



Allocation of a 300 MW block of power and associated energy to non-firm service for cryptographic use applied to blockchains

Request for Proposals Document A/P 2019-01

Consolidated document on October 1, 2019

[Integrating Addendum 1 issued on June 14, 2019, Addendum 2 issued on June 28, 2019, Addendum 3 issued on August 14, 2019 and Addendum 4 issued on October 1, 2019]

IMPORTANT NOTICE

This document integrates Addenda 1, 2, 3 and 4 into the request for proposals document A/P 2019-01 issued on June 5, 2013. This consolidated document is made available to potential bidders for the sole purpose of facilitating the reading of the call for tenders document. In case of discrepancy between the consolidated document and the original version of the request for proposals document A/P 2019-01 as amended by Addenda 1, 2, 3 and 4, the latter shall prevail.

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Disclaimer

This document is provided in English as a courtesy measure only and should be treated as such. It is to be noted that, to the best extent of our knowledge, the English version of this document is adequate. However, should any discrepancies be noticed between this document and its French version, the latter shall prevail in the interpretation of the information contained therein.

Background

As part of its electric power distribution activities, Hydro-Québec (the **Distributor**) is an enterprise carrying out certain activities, such as electric power distribution, that are under the jurisdiction of the Régie de l'énergie, as provided for in the *Act respecting the Régie de l'énergie*.

The Distributor is launching this request for proposals (the **Request for Proposals**) in accordance with the Régie de l'énergie's Decision D-2019-052, D-2019-078 and D-2019-119, to allocate a 300 megawatt (**MW**) block of power and associated energy to *non-firm service for cryptographic use applied to blockchains*, taking into account the concerns expressed by the Québec government in its Order-in-Council No. 646-2018 of May 30, 2018 and the Québec Minister of Energy and Natural Resources' ministerial order No. AM 2018-004 of May 31, 2018.

The Distributor has retained the services of Raymond Chabot Grant Thornton to assist in the tendering process and to act as its official representative (**Official Representative**). The Official Representative's contact information is provided in Article 4.2.

Unless otherwise indicated, all amounts appearing in this Request for Proposals document are expressed in Canadian dollars (\$/¢).

Chapter 1 presents the general provisions of the Request for Proposals, Chapter 2 describes the eligibility requirements, Chapter 3 describes the selection process, and Chapter 4 provides instructions for bidders.

Lastly, the annexes to the Request for Proposals are available on the Distributor's website (<https://www.hydroquebec.com/blockchain/>), under the "Selection process" tab, in the "Documentation" sub-menu, and form integral part of the Request for Proposals.

1 General provisions

The Rates and Conditions of Service for Cryptographic Use Applied to Blockchains (Annex 8) apply to bidders selected under the Request for Proposals; these rates and conditions are in addition to Hydro-Québec's Electricity Rates for its Electricity Distribution Activities (Annex 9) and Hydro-Québec's Conditions of Service for its Electricity Distribution Activities (Annex 10), all of which are in effect and set by the Régie de l'énergie.

The *Electricity Rates* establish all prices, their conditions of application and the calculation methods that apply to the billing of electricity and services supplied by the Distributor under a *contract*. The *Conditions of Service* establish conditions related to the electricity service contract, billing and payment methods, modes of supply and connection to the system, and the *customer's* and the Distributor's rights and responsibilities.

1.1 Definitions

Unless the context requires otherwise, the terms indicated in italics in this Request for Proposals are defined in Annex 1. These defined terms are in addition to those starting with a capital letter in the text and those provided in Article 1.1 of the *Electricity Rates* and Article 21.1 of the *Conditions of Service*.

1.2 Quantity offered

For interested bidders, the Distributor is reserving a 300 MW block of power and associated energy to *non-firm service*, including a block of at least 50 MW reserved for *projects* of 5 MW or less. The Distributor may apply a 10% margin over or under the 300 MW quantity offered.

Contract power must be at least 50 kilowatts (**kW**) and no more than 50 MW.

1.3 Non-firm service

Bidders must make a commitment for non-firm service, according to the following terms:

- the *contract's* maximum power demand must not exceed 5% of the maximum recorded during the previous 12 *consumption periods*, on two (2) hours' notice by the Distributor prior to the start of each curtailment period. Demand curtailment requests may apply to a maximum of 300 hours per year, from April 1 of one year to March 31, inclusive, of the next year, without compensation and without further restrictions as to the number or duration of curtailment periods;
- if the *customer* consumes electricity during a curtailment period, all consumption above the 5% limit during this period will be billed at 50¢/kWh;

(*non-firm service*).

1.4 Contractual undertakings

Each bidder chosen under the selection process must sign a *draft-design agreement* and a *connection agreement* with Hydro-Québec, as described in Article 4.18.

The bidders' undertakings and characteristics specific to their bid will be reflected in these agreements.

1.4.1 Consumption undertaking

In their Bid Form, bidders must provide the following information for the *electrical installation*:

- *contract power*¹;
- *contract LF (load factor)*;
- requested energization date;
- required *scaling*, if applicable.

Based on this data, the Distributor will calculate the bidder's consumption undertaking, expressed in kWh/year, which, for each *contract year*, corresponds to the product of the *contract power*, the *contract LF* and the total number of hours in the *contract year* in question (***contract energy***). The *contract energy* will be adjusted to account for any *scaling* during the applicable period.

The bidder's consumption undertaking is established over a period of five (5) consecutive years following the *date on which service is first established to the electrical installation (consumption undertaking)*.

The terms for failure to fulfill the *consumption undertaking* by the *customer* are described in Article 1.5.1.

As described in more detail in Article 3.4, the Distributor will give preference to *projects* with the most timely *scaling* and *service establishment date*, and with the highest *contract LF*.

1.4.2 Economic development undertakings

To their bids, bidders must attach information regarding their undertakings with respect to the following three (3) criteria for economic spinoffs in Québec:

- number of direct jobs in Québec per MW;
- total payroll of direct jobs in Québec per MW;
- capital investment in Québec per MW;

(***economic development undertakings***).

The factors to be considered for the purpose of establishing *economic development undertakings* are broken down in the tables presented in section 4.1 of the Bid Form. Bidders must complete these tables in accordance with the instructions and terms indicated.

The bidder's undertakings regarding the number of direct jobs in Québec and the total payroll associated with these jobs must correspond to the number of jobs and total payroll that the bidder undertakes to create during the operating period. These undertakings must be ongoing and maintained over a period of five (5) consecutive years following the *date on which service is first established to the electrical installation*.

The undertaking regarding investments in Québec is a one-time undertaking that must correspond to the capital investment that the *customer* undertakes to make by the beginning of its *electrical installation's* operating period, at the conclusion of its *scaling*, if applicable.

¹ For a bidder holding an *existing contract*, *contract power* is equivalent to the power requested in addition to the *existing contract*.

The *economic development undertakings* of each bid will be evaluated in Step 2 of the selection process. The rules for scoring *economic development undertakings* are defined in Article 3.3.1.

The terms for failure to fulfill the *economic development undertakings* by the *customer* are described in Article 1.5.2.

1.4.3 Environmental undertaking

If applicable to their *project*, bidders must attach to their Bid Form information regarding their environmental undertaking to recover a portion of the energy from thermal waste produced by *electrical appliances and equipment* in order to route it to *users* wanting to exploit this *recovered energy*.

For the purposes of this Request for Proposals, the energy savings corresponds to the following ratio:

$$\text{Energy savings ratio} = \frac{\text{Electricity consumption avoided through heat recovery}}{\text{Total electricity consumption}} \times 100$$

(energy savings ratio).

The bidder's undertaking, expressed in terms of the *energy savings ratio*, is defined as its environmental undertaking (**environmental undertaking**).

Bidders' *environmental undertaking* will be evaluated in Step 2 of the selection process. The rules for scoring the *environmental undertaking* are defined in Article 3.3.2.

The terms for failure to fulfill the *environmental undertaking* by the *customer* are described in Article 1.5.2.

1.4.3.1 Identifying user(s) of recovered energy

In their bids, bidders must identify at least one *user* of the *recovered energy*. To that end, bidders must attach to their bid a copy of the contract signed with the *recovered energy user* or, if the bidder does not have a signed contract at the time of its bid submission, the bidder must provide any letter of intent or agreement in principle between the parties in that regard.

If the bidder and the *recovered energy user* constitute one and the same legal entity, the bidder must include in its bid an attestation, signed by one of its authorized officers or directors, stating that it undertakes to use the *recovered energy* from *electrical appliances and equipment*.

1.4.3.2 Recovered energy exploitation process design report

In Section 4.2 of the Bid Form, bidders must provide a report signed and sealed by an engineer. Section 4.2 of the Bid Form describes the information to be presented in the report. The Distributor reserves the right to request any additional information to the submitted report, as needed.

1.4.3.3 Performance test

No later than 12 months after the *date on which service is first established* to the *electrical installation*, the *customer* must conduct a performance test, at its own expense, to confirm that it is

fulfilling its *environmental undertaking*. This performance test must be conducted and signed by an independent engineering firm, and the test report issued by the firm must be sent to the Distributor within 30 days of the performance test.

Two (2) months before the start of the performance test, the engineering firm must send the Distributor the performance test procedure. The Distributor reserves the right to comment on the performance test procedure and/or witness the performance test.

1.5 Terms for contractual undertakings not fulfilled

1.5.1 Terms for *consumption undertaking* not fulfilled

If the *real energy consumed* is less than the *contract energy* for a given *contract year*, 1¢/kWh multiplied by the consumption difference in kWh will be billed to the *customer*. For the purposes of this calculation, any amount of energy not delivered to the *customer* during a curtailment period associated with the *non-firm service* is added to the *real energy consumed*.

