisis, the reporting trend suggests that hydrological uncertainty may be becoming increasingly embedded within the corporation's long-term planning assumptions.

• Increased electricity imports appear to reflect a deliberate strategy to conserve reservoir storage levels during periods of lower inflows. At the same time, sustained reliance on imports may indicate that Hydro-Québec's traditional surplus-capacity model is becoming more constrained under changing climate conditions.

• The implications for Action Plan 2035 may be significant. The plan's objectives — including electrification, transmission expansion, export activity, and major demand growth — could become more difficult to sustain if long-term hydrological variability reduces available hydroelectric surplus capacity.

• At the same time, evolving drought conditions may strengthen the strategic rationale for:

expanded wind generation,

transmission-system expansion,

demand-side management,

energy-efficiency investments,

interconnections,

and broader supply diversification.

• The Churchill Falls Memorandum of Understanding (MOU) with Newfoundland and Labrador may become increasingly important within this evolving context. Although Hydro-Québec has not explicitly linked the agreement to drought adaptation, the proposed Labrador developments appear broadly consistent with the corporation's growing emphasis on long-term supply resilience, geographic diversification, and operational flexibility.

• The evolution of Hydro-Québec's reporting between 2023 and 2025 suggests a gradual transition from viewing reduced runoff primarily as a temporary operational issue toward recognizing hydrological uncertainty as a recurring factor affecting long-term electricity planning.

• Overall, the available evidence suggests that Hydro-Québec may be entering a period of evolving operational and strategic adaptation in which climate resilience, supply diversification, infrastructure investment, and long-term system flexibility become increasingly important alongside the traditional advantages of Québec's hydroelectric system.

Introduction: Hydro-Québec Quarterly Reporting and Strategic Context

Hydro-Québec (HQ) publishes quarterly financial and operational reports throughout the year to provide updates on corporate performance, capital investments, electricity demand, and progress toward its long-term strategic objectives. The corporation follows a calendar-year reporting structure and issues three Quarterly Bulletins annually, covering the first quarter (January–March), first six months (January–June), and first nine months (January–September) of each year. The fourth quarter is incorporated into Hydro-Québec's Annual Report, which is typically released in February of the following year.

Hydro-Québec's quarterly reports are generally published approximately six to eight weeks after the end of each reporting period. In practice, first-quarter results are usually released in late May, second-quarter results in late August, and third-quarter results in late November. The publication of Hydro-Québec's 2025 Annual Report in February 2026 now provides a more complete picture of how the corporation is responding operationally and strategically to emerging climate-related pressures, particularly reduced hydraulic inflows and evolving reservoir-management challenges that have affected Québec's hydroelectric system since approximately 2023.

The increasing visibility of low runoff conditions and related operational changes beginning around 2023 prompted closer examination of Hydro-Québec's quarterly and annual reporting in order to better understand whether broader operational or strategic trends were emerging and whether these developments might hold longer-term significance within the context of Action Plan 2035 and the Churchill Falls Memorandum of Understanding (MOU).

These reports have become increasingly important within the context of Hydro-Québec's Action Plan 2035, the corporation's long-term strategic framework for expanding clean

electricity generation, strengthening transmission infrastructure, improving reliability, and supporting large-scale electrification across Québec and export markets. The quarterly reporting process now serves not only as a financial disclosure mechanism, but also as a means of tracking Hydro-Québec's progress toward its 2035 strategic objectives, including major capital investments, new generating capacity, energy-efficiency initiatives, and grid modernization.

The 2025 Annual Report appears particularly significant because it increasingly suggests that climate variability and hydrological uncertainty may be becoming more important operational considerations within Hydro-Québec's planning framework. While the corporation continues to publicly emphasize resilience, flexibility, and confidence in its long-term strategy, recent reporting contains repeated references to reduced runoff conditions, reservoir management, accelerated infrastructure investment, imports, and increased reliance upon system-optimization measures designed to manage reduced water availability across its generating network.

