

## R-4333-2026

### DEMANDE DE RENSEIGNEMENTS NO 1 DU REGROUPEMENT ASIC, FIRST BLOCK, HIVE, ÉNERGIE FLUMEN, MWC À HYDRO-QUÉBEC DISTRIBUTION

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 5

**Preamble:**

*[Our translation] However, the Distributor notes a significant gap between the anticipated benefits projected by industry representatives in 2018 and the picture observed in 2026. Indeed, despite the promises of innovation made in 2018, cryptocurrency mining remains the only significant activity associated with blockchains, and the adoption rate of this technology is low.*

1. Please provide any analysis that HQD has undertaken on the economic benefits of crypto mining between 2018 and 2026.
2. Please provide any analysis that HQD has undertaken on the adoption of bitcoin technology by various industries, including financial services, retailers and/or technology firms.
3. If HQD has not undertaken such studies, please provide a reason why.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 6

**Preamble:**

*[Our translation] In general, the Distributor believes that blockchain technology remains marginal both in its adoption and in its ability to sustainably transform the existing industries.*

4. Please provide any analysis that HQD has undertaken to substantiate this claim.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 6

**Preamble:**

*[Our translation] Beyond the economic benefits, the Distributor considers the strategic nature of both activities. Cryptocurrency mining relies primarily on specialized*

*computing, poorly integrated into local value chains, exposed to high risks of volatility and relocation, and whose structural benefits for the economy and the technological ecosystem remain limited. This activity contributes only marginally to Quebec's economic and technological objectives, thus limiting its strategic scope.*

5. Please provide any evidence or analysis that HQD has undertaken that compares the economic benefits to Quebec from crypto mining compared to other sectors.
6. Please provide any analysis that HQD has undertaken that supports the benefit of specifically tying an electricity supply rate for a particular industry based on their economic value to Quebec.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 6

**Preamble:**

*[Our translation] As regards data centers, they have a more pronounced strategic character. They constitute in fact a component of the digital infrastructure which supports the deployment of cross-cutting technologies, such as cloud computing and artificial intelligence. Depending on their nature and their integration into the local economy, they can generate spillover effects on innovation and productivity in a wide range of sectors.*

7. Please provide any evidence or analysis that HQD has undertaken on the economic benefits of data centres for the Quebec economy. If no such evidence exists, please explain why.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 8

**Preamble:**

*[Our translation] The Distributor's proposal to revise the calibration of the CB tariff is consistent with its approach based on the economic impact and strategic nature of the sectors targeted by this request. It believes it has thus demonstrated in its evidence and in the preceding sections of this document that the CB tariff should be higher than the CD tariff. Based on this approach and the desire to send price signals related to the current energy context, the economic impact, and the strategic nature of this use, the Distributor no longer considers it relevant for energy and power prices to be differentiated for medium and high-power subscriptions.*

8. Please provide any economic analysis that HQD has undertaken that supports the 50% premium being charged to the CB rate class compared to the CD rate class.

9. Please provide any analysis that HQD has completed on the potential capacity value that customers on the CB rate class provide to HQ given their requirement to reduce peak demand for multiple hours annually.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 8

**Preamble:**

*[Our translation] In the case of a CD subscription currently at the LG rate, the proposed transitional rate would be effective for a period of five years, whereas in the case of a CB subscription, it would be phased in over three years. For all the reasons mentioned above, the Distributor aims to achieve the desired price signal more quickly for the CB subscription.*

10. Please provide any detailed analysis that HQD completed in determining that the 3-year phase in approach was optimal.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 10

**Preamble:**

*[Our translation] Regarding the impact of tariff increases on consumption levels, these will likely vary depending on the type of subscription. For the demand for the CD subscriptions, the Distributor does not anticipate any impact. Indeed, it estimates that, based on the observed strength of demand and its monitoring system, it will remain at the previously anticipated level. Furthermore, connection requests are regulated.*

11. Please provide any analysis that HQD has undertaken on the price responsiveness of data centre customers to an increase of more than 100% for supply costs.
12. Please provide any correspondence between HQD and potential data centre customers that discussed their willingness-to-pay and at what level they would not locate in Quebec. If no such evidence exists, please explain why.