For a given *contract year*, the amount to be paid by the *customer* for failure to fulfill their *consumption undertaking* is equal to:

$$(\text{contract energy} - (\text{real energy consumed} + \text{energy not delivered during curtailment period}))^2 \times 1\text{¢/kWh}$$

In all cases, the sum of the amounts to be paid by the *customer* for failure to fulfill their *consumption undertaking* may not exceed the amount of the financial guarantee, as calculated according to the formula presented in Article 4.18.1.2.

The provisions of this article are applicable, with the necessary adaptations, to selected bidders from a *municipal system* who have accepted the *notice of acceptance*.

1.5.2 Terms for *economic development undertakings* and *environmental undertaking* not fulfilled

Fulfillment of the *economic development undertakings* and, if applicable, the *environmental undertaking* must be maintained for five (5) consecutive years following the *date on which service is first established* to the *electrical installation*. These undertakings will be reproduced in the *connection agreement* to be signed. If the *customer* fails to fulfill its undertakings, in whole or in part, an increase in the applicable price will be applied to the *real energy consumed*.

This increase is determined as follows:

- i. If the *customer* fulfills 50% or more of each of its *economic development undertakings* and, if applicable, its *environmental undertaking*, as set out in its *connection agreement*, the increase will be equal to the difference between the first-tier energy price at Rate M or the energy price at Rate LG, as the case may be, and the *disincentive rate*, prorated to the number of undertakings not fulfilled, as follows:
 - o a single undertaking not fulfilled – 33% of the difference;
 - o two undertakings not fulfilled – 66% of the difference;

² The result of this formula cannot be less than zero.

- three or more undertakings not fulfilled – 100% of the difference.

The increase will be applied for a maximum period of 12 months or until the *customer* rectifies all identified defects, whichever comes first. If the *customer's* undertakings remain unfulfilled at the end of this period, the *disincentive rate* will apply.

- ii. If the *customer* fails to fulfill 50% or more of its *economic development undertakings* or, if applicable, its *environmental undertaking*, as indicated in its *connection agreement*, the *disincentive rate* will apply. The *disincentive rate* will apply until the defect(s) is(are) corrected in whole or in part, in which case the increase set out in this article will apply.

The *customer* must provide an annual declaration attesting to its fulfillment of its *economic development undertakings* and, if applicable, its *environmental undertaking*. This declaration must meet the following criteria:

- It must be signed by one of the *customer's* senior officers;
- It must be provided within 30 days following every anniversary of the *date on which service is first established* to the *electrical installation*;
- It must contain all the elements needed to attest to the *customer's* fulfillment of its undertakings.

A sample declaration is appended to the standard *connection agreement* (Annex 7), for information purposes.

At its discretion, the Distributor may require the *customer* to provide it with an attestation, at its own expense, from an independent firm, establishing the results obtained regarding its *economic development undertakings* and its *environmental undertaking*, if applicable.

The Distributor may, at any time, conduct audits or retain the services of an independent firm to conduct audits aimed at determining whether the *customer* is fulfilling its *economic development undertakings* and, if applicable, its *environmental undertaking*. In such case, the Distributor may ask the *customer* in writing to send it the information that the Distributor or the independent firm needs to conduct the audit. The *customer* must provide this information within 30 days of the date of the Distributor's written request. If the requested information is not provided on time, or if the provided information fails to confirm fulfillment of each of the above-mentioned undertakings, the *customer* will be deemed to be in default and the *disincentive rate* will apply.

1.6 Connection to the Hydro-Québec system

The terms for the costs of the work are presented in Article 3.4.1.

Hydro-Québec work for the purpose of connecting the *electrical installation* and, if applicable, strengthening the required power distribution and transmission systems, as defined in the *connection agreement*, will be carried out by Hydro-Québec.

All costs for this work will be the selected bidder's responsibility, with no possibility of reimbursement, and they must be paid by the selected bidder before the work begins.

1.6.1 Connection type

Hydro-Québec establishes the layout of the power distribution system and determines the work needed to connect your *project*, favouring the least costly technical solution.

Medium-voltage three-phase electricity is supplied up to a maximum of 260 A. Beyond that, Hydro-Québec determines if your *electrical installation* must be supplied at medium voltage or high voltage.

Connections may be subject to authorization under the *Environment Quality Act* or any other regulation in effect, such as by the Commission de la protection du territoire agricole du Québec (CPTAQ).

Annex 11 presents a summary of implications by connection type.

2 Eligibility requirements

2.1 General requirements

To qualify to participate in the Request for Proposals, bidders must comply with all terms and conditions of this document, including its annexes, and submit the Bid Form containing all requested information and documents.

2.2 Eligible bidders

A person or entity, a corporation, a trust acting through its trustee or an organization whose *project* requires electricity consumption for *cryptographic use applied to blockchains* and that must be served by Hydro-Québec from the *integrated system* are eligible for the Request for Proposals.

A *contract* is considered to be for *cryptographic use applied to blockchains* if the *contract power* corresponding to such use is at least 50 kW.

The *electrical installation* for *cryptographic use applied to blockchains* must have a separate *contract*, separate metering and separate billing, with no possibility of combining. For the purposes of the Request for Proposals, only one bid may be selected for a given *site*.

The connection and use of the *electrical installation* must, at all times, comply with the legal provisions and standards in effect. The *customer* is responsible for all charges incurred for compliance with requirements, particularly those related to metering.

2.3 Bid bond

Upon submitting their bid, bidders must attach a bid bond in the amount of \$10/kW based on the *contract power* (***bid bond***).

2.3.1 Acceptable forms of bond

The Distributor reserves the right to reject a bid whose *bid bond* is not attached or is not in compliance with the terms set out in this section, all in accordance with the provisions of Article 4.13.2

The *bid bond* must be in the form of:

- A) an irrevocable and unconditional standby letter of credit conforming to the sample provided in Annex 5 duly signed by a *financial institution*; or
- B) a certified cheque.

Any *bid bond* must be issued by a financial institution that, at all times, meets the following conditions; otherwise, an alternate financial institution may be required:

- 1) It is a Canadian financial institution or a foreign financial institution with a Canadian branch;
- 2) It has at least \$10 million in assets;
- 3) It maintains, at all times, a minimum credit rating of A- by Standard & Poor's, A3 by Moody's or A (low) by DBRS. If a financial institution has a credit rating equal to this minimum threshold and the said credit rating is on a credit watch with a negative outlook, it is not eligible to provide

a *bid bond*. If the rating agencies do not rate the financial institution the same, the lowest credit rating will be used;

(financial institution).

The *bid bond* of unsuccessful bidders will be returned at the end of the Request for Proposals, as provided for in Article 4.12.

The *bid bond* of a selected bidder who does not sign the *notice of acceptance* will be returned within a reasonable time after five (5) business days have passed, as stipulated in Article 4.17.

The Distributor holds the *bid bond* of a selected bidder until it has signed the *draft-design agreement* and paid the costs provided for in this agreement in accordance with Article 4.18.1.1.

2.3.2 Surrender of the *bid bond*

The *bid bond* may be surrendered to the Distributor if:

- i. the bidder withdraws its bid after the bid opening, unless the bid is withdrawn in accordance with the terms stipulated in Article 4.17;
- ii. the selected bidder who has signed a *notice of acceptance* has not signed and returned the *draft-design agreement* and paid the costs set out in this agreement within the time stipulated in its *notice of acceptance*.

3 Selection process

3.1 Introduction

The selection process is illustrated in a diagram in Annex 2 and consists of the following three (3) steps:

- Step 1: Evaluation of bids based on minimum requirements
- Step 2: Ranking of bids
- Step 3: Determination of optimum combination

These three (3) steps are described in greater detail in the following articles.

The Distributor reserves the right to seek the opinion of an independent expert of its choice to determine whether a bidder meets the conditions of the steps, as described below.

3.2 Evaluation of bids based on minimum requirements (Step 1)

To qualify for the Request for Proposals, bidders must satisfy all terms of this Request for Proposals document, including those indicated in Chapter 2, and meet the following minimum requirements:

- The requested electricity service is for *cryptographic use applied to blockchains*;
- The *contract power* is at least 50 kW and no more than 50 MW;
- The bidder has paid the \$2,000 registration fee in accordance with the provisions of Article 4.2.2;
- The *bid bond* is attached to the bid and complies with the terms set out in Article 2.3, subject to the terms set out in Article 4.13.2;
- The bidder has submitted a compliant Bid Form containing all required information and documents.

Bids failing to meet any of the minimum requirements will not move on to Step 2.

3.3 Ranking of bids (Step 2)

The bids meeting the minimum requirements listed in Step 1 will be evaluated on an individual basis according to the criteria and corresponding weightings set out in the following table.

Once the evaluation is completed, the bids will be ranked based on the scores obtained. Only the bidders with the highest scores in Step 2 will move on to the next step in the selection process.

Table 1 – Selection Criteria and Their Weighting

Selection Criteria	Weighting
Economic development criteria: - Number of direct jobs in Québec per MW - Total payroll of direct jobs in Québec per MW - Capital investment in Québec per MW	30 30 30
Environmental criterion: - Energy savings ratio = $\frac{\text{Electricity consumption avoided through heat recovery}}{\text{Total electricity consumption}^{(1)}} \times 100$	10
Total	100

Note 1: To obtain points for this environmental criterion, the *energy savings ratio* must be at least 7.5%.

3.3.1 Québec economic development criteria

Bidders must complete the tables in Section 4.1 of the Bid Form describing their *economic development undertakings* with respect to the following criteria, as defined in Article **Erreur ! Source du renvoi introuvable.**:

- Number of direct jobs in Québec per MW;
- Total payroll of direct jobs in Québec per MW;
- Capital investment in Québec per MW.