Drought Conditions, Imports, and Reservoir Management

In recent years, Hydro-Québec's quarterly reporting has increasingly reflected concerns associated with drought conditions, reduced reservoir inflows, and the operational impacts of lower water availability across Québec's hydroelectric system. While the corporation does not generally characterize these developments as a direct threat to its long-term strategy, the reports nevertheless reveal growing emphasis on reservoir management, imports, system flexibility, and climate-related operational pressures.

One of the most notable developments in recent reporting has been Hydro-Québec's increasingly explicit reference to reduced runoff conditions and lower hydraulic inflows affecting major reservoirs. These conditions have required the corporation to increase electricity imports from neighboring jurisdictions in order to preserve reservoir storage levels and maintain system reliability. Quarterly reporting issued during 2025 showed a substantial increase in imported electricity compared with previous years, suggesting that Hydro-Québec has become more reliant on external markets during periods of reduced water availability.

The 2025 Annual Report reinforced this trend by acknowledging that Hydro-Québec has been operating within a context of prolonged lower hydraulic inflows since approximately 2023. The report places strong emphasis on the management of the corporation's reservoirs as strategic energy-storage assets capable of supporting market optimization and long-term reserve management. The reporting also highlights increased focus on preserving operational flexibility through imports, demand management, and transmission-system optimization.

The reports suggest that Hydro-Québec is using imports strategically as part of a broader reservoir-management approach. Because Québec's hydroelectric system possesses significant storage capacity, Hydro-Québec can conserve water during lower inflow periods by purchasing electricity from external markets when conditions are favorable, while continuing

to export electricity during periods of stronger market demand. This operational flexibility has historically represented one of Hydro-Québec's major advantages within northeastern North American electricity markets.

At the same time, increased reliance on imports raises important questions regarding the long-term sustainability of Hydro-Québec's traditional operating model under changing climate conditions. Multi-year drought patterns and declining reservoir replenishment levels could potentially reduce the availability of surplus hydroelectricity for export markets, particularly during winter peak-demand periods. Since export revenues remain an important contributor to Hydro-Québec's financial performance, prolonged low-water conditions could eventually affect both revenue stability and long-term planning assumptions.

Public Reporting and Framing of Risk

An important consideration is that Hydro-Québec's public reporting on drought conditions may understate or under-emphasize the broader significance of what appears to be developing within the hydroelectric system. The corporation's quarterly reports and Annual Report generally frame the issue in operational and financial terms — such as reduced runoff conditions, reservoir management strategies, import requirements, and market optimization — rather than presenting drought as a potentially systemic strategic risk.

As a result, the reporting tends to emphasize Hydro-Québec's operational flexibility and market-management capabilities while providing comparatively limited discussion regarding the possible long-term implications of sustained hydrological decline. The overall tone of the reporting remains focused on resilience, optimization, and operational adaptability rather than vulnerability or crisis.

Outside Hydro-Québec's formal reporting structure, however, broader public commentary, media reporting, and industry discussion have increasingly raised concerns regarding historically low reservoir levels, repeated years of below-normal precipitation, and the potential effects on future export obligations and domestic electrification plans. Public discussion has also focused on whether current reservoir conditions could complicate Hydro-Québec's ability to simultaneously support rising Québec electricity demand, maintain export commitments, and preserve adequate long-term reservoir reserves under increasingly variable climate conditions.

An additional issue emerging from recent discussion is whether Hydro-Québec's long-standing reputation for abundant hydroelectric surplus capacity may gradually be giving way to a more constrained operational reality. The increasing need for imports, combined with aggressive electrification objectives and growing climate uncertainty, may indicate that future supply margins could become narrower and more dependent upon diversified energy sources and sophisticated system-management practices.

Evolution of Hydro-Québec's Reporting on Drought and Low Hydraulicity

References to drought conditions and reduced hydraulic inflows began to appear more noticeably within Hydro-Québec's public reporting during 2023, although the issue was initially framed primarily as a temporary operational and market-related challenge rather than a long-term strategic concern. Early references focused mainly on lower export revenues, reduced water inflows, and weaker external electricity sales associated with lower-than-normal runoff conditions. At this stage, Hydro-Québec's reporting generally presented the issue as part of the normal variability historically experienced within large hydroelectric systems rather than as evidence of structural climate-related change.