**Reference:**

- R-4333-2026, HQD-5, Document 2, ([B-0025](#)) page 5

**Preamble:**

*[Our translation] The observed impact on electricity prices following the massive influx of data centers in several North American jurisdictions leads the Distributor to want to contain the impact such a wave could have on the bills of existing subscriptions. In this context, the use of marginal cost makes it possible to send a fair and reasonable*

*price signal, allowing the recovery of costs associated with green and renewable energy and thus limiting the upward pressure on rates attributable to the strong growth in data center consumption.*

13. Please provide any studies that HQD completed or relied upon to determine that data centres will have a direct impact on customer bills for Quebec ratepayers.
14. Please provide any studies or analysis that HQD has completed that compares the marginal cost of supply – as being proposed in this proceeding – compared to the marginal cost of supply in other jurisdictions in North America.
15. In particular, please provide commentary on the recent wind and solar procurements in Ontario where the weighted average cost of new supply was less than \$90/MWh and why this is not a more appropriate marginal cost assumption.

**Reference:**

- R-4333-2026, HQD-5, Document 2, ([B-0025](#)) page 5

**Preamble:**

*[Our translation] As explained, the arrival of data centers leads to an increase in demand which could reach approximately 9 TWh within a few years. This additional demand is expected to lead to annual supply costs of around \$1.3 billion in 2026, based on marginal supply costs. Such a burden will inevitably exert significant upward pressure on rates for all customers, since at LG's current rates, the revenue generated, approximately 6.5 ¢/kWh, barely covers half of the additional supply costs alone.*

16. Please provide the contracted rate for supply that HQ will provide on the New England Clean Energy Connect and the Champlain Hudson Express (CHPE).
17. Please provide any commentary on whether the contracted supply on those export contracts will cover the additional supply costs in Quebec.

**Reference:**

- R-4333-2026, HQD-5, Document 2, ([B-0025](#)) page 6

**Preamble:**

*[Our translation] (...) on the average cost (the current rate) would result in this burden being borne by additional by all Hydro-Québec customers.*

18. Please provide any analysis that HQD has undertaken on whether baseload consumption can provide a rate benefit to existing HQD customers by utilizing

supply in off-peak hours when its value is low while they will continue to pay the average annual rate tariff.

19. If no such benefit exists, please provide commentary on why that is the case.

**Reference:**

- R-4333-2026, HQD-5, Document 2, ([B-0025](#)) page 6

**Preamble:**

*[Our translation] The Distributor wishes to reiterate that the Bonbright principles aim in particular to enable the generation of the revenues necessary to cover the costs of service and ensure the financial health of the company, while promoting an optimal allocation of resources.*

20. Please provide analysis that HQD has undertaken in which it compares the Bonbright principles described in this evidence to all of its existing rate classes.
21. If no such analysis exists, please describe why this analysis was only undertaken for the CB and CD rate classes.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 5

**Preamble:**

*A significant increase in electricity prices for customers of various American distributors is observed following the arrival of large-scale data centers, whose electricity needs are similar to those of thousands of residential customers.*

22. Please provide any evidence or analysis that HQD has undertaken to support its conclusion that data centres will increase costs for all ratepayers?
23. Please provide any analysis or evidence that HQD has undertaken regarding the range of different tools that distributors have adopted to mitigate the potential impact of data centres on existing ratepayers.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 6

**Preamble:**

*[Our translation] The price will be set at a cost reflecting that of new supplies, while remaining competitive on a North American scale, particularly given that the electricity supplied is entirely renewable.*

24. Please provide any evidence or analysis that HQD has undertaken on the cost of new supply in different jurisdictions across Canada.
25. If no such analysis exists, please explain why.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 6

**Preamble:**

*[Our translation] Hydro-Québec's proposed approach is consistent with what is observed elsewhere. Several North American jurisdictions have indeed adopted, or are in the process of adopting, mechanisms aimed at managing the growth of the load associated with data centers. These mechanisms are generally based on specific pricing at a price level that aims to better reflect the marginal costs associated with this sector."*

26. Please provide any analysis that HQD has undertaken to compare its marginal cost estimate of \$130/MWh compared to marginal cost estimates in other jurisdictions across North America.
27. If no such analysis exists, please explain why.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 6

**Preamble:**

*[Our translation] Furthermore, the Distributor requests the Board to approve the revision of the tariff for cryptographic use applied to blockchains (CB tariff) in order to more accurately reflect the energy-intensive nature of this activity and its more limited economic benefits for Quebec.*

28. Please provide any analysis or evidence that HQD is undertaken that shows other jurisdictions revising existing tariffs for crypto mining customers.
29. Please provide the amount of capacity that is allocated to cryptomining customers compared to total installed capacity.