A weighting of 30 points is given to each of these selection criteria. The bid that will generate the greatest economic spinoffs for a given criterion will be awarded the maximum points (30) for that criterion. The other bids will be evaluated based on the difference between their undertaking level for a given criterion and the undertaking level of the bid presenting the greatest undertaking on that same criterion. Points for each evaluated criterion will therefore be awarded on a prorated basis for the undertaking of the bid being evaluated and the undertaking of the highest rated bid for each criterion.

3.3.2 Environmental criterion

If applicable to their *project*, bidders must attach to Section 4.2 of the Bid Form all documents, evidence and information concerning their *environmental undertaking*, as defined in Article 1.4.3.

A weighting of ten (10) points is given to this selection criterion. The bid with the greatest *environmental undertaking* will be awarded the maximum points (10) for this criterion. The other bids will be evaluated based on the difference between their undertaking level for this criterion and the undertaking level of the bid with the greatest undertaking. Points for this criterion will therefore be awarded on a prorated basis for the undertaking of the bid being evaluated and the undertaking of the highest rated bid for this criterion.

Bidders with an *environmental undertaking* below 7.5% will receive no points for this criterion.

3.4 Determining the optimum combination (Step 3)

Using the bids selected in Step 2, the Distributor will determine the optimum combination for meeting the quantity offered of 300 MW (+/-10%). Hydro-Québec reserves the right to discuss technical aspects or any other aspect deemed necessary with such bidders.

This combination will aim to maximize the Distributor's electricity sales over the period from January 1, 2020 to December 31, 2024, in accordance with the parameters of the Request for Proposals and irrespective of the Step 2 ranking. The Distributor will therefore give preference to *projects* with the most timely *scaling* (if applicable) and *service establishment date*, and with the highest *contract LF*.

Connection times will be assessed by specialized Hydro-Québec units tasked with planning the connection to the distribution or transmission system, depending on the load characteristics. These assessments will factor in the complexity of the work to be done to connect to the Hydro-Québec system and, if applicable, the work to be done to strengthen the system for the proposed *project*.

The service establishment date to be used for bid analysis purposes will be the later of:

- the energization date requested by the bidder, and
- the *service establishment date* revised by Hydro-Québec based on the estimated duration of the system connection and strengthening work to be done, as applicable.

As a result, a *project* requiring new construction or installations or even modifications to the transmission or distribution systems and that is unlikely to be connected within a short timeframe will be at a disadvantage in the bid analysis.

3.4.1 Work costs

3.4.1.1 Bidders supplied by the Distributor

At the end of Step 3, after completing the bid analysis and determining the optimum combination, the Distributor will notify the selected bidders in writing by way of a *notice of acceptance*. Selected bidders will have five (5) business days to accept the cost assessment for the Hydro-Québec work to be done to connect the *electrical installation* and, if necessary, strengthen the electricity distribution and transmission systems, as indicated in the *notice of acceptance*.

The Distributor will be responsible for any overrun above that estimate.

If the selected bidder accepts the said estimate and connection times by signing the *notice of acceptance*, the bidder must submit a *connection request* and sign the *draft-design agreement* with Hydro-Québec, as described in Article 4.18.1.1, within the time indicated in its *notice of acceptance* and pay the draft design costs stipulated in that agreement.

If a bidder withdraws by not signing the *notice of acceptance* on time, the Distributor will determine a new optimum combination from among the *projects* selected in Step 3, using the *projects* that have already been selected and accepted, in order to meet the quantity offered of 300 MW (+/-10%) while also maintaining the portion reserved for *projects* of 5 MW or less.

4 Instructions to bidders

4.1 Schedule

The following schedule shows the main steps in the Request for Proposals. The dates shown are for information purposes only and are subject to change:

Registration opening date	June 13, 2019
Deadline for submitting Registration Form for Request for Proposals (bidder's Notice of Intent), by 4:00 p.m., Montreal time	October 18, 2019
Deadline for submitting questions, by 4:00 p.m., Montreal time	October 23, 2019
Deadline for submitting bids, by 4:00 p.m., Montreal time	October 31, 2019
Announcement of results to bidders	January 2020

4.2 Registration for Request for Proposals

4.2.1 Registration Form for Request for Proposals

Any interested bidders must complete the registration form provided in Annex 3 and send the registration form along with the registration fee indicated in Article 4.2.2 to the Official Representative at the following address, with the following reference in the subject line, by the deadline indicated in Article 4.1:

HYDRO-QUÉBEC / AP 2019-01 – Blockchains

REGISTRATION

Raymond Chabot Grant Thornton

Re: Hydro-Québec Distribution / Request for Proposals AP 2019-01 – Blockchains

Suite 2000, 600 de la Gauchetière Street West

Montréal, Québec H3B 4L8 Canada

Marked “Confidential”

For interested bidders, this form constitutes their notice of intent to submit a bid under the Request for Proposals. Interested bidders who fail to submit this form and pay the required registration fee on time will not be eligible to submit a bid under the Request for Proposals.

Upon receipt of the registration form and payment of the corresponding fee, the Distributor will send the bidder, through its Official Representative, an acknowledgement of receipt with a confidential user code that it can use to address its questions to the Distributor, in accordance with Article 4.4.

This code must appear on any correspondence regarding the Request for Proposals.

4.2.2 Registration fee

The registration fee for the Request for Proposals is \$2000, all taxes included. It must be paid by certified cheque payable to Hydro-Québec at the time the duly completed registration form is sent to the Official Representative.

This fee is non-refundable.

4.3 One bid per *site*

A bidder may not submit more than one bid for a given *site*. No exceptions. For greater certainty, a bidder may submit more than one bid provided the *projects* are on different *sites*.

4.4 Communications with bidders

Any questions or requests regarding the Request for Proposals must be sent electronically to the Official Representative via the Distributor's website, at the following address:

<https://www.hydroquebec.com/blockchain/>

The Distributor is committed to answering questions addressed to it by registered bidders, within the meaning of Article 4.2, provided that these questions are submitted by the date indicated in Article 4.1. Answers are provided in writing and sent electronically to the bidder who asked the question. All questions and answers will also be posted on the Distributor's website, without identifying the asker.

No interpretation, revision or other communication from the Distributor regarding the Request for Proposals document is valid unless sent in writing by the Official Representative.

The Distributor is not responsible for any information that the bidder obtains verbally or from another source.

4.5 Verification of Request for Proposals document

Bidders are responsible for reading every clause of the Request for Proposals document, fully comprehending the meaning and intent, and informing themselves about the purpose and requirements of all the documents forming an integral part thereof.

During the bid period, if a bidder requires clarification on the content of the Request for Proposals document, they must submit a written request in accordance with the procedure indicated in Article 4.4.

Also, bidders must notify the Official Representative of any discrepancy, contradiction or omission in the Request for Proposals document and, if applicable, obtain any interpretation from the Distributor.

4.6 Addenda

Any amendments to the Request for Proposals document are made by way of an addendum issued by the Distributor, which becomes an integral part of the Request for Proposals document. Addenda are sent electronically to all registrants within the meaning of Article 4.2 and posted on the Distributor's website.

4.7 Bid Form

Bidders must submit their bid using the Bid Form, provided in Annex 4. The electronic form is available on the Distributor's website at the following address:

<https://www.hydroquebec.com/blockchain/>

Bidders must submit a bid meeting all requirements of this Request for Proposals document, and must answer all questions and provide all requested information and documentation.

All supporting documentation must be clearly identified and presented in accordance with the requirements described in the Bid Form, in the same format and following the same order as the Bid Form. Bidders who fail to accurately and completely provide the information requested in the Bid Form may have their bid rejected. If a bidder is of the opinion that a question does not apply to their *project*, the bidder must enter "N/A" as their answer and provide a rationale.

If a bidder is of the opinion that the Bid Form does not allow it to adequately describe the *project* it intends to carry out, the bidder may add supplementary information and pages to the form as needed. However, this does not relieve the bidder from the obligation to provide all information requested in the Bid Form. Any general documentation such as information bulletins and prospectuses containing technical and financial data may be included with the bid. Such complementary documentation will be accepted for information purposes only.

Every exhibit submitted in support of a section of the Bid Form must bear the section number to which it refers. For example, the document submitted in connection with Section 3.3.1 of the Bid Form must be called EXHIBIT 3.3.1.

The bidder's name and the Request for Proposals number must appear on all pages of the bid and on any document that the bidder sends to the Distributor along with the bid.

The Bid Form must be completed electronically using word processing software and signed, with all requested documents attached to it, and submitted in accordance with Article 4.10.

The Request for Proposals document is the property of the Distributor and may be used solely for bid preparation purposes.

4.8 Declaration of potential conflict of interest

If someone holding a position with the bidder that is directly related to the bid preparation, or someone having a financial interest in it, is a relative or partner (namely, father, mother, son, daughter, brother, sister, spouse or common-law spouse, sister-in-law, brother-in-law) of a Hydro-Québec employee participating in the selection process relating to the Request for Proposals, the bidder must inform the Distributor. Such a situation does not deny the bidder the opportunity to do business with the Distributor.

The bidder's declaration must be made using a notice appended to Section 1 of the Bid Form.

4.9 Signing the bid

If the bidder is a person, they must personally sign their bid.

If the bidder is an entity, the bid must be signed by a person duly authorized to do so by its board of directors. A certified copy of the resolution from the bidder's board of directors must be attached to the bid.

If the bidder is a corporation or joint venture, the bid must be signed by each partner or by a person duly authorized by the corporation or joint venture. A power of attorney for each signatory must be attached to the bid.