A more significant shift became visible during 2024. Quarterly reporting issued throughout 2024 increasingly referred to ongoing low runoff conditions, below-normal precipitation, reduced snow cover, and the need for prudent reservoir management. The language also became more repetitive and consistent across successive reporting periods, suggesting that lower hydraulic inflows were no longer being treated as an isolated or short-term event. Hydro-Québec began placing greater emphasis on:

- preserving reservoir storage levels,
- managing energy reserves,
- reducing certain export activities,
- optimizing electricity purchases and sales, and
- maintaining operational flexibility under prolonged low inflow conditions.

The tone of the reporting also evolved gradually over time. While Hydro-Québec consistently avoided alarmist language, the issue of hydrological variability became increasingly integrated into broader discussions of operational planning, financial performance, infrastructure investment, and long-term system management. By late 2024 and into 2025, references to prolonged low hydraulicity conditions suggested that the corporation increasingly viewed reduced water availability as an ongoing operating condition rather than a temporary anomaly.

Importantly, however, Hydro-Québec's reporting continued to emphasize resilience, optimization, flexibility, and prudent management rather than vulnerability or crisis. As a result, the urgency of the issue appears to have increased operationally without a corresponding increase in overtly urgent public language.

The evolution of Hydro-Québec's reporting may therefore reflect a gradual transition in operational and planning assumptions. Rather than presenting drought conditions as a temporary disruption, recent reporting increasingly suggests that hydrological uncertainty may be emerging as a recurring factor influencing reservoir management, infrastructure investment, supply diversification, and long-term electricity planning.

Strategic Implications for Action Plan 2035

Near-Term Operational Implications

The operational implications of prolonged drought conditions are already becoming visible within Hydro-Québec's reporting. In the short term, lower inflows appear to be affecting the corporation primarily through reservoir management, market activity, and electricity procurement. Hydro-Québec's reporting indicates that the corporation has responded to reduced inflows by managing reservoirs more conservatively, reducing some external sales, and increasing electricity purchases from neighboring markets.

These developments do not necessarily indicate an immediate reliability crisis. However, they do suggest a more constrained operating environment in which Hydro-Québec may need to rely more heavily upon imports and short-term market purchases in order to preserve reservoir levels while meeting domestic demand and maintaining export flexibility. The trend may also reduce Hydro-Québec's ability to maximize export revenues during certain periods, particularly if water reserves must increasingly be conserved for winter demand and long-term system security.

Longer-Term Strategic Implications

Over the longer term, continued hydrological variability could carry more significant implications for Action Plan 2035. The plan assumes major growth in electricity demand, large-scale electrification, expanded renewable generation, and continued export activity. Persistent reductions in water availability could place increasing pressure on Hydro-Québec's traditional surplus-capacity model while simultaneously increasing the importance of diversification and operational flexibility.

Within this context, several components of Action Plan 2035 appear increasingly significant, including:

- expanded wind generation,
- transmission-system expansion,
- demand-side management,
- energy-efficiency investments,
- interconnections, and
- broader renewable-energy diversification.

These initiatives may be interpreted not only as economic-growth and electrification measures, but also as evolving responses to increasing hydrological uncertainty and the need for greater long-term system resilience.

Another important feature of recent reporting is the growing emphasis on capital investment. Hydro-Québec has reported sharply increasing levels of infrastructure spending associated with implementation of Action Plan 2035. These investments are primarily framed in terms of

economic development and clean-energy transition objectives, but they also appear increasingly consistent with the need for enhanced operational resilience under more variable climate conditions.

Taken together, recent reporting suggests that Hydro-Québec may gradually be evolving toward a more diversified long-term planning model in which hydroelectric generation remains central but is increasingly supported by expanded wind resources, demand-side management, interconnections, storage optimization, and broader operational flexibility across regional electricity markets.

Churchill Falls MOU and the Evolving Strategic Context

The Churchill Falls Memorandum of Understanding (MOU) between Hydro-Québec and Newfoundland and Labrador Hydro may become increasingly important within the broader context of evolving hydrological conditions, electrification demand, and long-term supply planning. Although Hydro-Québec's reporting does not explicitly frame the agreement as a climate-adaptation measure, the timing and scale of the proposed Labrador developments appear broadly consistent with the corporation's growing emphasis on long-term supply resilience, diversification, and operational flexibility.