30. Please provide average peak demand of cryptomining customers during the 10 highest peak demand days in the last 5 years.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 6

**Preamble:**

*[Our translation] Among the distributors offering or having offered a specific tariff to this category of customers, most design it according to the principle of recovering the associated marginal costs.*

31. Please provide how HQD defines marginal cost of supply and why the \$130 is appropriate when recent procurements have had prices significantly below that level?
32. Please provide evidence that other jurisdictions are including transmission and balancing costs in their marginal cost estimates.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 7

**Preamble :**

*[Our translation] Some jurisdictions have adopted an approach based on a markup to the base rate or the application of other charges to mitigate the risks associated with the supplies and investments needed to support the additional charges. To this end, AEP in Ohio and Chelan County PUD & Grant County PUD in Washington State have adopted industry-specific rates to allow their existing customers to avoid excessive rate shocks and mitigate the risks associated with rapid demand growth that is not guaranteed to materialize.*

33. Please provide the details and any conditions that are included in this rate.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 7

**Preamble:**

*[Our translation] In the Canadian provinces, in addition to the implementation of the 2% premium in Alberta, the British Columbia government has revised its energy policy to regulate activities surrounding artificial intelligence (“AI”), data centres and cryptocurrency mining. 38 Thus, starting in 2026, a 300 MW block will be reserved for...”*

34. Please describe why HQD has not adopted a competitive approach to allocating new supply, similar to what is occurring in BC.
35. Please describe the benefits and drawbacks of such an approach.
36. Please describe any regulations or other impediments that would prevent HQD from adopting a similar approach to BC Hydro

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 8

**Preamble:**

*[Our translation]*

	<b>M</b>	<b>LG</b>	<b>TOTAL</b>
Subscriptions	8	12	<b>20</b>
GWh	129	1,141	<b>1270</b>
Peak (MW)	24	162	<b>187</b>
Authorized (MVA)	115	547	<b>662</b>

37. Can you provide the value of selling this supply to existing small-volume customers?
38. Can you provide the value of selling this supply to L tariff customers?
39. Can you provide the value of selling this supply on the existing M and LG tariff?
40. Can you provide the value of selling this supply on the proposed CB and CD tariff?

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 10

**Preamble:**

*[Our translation] Thus, all data centers whose maximum authorized power reaches at least 205 MW will have to commit to the Distributor to respect a ramp-up spanning a 10-year horizon. If, during a calendar year, the customer's largest actual power demand is less than 60% of the power expected according to the committed load ramp-up, the difference between these two values will be subject to a premium for unused power of \$ 92.280/kW.*

**41.** Are any other customer classes subject to a similar charge.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 11

**Preamble:**

*[Our translation] In addition, in order to encourage customers to commit to a ramp-up that adequately reflects their needs and to avoid underestimation to circumvent the premium, the maximum power called cannot exceed 110% of their committed ramp-up. Any consumption beyond this threshold will be billed at a price of 17.420 ¢/kWh, i.e. double the price of the energy component of the proposed tariff.*

**42.** Are any other customer classes subject to a similar charge.

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 11

**Preamble:**

*[Our translation] To mitigate the impact on existing customers, a transitional rate will be implemented for data centers that were allocated a block before 2026. This will allow them to reach the CD rate over a five-year period. This adjustment will be in addition to the regular rate indexing. Customer bills will be based on the CD rate, to which an initial 38% discount will be applied. During the transition period, the applicable discount will be reduced linearly annually until it reaches 0%. The terms of the rate are presented in HQD-2, Document 1.1.*

**43.** What if forecasted demand over the next 5 years does not materialize? Will the transition be slowed?

**44.** What if the competitive procurements currently underway (wind and solar) have a marginal cost that is below the proposed tariff? Does HQD intend to adjust the proposed CB and CD tariffs lower?

**Reference:**

- R-4333-2026, HQD-5, Document 1 ([B-0021](#)), page 11

**Preamble:**

*[Our translation] The Distributor proposes a new tariff structure for the CB tariff. The proposed amendments target sections 7.3 and 7.4 to establish a single average price for medium and high-power customers of approximately 19.5¢/kWh. This price level is achieved by increasing by 50% the average price offered for the consumer category associated with the data centers.*

45. Please provide any evidence or analysis that supports the 50% surcharge
46. Is HQD aware of any other jurisdiction that has implemented a surcharge with a similar premium applied only to crypto mining?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page i

**Preamble:**

*[Our translation] First, there has been a real proliferation of tariffs aimed at better regulating the demand from data centers and other high-power loads, with 46 new tariffs identified in 2025 compared to 8 in 2024. The main motivation remains the protection of other categories of consumers, in particular with tariffs reflecting the marginal costs of production and network.*