The bidder must designate a contact person for communications with the Distributor (Section 1 of the Bid Form).

4.10 Bid submission

Bidders must submit their bid to the office of the Official Representative at the address provided in Article 4.2.1, before the bid submission deadline indicated in Article 4.1.

Each bid box or envelope must bear the bidder's name and exact address and the Request for Proposals number, and be marked "**CONFIDENTIAL BID.**"

Bidders must send a signed original hard copy as well as four (4) complete electronic copies (USB key) using Microsoft Office (MS Word and Excel) version 2010 (or older). The Bid Form and each exhibit must be a separate file in the original format. However, documents from third parties or documents bearing signatures may be submitted in PDF, as long as they can be easily printed.

Bidders must attach their original *bid bond* to their bid, and it must be in accordance with the provisions of Article 2.3.

4.11 Bid validity

The terms and conditions of the bid must be valid for 180 calendar days from the bid submission deadline indicated in Article 4.1.

4.12 Duration of Request for Proposals

The Request for Proposals will close on the later of the following dates:

- the date on which the Distributor receives all of the *notices of acceptance* accepted by the selected bidders (Art. 4.17);
- 180 calendar days after the bid submission deadline (Art. 4.1).

4.13 Acceptance or rejection of bids at bid opening

The Distributor reserves the right to reject any bid that it deems to be frivolous or non-compliant, without any recourse for the bidder.

If, during the Request for Proposals process, it is observed that a bidder provided erroneous information or failed to provide relevant information, the Distributor reserves the right to reject any bid submitted by a bidder under the Request for Proposals.

4.13.1 Defects leading to the rejection of bids at bid opening

The following defects will lead to automatic rejection of the bids concerned:

- The bid is received after the deadline (date and time) indicated in Article 4.1. In this case, the bid will be returned to the sender unopened;

- The bid is not written in French or English;
- The bidder did not properly register in accordance with Article 4.2.

For any bid rejected at bid opening, the Distributor will notify the bidder in writing. The *bid bond* will be returned to the bidder.

4.13.2 Defects leading to conditional acceptance of the bid

The following defects will lead to conditional acceptance of the bid, involving a grace period determined by the Distributor for correction or verification.

- The bidder's name is missing;
- The bid is not signed by an authorized person;
- The *bid bond* is not attached to the bid, but it has been demonstrated, to the Distributor's satisfaction, that it was issued before the bid opening date;
- The *bid bond* amount is insufficient;
- The *bid bond* is not in compliance with the terms set out in Article 2.3.
- The bid is not valid for 180 calendar days from the bid submission deadline indicated in Article 4.1;
- The bidder submitted more than one bid for the same *site*.

As soon as possible after bid opening, the Official Representative will inform the bidder of the observed defect and indicate the place and the deadline (date and time) for making the correction or submitting further clarification, as applicable.

Failure to provide the requested information by the indicated deadline will lead to the bid's rejection. In that case, the Distributor will notify the bidder in writing and return its *bid bond* to it.

4.14 Withdrawing a bid

If a bidder withdraws its bid after the bid submission date, the Distributor will cash the *bid bond*, without prejudice to its other rights and remedies.

In this context, the Distributor also reserves the right, in addition and without prejudice to its other remedies, to reject some or all other bids submitted by the bidder, its affiliates or its associates, as applicable.

4.15 Cancellation

The Distributor reserves the right to cancel the Request for Proposals at any time and for any reason, and to reject any one or all of the bids received. In this case, bidders are not entitled to any damages or reimbursement of fees related to the preparation or submission of their bid.

The *bid bond* will be returned to bidders, as applicable.

4.16 Confidentiality

Bids submitted by bidders are confidential.

Bidders acknowledge, however, that the Distributor is required to submit to the Régie any information presented in a bid, including confidential information, whenever the Régie requires the Distributor to do so. In this case, and at the Distributor's request, the bidder's requirements regarding the confidentiality of such information will be forwarded to the Régie.

4.17 Notice to bidders

After completing the bid analysis, the Distributor will notify the selected bidders in writing by way of a *notice of acceptance (notice of acceptance)*.

4.17.1 Bidders supplied by the Distributor

Selected bidders will have five (5) business days to accept the cost estimate for the Hydro-Québec work to be done to connect the *electrical installation* and, if necessary, strengthen the electricity distribution and transmission systems, as indicated in the *notice of acceptance*.

If the selected bidder accepts the estimate of the said costs, it must submit a *connection request* and sign the *draft-design agreement* with Hydro-Québec, as described in Article 4.18.1, within the time indicated in the *notice of acceptance*, and pay the *draft design* costs stipulated in that agreement. The *bid bond* described in Article 2.3 is returned to the selected bidder upon signing of the *draft-design agreement* and payment of the costs of the said work.

If the selected bidder rejects the estimate of the said costs, its bid will be rejected. The *bid bond* described in Article 2.3 will be returned to the bidder.

If the selected bidder accepts the *notice of acceptance* but does not sign the *draft-design agreement* and does not pay the *draft design* costs set out in that agreement, the provisions of Article 2.3.2 will apply.

Unsuccessful bidders are also notified in writing, and the Distributor returns their *bid bond* to them.

4.18 Agreements

The agreements involved will be drafted in French only.

4.18.1 Selected bidders supplied by the Distributor

4.18.1.1 *Draft-design agreement*

Selected bidders must sign a *draft-design agreement* with Hydro-Québec by the deadline indicated in their *notice of acceptance*. The purpose of the *draft-design agreement* is to:

- establish the selected bidder's and Hydro-Québec's *draft-design* undertakings;
- specify the terms related to the cost of connecting the *electrical installation*, including the *service establishment date*.

The costs outlined in the *draft-design agreement* must be paid in full by the selected bidder upon signing of this agreement. A standard *draft-design agreement* is provided in Annex 6.

4.18.1.2 *Connection agreement*

Selected bidders must sign a *connection agreement* with Hydro-Québec. The purpose of the *connection agreement* is to:

- establish the cost of the work to be done, which must be paid in full by the selected bidder upon signing of the *connection agreement*;
- establish the selected bidder's undertakings, as set out in Article 1.4;
- establish the applicable terms in the event of the selected bidder's failure to fulfill its undertakings, as set out in Article 1.5;
- establish the selected bidder's undertakings regarding submitting a financial guarantee for an amount equivalent to one year of consumption at 1¢/kWh, according to the following formula: *contract energy (in kWh/year) × 1¢/kWh*. This financial guarantee is remitted to the Distributor upon signing of the *connection agreement* and is in addition to any guarantee required under the *Conditions of Service*.

The term of the *connection agreement* is five (5) years from the *service establishment date*. After that, the *customer's* supply will continue according to the *Conditions of Service* in effect at the time.

A standard *connection agreement* is provided in Annex 7.

4.19 **Applicable Laws**

The Request for Proposals is governed by the laws applicable in the province of Québec.

Annex 1 Definitions

Definitions

In this document, the following terms have the meanings given here:

contract

an agreement entered into between a *customer* and the Distributor for *electricity service* delivered to a *service address*.

existing contract

an existing *contract* in accordance with the precisions of Section 3 of the *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*.

contract year

every period of 12 consecutive months, starting on the *date on which service is first established* to the *electrical installation* and ending on the 365th day thereafter, which is the date on which the next *contract year* begins.

electrical appliances and equipment

the network of any electric, electronic, mechanical devices, machines, objects, specialized systems and cables designed to be powered by electricity to allow for *cryptographic use applied to blockchains*.

load side

on an electric circuit, the side toward which the power flows. For example, the *service address* is on the load side of the *distribution line*.

draft design

all of the steps required to specify the technical, financial and environmental aspects as well as the engineering and schedule for completing the work necessary to supply the *electrical installation*.

notice of acceptance

as defined in Article 4.17

building

any structure not in contact with any other structure, except a house or a place of business which is semidetached or attached, each one then being considered a building.

customer's service entrance

the portion of the *customer's electrical installation* from the *service box* or *customer substation*, as the case may be, to the *connection point* on the *power distribution system*.

distribution service loop

the portion of the *power distribution system* from the *supply point on the distribution line* to the *connection point* supplying a single *building*.

blockchain

a distributed and secure database, in its current and future versions, in which successive transactions (blocks) between users are recorded in chronological order. Each block is linked to the block before it and so forth going back to the first block in the chain.

customer

an individual, a body corporate, a partnership, an agency acting through its agent, or an organization that is responsible for one or more *service contracts*, that requests the connection of an *electrical installation* or that requests or causes work to be done.

service box

a metal box or cabinet housing the main breaker or switch and constructed so that it may be locked or sealed and the switch or circuit breaker may be manually operated when the service box is closed.