The agreement, announced in late 2024, establishes a framework for future hydroelectric development in Labrador, including the proposed Gull Island generating station, expansion of existing Churchill Falls facilities, upgrades to existing infrastructure, and major transmission investments. Collectively, these projects could eventually provide approximately 3,900 MW of additional renewable generating capacity.

In the short term, the Churchill Falls MOU does not directly resolve the operational challenges associated with lower inflows currently affecting Québec's hydroelectric system. However, the agreement may provide Hydro-Québec with greater long-term planning flexibility as the corporation attempts to balance rising electricity demand, electrification objectives, export commitments, and increasing hydrological uncertainty.

The broader significance of the MOU appears particularly important when viewed alongside the evolution of Hydro-Québec's reporting since approximately 2023. During this period, Hydro-Québec has increasingly emphasized:

- reservoir preservation and energy-reserve management,
- expanded transmission infrastructure,
- operational flexibility,
- interconnections,
- renewable-energy diversification, and
- long-term system resilience.

Within this evolving context, the Labrador developments may eventually provide an important supplementary source of renewable generation capable of supporting both domestic demand growth and export-market stability during periods of reduced reservoir inflows within Québec.

Importantly, however, the available evidence does not suggest that the Churchill Falls MOU should be interpreted as a direct response to drought conditions alone. Rather, the evolving hydrological and operational environment may be altering the broader strategic context within which the negotiations and future Labrador developments are occurring.

Historically, Hydro-Québec's system benefited from extensive reservoir storage and relatively stable long-term hydrological conditions. However, the increasing visibility of reduced runoff conditions, imports, reservoir-management pressures, and diversification initiatives suggests that long-term supply flexibility and geographic diversification may now hold greater strategic importance than under earlier planning assumptions.

Within this context, the Churchill Falls and Gull Island developments may increasingly be viewed not simply as economic-growth initiatives, but also as part of a broader evolution toward enhanced long-term supply resilience and diversified renewable generation under changing climate conditions.

Conclusion

Hydro-Québec's quarterly reporting and 2025 Annual Report increasingly suggest that drought conditions, reduced hydraulic inflows, and broader climate variability are becoming important operational and strategic considerations within Québec's hydroelectric system. While the corporation continues to publicly emphasize resilience, flexibility, optimization, and prudent management, the overall reporting trend indicates that hydrological uncertainty may gradually be becoming embedded within Hydro-Québec's long-term planning framework.

The evolution of reporting between 2023 and 2025 appears particularly significant. Early references to reduced runoff conditions were initially presented primarily as temporary operational and market-related challenges affecting exports and reservoir levels. Over time, however, the language became more persistent and structurally integrated into broader discussions of reservoir management, imports, system flexibility, infrastructure investment, and long-term supply planning. Although Hydro-Québec has consistently avoided overtly alarmist language, the increasing frequency and prominence of these references suggest that hydrological variability is no longer being treated solely as an isolated short-term anomaly.

Within the context of Action Plan 2035, these developments may carry important long-term implications. The plan assumes major growth in electricity demand, large-scale electrification, expanded renewable generation, and continued export activity. Persistent hydrological variability could place increasing pressure on Hydro-Québec's traditional surplus-capacity model while simultaneously strengthening the strategic rationale for supply diversification, transmission expansion, wind development, demand-side management, and

energy-efficiency investments.

The Churchill Falls Memorandum of Understanding also appears increasingly significant within this broader context. Although Hydro-Québec has not explicitly framed the agreement as a response to drought-related pressures, the timing and scale of the proposed Labrador developments strongly align with the corporation's growing emphasis on long-term supply resilience, geographic diversification, and operational flexibility under uncertain hydrological conditions.

Overall, the combined evidence from Hydro-Québec's quarterly bulletins, Annual Report, infrastructure-investment patterns, operational trends, and broader strategic developments suggests that Hydro-Québec may be entering a period of evolving adaptation in which climate resilience, supply diversification, and long-term system flexibility become increasingly important alongside the traditional advantages of Québec's large-scale hydroelectric model.

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