47. Have any of the tariffs discussed above cited the lack of adoption across the broader industry that is being cited by HQD to in part justify the increase in the CB rate?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page ii

**Preamble:**

*[Our translation] Contractual conditions are intensifying to reduce risks for energy suppliers and their customer base: financial guarantees, long-term contracts with strict exit conditions, and a “take-or-pay” approach. No active peak demand response obligations have been identified to date... but this topic is the subject of active discussion, particularly in jurisdictions with the most constrained grids, such as Texas.*

48. Given the lack of peak-demand reduction activities (i.e. Demand Response or peak shaving) in other jurisdictions, please explain why these tariffs are comparable to the CB rate in particular that includes peak-shaving requirements?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page ii

**Preamble:**

*[Our translation] As mentioned, these tariffs almost always reflect marginal service costs, meaning they are significantly higher than standard industrial tariffs. Depending on the jurisdiction, this translates into higher initial capital contributions, higher power or energy charges, additional tariff components (“riders”), or even the requirement for data center developers to secure new energy supplies themselves. A cost of 13¢/kWh*

*is in line with the average tariffs in neighboring jurisdictions and major development hubs.*

49. Please provide any estimates on the marginal cost of supply in the jurisdictions reviewed?
50. Did Dunsky review the marginal cost of supply in these jurisdictions? If not, why?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page 5

**Preamble:**

*[Our translation] Data centers can support the development of the artificial intelligence and data science ecosystem, notably by providing local computing capacity and encouraging the establishment of technology companies. However, they generally generate more limited economic benefits, particularly in terms of employment, compared to sectors such as manufacturing or heavy industry. In this context, the trend observed in recent years has been a relative deprioritization of data center projects in the allocation of computing power to new large customers. In 2023, only one data center project was among the 11 projects selected by the government. In 2024, none of the 11 selected projects were data centers.*

51. Please provide any analysis that Dunsky has undertaken on the economic benefits of data centres or crypto mining compared to other existing industrial sectors in Quebec?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page 8

**Preamble:**

*[Our translation] This is not a detailed marking exercise; our analysis was based on public databases and pre-existing markup, combined with ad hoc research and estimates, are used to highlight general findings. Our analysis does not take into account any special contracts that may exist, the information about which is often confidential – in its absence, we will infer trends based on a comparison of data center rates and standard rates for which the data is publicly available.*

52. Given that it does not include any provisions for particular tariffs, how useful is it to compare to the tariffs being proposed by HQD that may include demand response obligations?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page 10

**Preamble:**

*[Our translation] For example, in the PJM region, the largest U.S. power grid (serving 65 million people), the latest capacity auction reached \$329 per MW-day, a 1,000% increase in two years. In this area, households and businesses could see price increases of up to 60% over the next five years—particularly due to the soaring demand from data centers.*

53. Please confirm that capacity costs account for a small percentage of total energy costs in PJM.
54. Please confirm that wholesale electricity prices that large load customers would pay in PJM have not increased to the same extent as being proposed by HQD.
55. Please confirm that most large load customers that purchase electricity from the wholesale market are not charge that marginal cost (i.e. the all-in PPA price) that is being proposed by HQD.

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page 14

**Preamble:**

*[Our translation] Almost unanimously, the jurisdictions studied developed these tariffs primarily to minimize, or even avoid, the impact on regular customers. The tariffs were generally designed so that the costs and risks associated with the production, transmission, and distribution of the additional electricity are borne by the users concerned, notably by reflecting, as far as possible, the **marginal costs** of production.*

56. Please define marginal cost of production?
57. Please confirm that we are not discussion the marginal cost of each unit – as is common in wholesale markets with hourly prices – but the all-in PPA price of the new marginal unit added to the grid?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page 14

**Preamble:**

*[Our translation] **The allocation of a better valuation of the electricity resource, in order to reflect the scarcity of the resource, as shown by BC Hydro's auction approach***

*...Regulatory flexibility – although this objective is not explicitly stated, tariffs targeting specific consumer segments (high FU or data center) allow distributors to gain regulatory flexibility. Indeed, this new tariff framework will facilitate future changes in the...*

- 58.** Please provide your views on whether the proposed competitive approach in BC promotes greater economic efficiency than the CB and CD tariffs being proposed by HQD.
- 59.** Please provide your view on regulatory flexibility as it pertains to the CB and CD tariffs being proposed by HQD given that these tariffs are not expected to change based on increases/decreases in demand or marginal supply costs.