Conditions of Service

Hydro-Québec's conditions of service for its electricity distribution activities, in effect, approved by the *Régie*, which apply to this Request for Proposals, including the *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*.

electrical consumption avoided through heat recovery

the annual energy savings, expressed in electrical kWh and/or thermal kWh, achieved by the *user* through the exploitation of *recovered energy*. The formula for calculating annual energy savings is presented in Table 4.2 of the Bid Form.

total electrical consumption

see the definition of *real energy consumed*.

date on which service is first established (also, service establishment date, initial energizing date)

the date on which Hydro-Québec energizes the new load or the additional load for *cryptographic use applied to blockchains*, as presented in the *connection agreement*. The *service establishment date* to be used for bid analysis purposes will be the later of the energization date requested by the bidder, and the *service establishment date* revised by Hydro-Québec based on the estimated duration of the system connection and strengthening work to be done, as applicable.

connection request

a request to supply electricity to a new electrical installation or an existing one that requires work.

contract energy

as defined in Article 1.4.1

energy not delivered during a curtailment period

for a given *contract year*, the quantity of energy interrupted, expressed in kWh, based on a curtailment request associated with the *non-firm service*.

recovered energy

a quantity of heat, expressed in thermal kWh, contained in the waste heat recovered from the operation of the *customer's electrical appliances and equipment*.

real energy consumed

a quantity of energy expressed in kWh; for a given *contract year*, it corresponds to the *customer's* actual energy consumption.

consumption undertaking
(also, *consumption commitment*)

as defined in Article 1.4.1

economic development undertakings

as defined in Article 1.4.2

environmental undertaking

as defined in Article 1.4.3

draft-design agreement

an agreement relating to a *draft design*, signed by the selected bidder and Hydro-Québec, in which the *draft design* and the parties' undertakings are described.

connection agreement

an agreement signed by the selected bidder and Hydro-Québec which contains a description of the work to be done, costs of the work, lead times and the parties' undertakings.

Contract LF (load factor)

the load factor associated with the *contract power*, expressed as a percentage. The load factor is the ratio of actual energy consumption (in kilowatt hours) to the energy it would be possible to consume using the full maximum power demand throughout the entire *consumption period*.

bid bond

as defined in Article 2.3

electrical installation

any electrical equipment, which includes any generating equipment connected and operated in parallel to the *power distribution system*, and any *customer substation* to which Hydro-Québec supplies or is to supply electricity and which is located on the *load side* of the *connection point*. The electrical installation includes the *customer's service entrance*.

financial institution

as defined in Article 2.3.1

service address

any location on the *load side* of the connection point served by the Distributor.

distribution line

a part of the *power distribution system* that includes all the *support structures*, conductors, *civil works* and equipment required for the distribution of electricity at *medium voltage* and *low voltage*, located

- in a public right-of-way;
- on private property supplying more than one *building*; or
- on two (2) or more adjacent lots.

scaling

the start-up period requested by the bidder to reach the *contract power*, expressed in kW for each month of the applicable scaling.

consumption period

a period during which electricity is delivered to the *customer* and which extends between the two (2) dates used by the Distributor for calculation of the bill;

supply point on the distribution line

the point on the *distribution line* at which the *distribution service loop* begins. If there is no *distribution service loop*, the *connection point* is considered to be the supply point on the distribution line;

connection point

the point where the *distribution service loop* meets the *customer's service entrance*, separating the equipment belonging to Hydro-Québec from that belonging to the *customer*, except for the *metering equipment* installed by Hydro-Québec. If there is no *distribution service loop*, the *supply point on the distribution line* is considered to be the *connection point*.

customer substation

a transformer substation that does not belong to Hydro-Québec, is located on the *load side* of the *connection point*, and supplies electricity to the *service address*.

project

refers to the project that is defined by the bidder in its bid and under which the requested electricity service will be for *cryptographic use applied to blockchains*.

contract power

the quantity of power to be installed, as requested by the bidder and presented in its bid, expressed in kilowatts (kW).

energy savings ratio

as defined in Article 1.4.3

Régie

the Régie de l'énergie, established under the *Act respecting the Régie de l'énergie* (CQLR, c. R-6.01), or any successor.

off-grid system

a system for the generation and distribution of electricity, independent of the main power system.

power distribution system

“a network of installations for the distribution of electric power once it leaves transformation substations, including *distribution lines* at voltages below 44 kV and any equipment located between such lines and *connection points* to consumer installations and, in the case of independent *electric power distribution systems* of the electric power distributor, a network of works, machinery, equipment and installations used for the production, transmission and distribution of electric power,” according to Section 2 of the *Act respecting the Régie de l'énergie* (CQLR, chapter R-6.01).

integrated system

all of Hydro-Québec's power systems, interconnected either directly or through neighbouring power systems. Excludes *off-grid systems* and *municipal systems*.

municipal system

a power system operated by a municipality or by the Coopérative régionale d'électricité de Saint-Jean-Baptiste-de-Rouville, and supplied by the Distributor.

private electric power system

as defined in section 62 of the *Act respecting the Régie de l'énergie*

electricity service

the energizing of the *connection point* and the maintaining of voltage there, whether or not electricity is used.

non-firm service

as defined in Article 1.3

site

any location designated by a lot number or street address, chosen by the bidder to receive the *electricity service*, and for which the associated *contract* will be subject to *cryptographic use applied to blockchains*.

support structures

all equipment, such as poles, guy wires and anchors, needed to support overhead conductors.

Electricity Rates

Hydro-Québec's *Electricity Rates* for its electricity distribution activities, in effect, established by the *Régie*, which apply to this Request for Proposals, in addition to the *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*.

disincentive rate

a rate of 15¢/kWh or any other applicable rate under the *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*.

Rates and conditions of service for cryptographic use applied to blockchains

the rates provided in Annex 8 or any other rates and conditions of service for *cryptographic use applied to blockchains* approved by the *Régie*.

cryptographic use applied to blockchains

the use of electricity for the purpose of operating computer equipment dedicated to cryptographic calculations which, in particular, serve to validate successive transactions made by users of a *blockchain*.

user

an entity, a corporation, an agency acting through its agent, or an organization exploiting *recovered energy* for a commercial or industrial operation outside the perimeter of the *electrical installation* and the *electrical appliances and equipment*

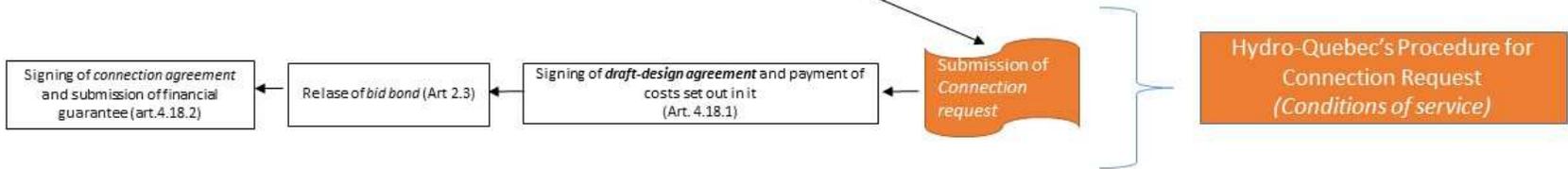
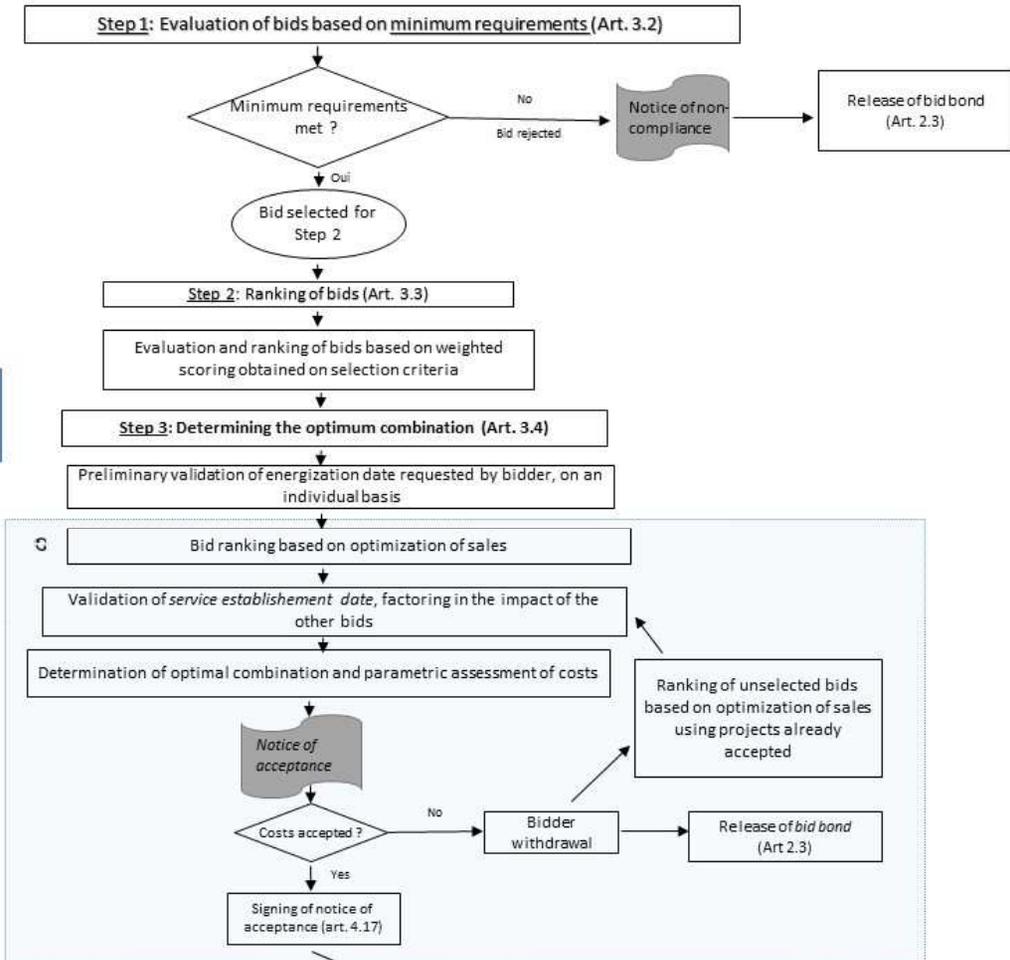
Annex 2

Summary of selection process

**Request for proposals- RFP – 2019-01
Annex 2 – Selection Process Summary**

Closing of the RFP (art 4.12)
Release of *bid bond* (Art 2.3) of projects not selected

- ⓐ Duration of Request for Proposals (art 4.12)**
The Request for Proposals will close on the later of the following dates:
- the date on which the Distributor receives all of the *notices of acceptance* accepted by the selected bidders (art 4.17);
 - 180 calendar days after the bid submission deadline (art. 4.1)



Annex 3 Registration Form

Registration Form for Request for Proposals A/P 2019-01

Notice of intent to bid

1. NAME OF NATURAL PERSON, ENTITY, CORPORATION OR JOINT VENTURE:

2. (IF OTHER THAN A NATURAL PERSON) NAME OF DESIGNATED REPRESENTATIVE:

3. (IF OTHER THAN A NATURAL PERSON) REPRESENTATIVE'S TITLE:

4. FULL ADDRESS:

TELEPHONE: (_____) _____ EXT.: _____

CELL: (_____) _____

EMAIL: _____

I declare that I am authorized to sign on behalf of the entity mentioned above or to be formed, which intends to bid (applicable for all except a natural person).