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page 16

**Preamble:**

*[Our translation] Thus, none of the jurisdictions studied currently incorporate contractual mechanisms forcing data centers to reduce their consumption according to a schedule.*

- 60.** In your view, should demand response obligations of customers being served by HQD be considered when setting the marginal cost rate being proposed by HQD.

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page 17

**Preamble:**

	<b>Grande puissance Archétype 1</b>	<b>Centre de données Archétype 1</b>	<b>Grande puissance Archétype 2</b>	<b>Centre de données Archétype 2</b>	<b>Différences entre Grande puissance et Centre de données</b>
<b>Arizona Public Services Arizona</b>	11,16	14,48	11,15	14,47	3,32 (~30%)
<b>Chelan County Public Utility District Washington<sup>B</sup></b>	3,15	6,05 - 8,48 <sup>C</sup>	3,15	6,01 - 8,44 <sup>C</sup>	2,88 - 5,31 (~168%)
<b>El Paso Electric Texas<sup>D</sup></b>	9,27	9,44	9,26	9,42	0,15 (~2%)
Notes méthodologiques : Les coûts moyens pour les différents tarifs présentés au Tableau 1 sont issus d'un exercice d'estimation, assumant ainsi un profil de charge uniforme à l'année à fins de simplification.					

**61.** Do you have a similar data table for neighbouring jurisdictions, such as Ontario, New Brunswick, New York or any of the New England States?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#))

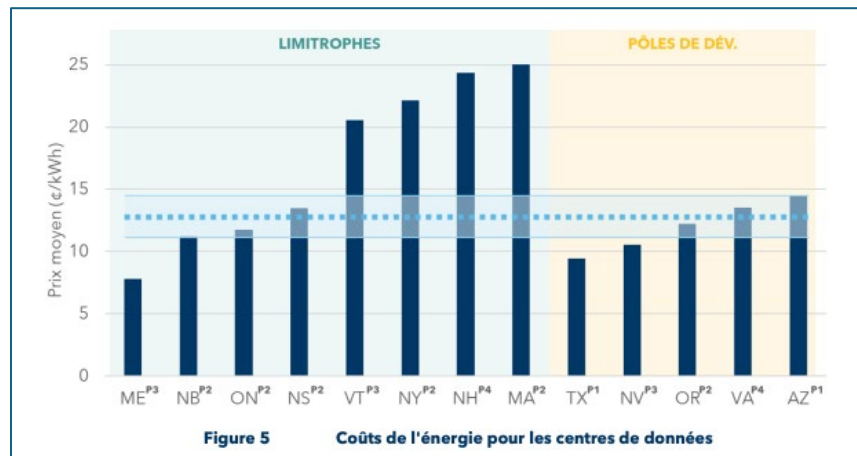
**62.** Est-ce que HQD a analysé la valeur potentielle de la récupération de chaleur qui est unique des activités de minage cryptographique aux chaînes de blocs?

**63.** Est-ce que HQD a analysé la façon dont les fournisseurs d'électricité au Texas gèrent les activités de minage cryptographique aux chaînes de blocs?

**Reference:**

- R-4333-2026, HQD-1, Document 1.2 (Dunsky Report) ([B-0005](#)), page 19

**Preamble:**



64. Dunsky provides values for the price of electricity for large consumers in Ontario (and other jurisdictions). Can Dunsky confirm the following:
- Large consumers in Ontario are able to reduce their electricity supply costs through the province's Industrial Conservation Initiative (ICI)?
  - Large volume consumers are known as Class A customers?
  - Based on published 2025 values by the IESO, the actual total supply cost for class A customers was \$below \$83/MWh.
    - The \$83/MWh is calculated by taking the total cost allocated to Class A customers (\$863 million) and dividing it by the TWhs of Class A consumption (44.9) to get a Global Adjustment cost of \$19.22/MWh.
    - This Global Adjustment value is then added to the weighted average spot price of \$64.1/MWh.
  - Confirm that \$83/MWh likely represents that highest price a large industrial customer would pay, as they can reduce their Global Adjustment costs by reducing demand during the peak 5 hours and can also reduce consumption during high price hours in the hourly wholesale market?
    - See link below for values: <https://www.ieso.ca/-/media/Files/IESO/Power-Data/data-directory/Global-Adjustment-Components-Costs-Consumption-by-Class.xlsx>
    - 2025 wholesale price was published by the IESO: <https://www.ieso.ca/corporate-ieso/media/year-end-data>