Signature of designated representative (or natural person):

Name (please print):

The interested bidder is asked to inform the Distributor, in writing, of any changes made to the name of the above-mentioned entity, corporation or joint venture before bids are submitted.

Annex 4 Tender Form



Allocation of a 300 MW block of power and associated energy in non-firm service to electricity consumers for cryptographic use applied to blockchains

Tender Form Request for Proposals A/P 2019-01

Consolidated document on October 1, 2019

[Integrating Addendum 1 issued on June 14, 2019, Addendum 2 issued on June 28, 2019, Addendum 3 issued on August 14, 2019 and Addendum 4 issued on October 1, 2019]

This document integrates Addenda 1, 2, 3 and 4 into the request for proposals document A/P 2019-01 issued on June 5, 2013. This consolidated document is made available to potential bidders for the sole purpose of facilitating the reading of the call for tenders document. In case of discrepancy between the consolidated document and the original version of the request for proposals document A/P 2019-01 as amended by Addenda 1, 2, 3 and 4, the latter shall prevail.

Date of issue: June 5, 2019
Closing date: October 31, 2019

Bidder's name :

Request for Proposals A/P 2019-01
Annex 4 – Tender Form

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Bidder's name :

Request for Proposals A/P 2019-01
Annex 4 – Tender Form

Introduction

This appendix constitutes the **TENDER FORM** for Request for Proposals Document A/P 2019-01 (the "**Request for Proposals**").

The Tender Form must be duly completed and signed, by attaching to it all the documents requested in accordance with the Request for Proposals document.

The bidder must then send his tender in accordance with the instructions set out in article 4.10 of the Request for Proposals document.

The bidder shall present his tender according to the plan of the Tender Form. Where a bidder is of the opinion that a question does not apply to his project, the bidder must enter as response the mention "N/A" and provide a rationale.

Hydro-Québec Distribution (the "**Distributor**") does not assume any responsibility for errors that might result from incomplete or erroneous information, or incoherence in the information submitted by the bidder.

A Word version of the Tender Form is available on the Distributor's website at the following address:

<https://www.hydroquebec.com/blockchain/selection-process/documentation.html>

The shaded areas in the Tender Form contain reminders or indications for the bidder relating to the portion of the tender to be completed. These areas do not have to be reproduced by the bidder in the version of the tender submitted in the context of the Request for Proposals.

Unless the context requires otherwise, the terms indicated in italics are defined in Appendix 1 of this Request for Proposals document. These definitions are in addition to those starting with a capital letter in the text and those provided in Article 1.1 of the *Electricity Rates* and Article 21.1 of the *Conditions of Service*.

Bidder's name :

Request for Proposals A/P 2019-01
Annex 4 – Tender Form

SECTION 1

Bidder's name :

Request for Proposals A/P 2019-01
Annex 4 – Tender Form

1 Identification and declarations

1.1 Certification

Name of bidder:

Name of authorized representative(s):

Bidder's address:

Email:

Québec enterprise number (NEQ)
(if bidder is a legal person):

User code received during registration to the
Request for Proposals:

Number of addenda received :

The terms and conditions of this tender are valid for a period of **180 calendar days** after the deadline for submitting tenders presented in article 4.1 of the Request for Proposals document.

We, the undersigned, having read the Request for Proposals document, its appendices, the documents made available to us by the Distributor as well as the addenda and answers to questions posted on the Distributor's website, have provided the information requested in the Tender Form, which represents our tender. We certify that all information provided and statements made are true and we agree to be bound by the statements, terms and conditions contained in our tender.

Bidder's name :

Request for Proposals A/P 2019-01
Annex 4 – Tender Form

We attach to our tender (check):

- The original of the *tender guarantee* in accordance with the terms and conditions stipulated in article 2.3 of the Request for Proposals document;
- a certified copy of the resolution by the board of directors of the bidder authorizing the authorized representative to submit and sign this tender or, a certified copy of a resolution by the board of directors to which is attached a certificate attesting that the authorized representative has the ability to bind the bidder through this tender;
- a power of attorney for each of the signatories in the case of a corporation or joint venture;
- a conflict-of-interest declaration.

For a legal person, a corporation or a joint venture (add signature pages as required):

Signature of authorized representative

Date

Name (print)

Title of representative authorized to sign

For a natural person:

Signature

Date

Name (print)

Bidder's name :

Request for Proposals A/P 2019-01
Annex 4 – Tender Form

1.2 Person designated for communication with the Distributor

Name of the person:

Title:

Business:

Full address:

Telephone (office):

Telephone (cell):

Email:

Bidder's name :

Request for Proposals A/P 2019-01
Annex 4 – Tender Form

SECTION 2

Bidder's name :

 Request for Proposals A/P 2019-01
 Annex 4 – Tender Form

2 Contract information

2.1 Contract quantities requested

The information in this section is used to establish the *consumption commitment* of the bidder. This information will be reproduced in the *connection agreement*. The duration of the *connection agreement* is five (5) years from the *date on which service is first established*. Later on, the customer's supply will continue according to the *Conditions of service* in effect at the time.

The bidder must provide the following information:

- *Contract power* must be at least 50 kilowatts (kW) and no more than 50 MW;
- *Contract LF (load factor)*;
- Requested commissioning date;
- Required *scaling*, if applicable.

The bidder commits to a <i>non-firm service</i> , as defined at article 1.3 of the Request for Proposals document.	Check for acceptance: <input type="checkbox"/>
--	---

2.1.1 Quantities requested

Table 2.1.1
Quantities requested

Contract power¹	kW
Contract LF (load factor); (based on a 365-day year)	%
Existing contract power (if applicable)	kW

¹ For a bidder holding an *existing contract*, *contract power* is equivalent to the power requested in addition to the *existing contract*.

Based on the data in this section, the Distributor will calculate the bidder's *consumption undertaking*, expressed in kWh/year, which, for each *contract year*, corresponds to the product of the *contract power*, the *contract LF* and the total number of hours in the *contract year* in question (the "**contract energy**"). The *contract energy* will be adjusted to account for any *scaling* during the applicable scaling period, if applicable.

The bidder's consumption undertaking is established over a period of five (5) consecutive years following the *electrical installation's date on which service is first established* (the "**consumption undertaking**")

Bidder's name :

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2.1.2 Requested commissioning date

The commissioning date requested by the bidder is the date on which the bidder undertakes to buy and take delivery of the quantities requested.

Requested commissioning date	DD / MM / YYYY
-------------------------------------	----------------

2.1.3 Requested commissioning date

The *scaling* corresponds to the start-up period following the date of requested commissioning, required to reach the *contract power* expressed in kW for each month where the *scaling* is applicable.

If applicable, please fill in the table below.

**Table 2.1.3
Scaling**

Power during the <i>scaling</i> (in kW) until the contract power is reached												
	1 st Month	2 nd Month	3 rd Month	4 th Month	5 th Month	6 th Month	7 th Month	8 th Month	9 th Month	10 th Month	11 th Month	12 th Month
Maximum power demand (kW)												
Load factor												

The Distributor will calculate, based on the data presented in Table 2.1.3, the *contract energy* during the *scaling*, expressed in kW-month, which corresponds for each month of *scaling* to the product of the maximum power demand entered, the corresponding load factor and the total number of hours in the month concerned.

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SECTION 3

Bidder's name :

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3 Project Information

3.1 Project summary description

The purpose of this section is to provide an overview of the bidder's project. The bidder must therefore provide an outline of the project, including the following information:

- The location of the *site*;
- A map or series of maps at the scale of 1:30,000 or larger, containing the following information:
 - The location of the project;
 - The proposed *site* boundary (cadastral plan);
- The proposed location of *the connection point*;
- Confirmation that the Bidder has read and understood the "Summary of implications by connection type" presented in Annex 11 of the Request for Proposal document.

3.1.1 Location of *site*

3.1.1.1 *Site* address or lot number

<i>Site</i> address or lot number:	
------------------------------------	--

3.1.1.2 *Existing, to be constructed or under construction site*

The bidder must specify if the *electrical installation site* is:

Check if the <i>site</i> exists (✓)	Check if the <i>site</i> is to be built or under construction (✓)
<input type="checkbox"/>	<input type="checkbox"/>

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3.1.2 Connection to the Hydro-Québec system

Connection point

The Bidder must indicate the proposed location of the *electrical installation connection point*, as confirmed by a master electrician, with the geographical coordinates (longitude and latitude) permitting Hydro-Québec to estimate the costs and connection times.

The bidder must also provide the information requested in sections **Erreur ! Source du renvoi introuvable.** and **Erreur ! Source du renvoi introuvable.**

3.1.2.1 Medium or low voltage connection

For a medium or low voltage connection, provide the position of the *connection point*:

Geographical coordinates:	
----------------------------------	--

3.1.2.2 High voltage connection

For a high-voltage connection, provide the position of the *connection point*:

Geographical coordinates:	
----------------------------------	--

3.1.3 Implications by connection type

The bidder must provide confirmation that it has read and understood the technical requirements associated with the type of electrical connection required for its project. These requirements are detailed in the Summary of implications by connection type (Annex 11 of the Request for Proposals document):

- Low voltage connection (maximum 6000 A at 347/600V)
- Medium voltage connection (maximum 260 A in three-phase)
- Medium-voltage or high-voltage connection (beyond 260 A in three-phase, voltage level is Hydro-Québec's choice)

Check to confirm that the implications associated with type of anticipated connection have been read and understood (✓)	<input type="checkbox"/>
--	--------------------------

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SECTION 4

Bidder's name :

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4 Economic development undertakings and environmental undertaking

The information in this section is used to identify the bidder's *economic development undertakings* and, where applicable, the *environmental* undertaking. This information will be reproduced in the *Connector Agreement* or the *Municipal System Agreement*, as applicable.

4.1 Economic development undertakings

The factors to be considered for the purpose of establishing *economic development undertakings* are broken down in the tables presented below. Bidders must complete these tables in accordance with the instructions and terms indicated.

4.1.1 Number of direct jobs in Quebec per MW

The bidder's *undertaking* regarding the number of direct jobs in Quebec must correspond to the number of jobs that the bidder undertakes to create during the *electrical installation's* operating period, at the conclusion of its *scaling*, if applicable. This undertaking must be ongoing and maintained over a period of five (5) consecutive years following the *date on which service is first established* for the *electrical installation*.

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Table 4.1.1
Number of direct jobs in Quebec per MW

Activities	Number of jobs	
	Full-time ⁽⁵⁾	Part-time ⁽⁶⁾
Main activity⁽¹⁾ :		
- Operation of the <i>electrical installation</i>		
Related Activities⁽²⁾ :		
- Equipment manufacturing, assembly, repair or distribution		
- Software development		
- Implementation of service centres or computer support		
- Research and development		
- Valuation of the useful heat produced by <i>the electrical installation</i> ⁽³⁾		
Subtotal		

Total number of direct full-time jobs in Quebec ⁽⁵⁾⁽⁶⁾ :

	(A)
--	------------

Contract Power (section 2.1.1) :

	(B)
--	------------

Number of direct jobs per MW :

	(A / B)
--	----------------

- (1) The jobs grouped in this category are directly related to the bidder's main activity, which is the operation of equipment for *cryptographic use applied to blockchains*. Only jobs that do not exist at the time of the launch of the Request for Proposals are considered.
- (2) This job category refers to jobs assigned to related activities. Related activities are those whose existence are directly attributable to the implementation of the main activity. For the purpose of this evaluation, the jobs associated with these related activities will be credited to the bidder on a pro rata basis for its capital contribution to the activity. For example, a bidder holding 50% of the capitalization of a firm engaged in any of the related activities listed in Table 4.1.1, in which the firm generates 10 time-equivalent jobs, may enter 5 jobs in the table. Only jobs that do not exist at the time of the launch of the Request for Proposals are considered.
- (3) The jobs associated with this related activity must be directly related to heat recovery from the *electrical installation*.
- (4) Enter the number of jobs associated with each of the activities during the period of operation at the end of the expected *scaling*, if applicable. The Distributor will calculate the ratio of the number of jobs / MW by dividing the total number of jobs by the *contract power*.
- (5) For the purposes of the Request for Proposals, full-time employment is 2,000 hours per year.
- (6) The number of part-time jobs set out in the table is determined on the basis of its full-time equivalent. Therefore, one (1) employee hired on a 500-hour basis in a year equals 0.25 full-time jobs. This is the last number that must to be entered on the table.

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4.1.2 Total payroll of direct jobs in Quebec per MW

The Bidder's undertaking regarding the total payroll of direct jobs in Quebec must correspond to the payroll that the bidder undertakes to create during the *electrical installation's* operating period, at the conclusion of its *scaling*, if applicable. This undertaking must be ongoing and maintained over a period of five (5) consecutive years following the *date on which service is first established* for the *electrical installation*.

**Table 4.1.2
Total payroll of direct jobs in Quebec per MW**

Activities	Payroll ⁽¹⁾⁽²⁾⁽³⁾ (\$)
Main activity :	
- Operation of the <i>electrical installation</i>	
Related Activities :	
- Equipment manufacturing, assembly, repair or distribution	
- Software development	
- Implementation of service centres or computer support	
- Research and development	
- Valuation of the useful heat produced by <i>the electrical installation</i>	
Total	

Total payroll of direct jobs in Quebec :

Contract Power (section 2.1.1) :

Total payroll per MW :

	(A)
	(B)
	(A / B)

- (1) The total payroll of direct jobs in Quebec is for only those jobs enumerated in Table 4.1.2.
- (2) Enter the payroll associated with each activity during operation. The Distributor will calculate the ratio of the total payroll / MW by dividing the total payroll by the *contract power*.
- (3) Enter the total payroll on an annual basis including the mandatory employer costs.

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4.1.3 Capital Investments in Quebec/MW

The undertaking regarding investments in Quebec is a one-time undertaking that must correspond to the capital investment that the customer commits to making by the beginning of its *electrical installation's* operating period, at the conclusion of its *scaling*, if applicable.

**Table 4.1.3.
Capital Investments in Quebec/MW**

Activities	Investments ⁽³⁾ (\$)
Main activity⁽¹⁾ :	
- Operation of the <i>electrical installation</i>	
Related Activities⁽²⁾ :	
- Equipment manufacturing, assembly, repair or distribution	
- Software development	
- Implementation of service centres or computer support	
- Research and development	
- Valuation of the useful heat produced by <i>the electrical installation</i> ⁽⁴⁾	
Total	

Total number of direct full-time jobs in Quebec :

	(A)
--	-----

Contract Power (section 2.1.1) :

	(B)
--	-----

Number of direct jobs per MW :

	(A / B)
--	---------

- (1) The investments grouped in this category are directly related to the bidder's main activity, which is the operation of equipment for *cryptographic use applied to blockchains*.
- (2) The investments under this category are associated with the related activities in which the bidder has invested. Related activities are those whose existence is directly attributable to the implementation of the main activity. For the purpose of this evaluation, investments associated with these related activities will be credited to the bidder on a pro rata basis for its capital contribution to the entity carrying on the activity. For example, an investment of \$100,000 in a business engaged in a related activity in which the bidder holds 50% of the capitalization records investments equivalent to \$50,000. This last number must be entered on the table. The Distributor will calculate the investment ratio/MW by dividing the total value of investments by the *contract power*.
- (3) Investments are limited to the acquisition of goods and equipment manufactured in Quebec. The services resulting from the investments must be provided by companies with a place of business in Quebec. Investments for the acquisition or renovation of buildings are excluded from the calculation.
- (4) The investments associated with this activity must be directly related to heat recovery from the *electrical plant*.

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4.2 Environmental undertaking

The information in this section is used to establish the bidder's *environmental undertaking*. This information will be reproduced in the *Connector Agreement*.

If applicable to their *project*, bidders must attach to their Tender Form information regarding their *environmental undertaking* to recovering a portion of the energy from the thermal waste produced by *electrical appliances and equipment* in order to route it to *users* wanting to exploit this *recovered energy*.

For the purposes of this Request Proposals, the energy savings correspond to the following ratio:

$$\text{Energy Saving Ratio} = \frac{\text{Power Consumption Avoided by Heat Recovery}}{\text{Total Power Consumption}} \times 100$$

(The "**energy savings ratio**").

The bidder's undertaking, expressed in terms of the *energy savings ratio*, is defined as its environmental undertaking (the "**environmental undertaking**"). *The energy savings ratio must be at least 7.5%*. Under this threshold, the bidder is not required to provide information for this Section 4.2.

4.2.1 Description of the reclamation of the recovered energy process

In his tender, the bidder must identify at least one *user* of the *recovered energy*. To that end, the bidder must attach to his tender a description of the reclamation procedure and copy of the contract signed with the *recovered energy user* or, if the bidder does not have a signed contract at the time of his tender submission, the bidder must provide any letter of intent or agreement in principle between the parties in this regard.

If the bidder and the *recovered energy user* constitute one and the same legal entity, the bidder must include in his bid an attestation, signed by one of its authorized officers or directors, stating that it undertakes to using the *recovered energy* from the *electrical appliances and equipment*.

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In this section, the bidder must include the following information:

a) *User ID*;

b) a summary description of the reclamation of the *recovered energy* explaining the processes used to recover and reclaim that energy, as well as other environmental benefits generated by this reclamation;

c) monthly values for each of the columns in Table 4.2 – Estimated Energy Balance Profile for a *Contract Year_i*;

d) the value of the guaranteed *environmental undertaking* (in %) and calculated using the ratio detailed in article 1.4.3 of the Request for Proposals document.

%

The bidder must attach a copy for each contract signed between it and the *user* to the effect that the *energy recovered* will be used in whole or in part by a company in Quebec. This contract must contain the following information:

- a) the main activities targeted by the *user* of the energy savings obtained from the reclamation of the *recovered energy*;
- b) the *user's* undertaking to purchase the *recovered energy*, for an annual quantity equal to at least the power consumption avoided by heat recovery (Table 4.2, column D), to achieve the client's *environmental undertaking* (Table 4.2, column E);
- c) the duration of the *energy recovery* contract and the terms and conditions for renewal of the contract. In the event that this contract is not signed at the time of tender submission, the bidder must describe the status of its discussions with *the recovered energy user* and submit a copy of any letters of intent, or agreement in principle, between the parties on this matter.

4.2.2 Recovered energy exploitation process design report

Upon submission of the tender, the bidder shall attach, at its own expense, a signed and sealed report from an engineer confirming that:

- the proposed technology and equipment used for energy recovery is proven. This thermal waste recovery and reclamation process proposed by the bidder must have achieved proven technology maturity. Generally, thermal waste recovery and reclamation processes that have been on the commercial market for at least three (3) years are considered technologically mature;
- the energy balance of the *reclaimed energy* process will be achieved during the construction of the recovery system;

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- monthly values for each of the columns in Table 4.2 – Estimated Energy Balance Profile for a *Contract Year* are demonstrable and feasible;
- the guaranteed *environmental commitment* will be met.

This report shall provide the following information on the characteristics of recovering thermal discharges from *electrical appliances and equipment*:

- the schematic of the thermal discharge recovery process;
- the types of heat transport fluids proposed for the transfer of *recovered energy*;
- the type and technical characteristics of the major equipment connected to the thermal discharge recovery process;
- an energy balance of the *reclaimed energy* reclamation process for a typical year.
- monthly values for each of the columns in Table 4.2 – Estimated Energy Balance Profile for a *Contract Year*;
- an explanation and rationale of the working assumptions leading to the calculation of the data in Table 4.2 – Estimated Energy Balance Profile for a *Contract Year* and to the energy balance;
- any additional information required to clarify the energy balance and design scheme of the thermal waste recovery process;
- floor area (m²):
 - total *electrical appliance* area;
 - total area of computer equipment required for *cryptographic use applied to blockchains*;
- forecast operating hours per year for the *reclaimed energy recovery* process;

The Distributor reserves the right to request any additional information on the report submitted, as needed.

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Table 4.2
Estimated Energy Balance Profile for a Contract Year

	(A) total electrical consumption for each month (kWh électrique)	(B) <i>Energy recovered</i> (thermal kWh)	(C1) <i>Energy loss</i> (thermal kWh)	(C2) <i>unused energy</i> (thermal kWh)	(D) Electrical consumption avoided by heat recovery for each month B - (C1+C2) (electric or thermal kWh)	(E) <i>Environmental undertaking</i> D / A (%)
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						
Total for the year						

For the purposes of Table 4.2:

unused energy

means the net amount of *recovered energy* available but unused, as this energy is surplus to the energy use required by the *user*. This excess energy is due to fluctuations in the *user's* energy requirements or changes in the generation of electrical appliance heat discharges.

energy loss

means energy losses that occur when the *recovered energy* is transferred between the point of generation and the point of use of the thermal discharges.

Annex 5

Irrevocable and unconditional standby letter of credit

- 1- This letter of credit must be issued on the official letterhead of the issuing financial institution.
- 2- The bidder must submit the original *bid bond*, before the submission deadline, to the office of the Official Representative at the address indicated in the Request for Proposals Document A/P 2019-01.

IRREVOCABLE AND UNCONDITIONAL STANDBY LETTER OF CREDIT

No. _____

To HYDRO-QUÉBEC (“**Beneficiary**”)
Senior Management – Strategic Finance and Risk
75 René-Lévesque Blvd. West, 15th floor
Montréal, Québec H2Z 1A4

Date of issue:

At the request of (customer’s name) (the “**Customer**”), whose head office is located at (customer’s address), we, (name and address of issuing financial institution) are establishing for your benefit our irrevocable and unconditional standby letter of credit (the “**Letter of Credit**”) for an amount not exceeding (amount in words) Canadian dollars \$(amount in figures) CAD (the “**Guaranteed Amount**”). The amount payable under this Letter of Credit will be payable to you upon request, notwithstanding any objection or dispute between the Beneficiary and the Customer regarding the Request for Proposals Document A/P 2019-01, upon presentation of the following documents:

1. Your written request for payment signed by a duly authorized representative, specifying the amount of the draw requested, which may not exceed the Guaranteed Amount;
2. The original or a copy of the Letter of Credit.

Any correspondence or request for payment must be presented at or sent to our address indicated above and must refer to the Letter of Credit. We will execute your request for payment no later than two (2) business days following receipt of such request for payment. Your request for payment may be submitted in person or sent by registered mail.

All costs pertaining to the Letter of Credit will be borne by the Customer.

The Letter of Credit will remain in force for a period of one year from its date of issue, until _____, 3:00 p.m., Montréal local time.

The Letter of Credit is irrevocable, unassignable and non-transferable.

By: _____
financial institution’s signing authority (please
print)

By: _____
financial institution’s signing authority (please
print)

(signature)

(signature)

The Letter of Credit is governed by the Uniform Customs and Practice (the “UCP”) for Documentary Credits, Revision 2007, Publication No. 600 of the International Chamber of Commerce. Matters not covered by the UCP will be governed by and interpreted in accordance with the laws in force in Quebec. We acknowledge the exclusive jurisdiction of the courts of Quebec, judicial district of Montréal, to hear any legal proceeding arising from the Letter of credit.

Annex 6

Standard draft-design agreement

This Standard Draft Design Agreement is provided for information only and will be adapted to take into account the characteristics of the bid, the electrical installation and the activities to be carried out by Hydro-Québec as part of the draft design.

DRAFT DESIGN AGREEMENT

signed in Montréal, Province of Québec, on _ _____

BETWEEN:

NAME, a natural person residing at no., address OR a legally constituted legal entity, domiciled at no., address, in the city of City, Province of Québec, POSTAL CODE, acting here through its authorized representative,

hereinafter called the “**Customer**”;

AND:

Hydro-Québec, a public legal entity incorporated under the *Hydro-Québec Act* (CQLR, C. H-5), having its head office at 75, René-Lévesque Boulevard West, in the City of Montréal, Province of Québec, H2Z 1A4, acting here through its Hydro-Québec Distribution division and its authorized representative,

hereinafter called “**Hydro-Québec**”;

The Customer and Hydro-Québec being hereinafter called collectively the “**Parties**” or individually a “**Party**”.

WHEREAS:

- A. following Hydro-Québec's call for proposals A/P 2019-01 for the allocation of a block of 300 MW of power and associated energy in non-firm service to electricity consumers for cryptographic use applied to blockchains, the Customer has submitted a bid which has been selected by Hydro-Québec;

- B. the Customer's bid is for supply of the electrical installation whose characteristics are described in Schedule 1 and whose subscription is for cryptographic use applied to blockchains;
- C. the power to be installed for supply of the electrical installation is
KW/MW;
- D. the technical solution determined by Hydro-Québec for supply of the electrical installation is described in Schedule 2;
- E. Hydro-Québec undertakes to carry out the draft design after which it will determine more accurately the electrical work required for supply of the Customer's electrical installation, the projected date for initial power-up and the costs of this work;

ACCORDINGLY, THE PARTIES AGREE AS FOLLOWS:

1. DEFINITIONS AND INTERPRETATION

- 1.1 The preamble forms an integral part of the *Agreement*.
- 1.2 The following words and expressions, when used in this Agreement, its schedules or any ancillary document to this *Agreement*, have the following meanings unless inconsistent with the context:
 - a) "**ABANDONMENT**" means any of the situations described in Section 8.1;
 - b) "**DRAFT DESIGN**" means all the steps required to carry out the engineering of *Hydro-Québec Electrical Work* required to supply power to the *Electrical Installation* and clarify the technical, financial and environmental aspects as well as the calendar for completion of this work;
 - c) "**BLOCKCHAIN**" means a distributed and secure database, in which successive transactions carried out between its users since its creation are stored chronologically, in the form of blocks linked to each other, according to its current and future variants;
 - d) "**CS**" means Hydro-Québec's Conditions of Service in its electricity distribution activities set by the Régie de l'énergie, in force, which apply to this *Agreement*, including the *Tariffs and Conditions of Service for Cryptographic Use Applied to Blockchains*;
 - e) "**PLANNED DATE FOR INITIAL POWER-UP**" means the preliminary date on which Hydro-Québec intends to power up the *Electrical Installation*, namely on [DATE];

- f) “**AGREEMENT**” means this draft design agreement and the expressions “hereof”, “herein”, “hereunder”, “hereby” and the like refer to this agreement as a whole and not to a particular section, paragraph or subparagraph;
- g) “**CONNECTION AGREEMENT**” means the agreement described in Section 5;
- h) “**END OF THE DRAFT DESIGN**” means the moment when the costs and schedule for completion of the *Hydro-Québec Electrical Work* as well as the *Planned date for initial power-up* of the *Electrical Installation* will be confirmed to the Customer by Hydro-Québec, by incorporation of this information in the *Connection Agreement* to be signed by the Customer;
- i) “**ELECTRICAL INSTALLATION**” means any electrical equipment, including power generation equipment operated in parallel with the electrical distribution grid, and any client substation powered or intended to be powered by Hydro-Québec, downstream of the connection point. Electrical power supply includes the connection of the Customer;
- j) “**TECHNICAL SOLUTION**” means the routing and work required to supply power to the *Electrical Installation*. The technical solution is determined by Hydro-Québec and is described, preliminarily, in Schedule 2;
- k) “**TARIFFS**” mean *Hydro-Québec’s* electricity tariffs in its electricity distribution activities set by the Régie de l’énergie, in force, which apply to this *Agreement*, to which are added the *Tariffs and Conditions of Service for Cryptographic Use Applied to Blockchains*;
- l) “**CIVIL WORKS**” mean the work to be carried out on Hydro-Québec’s underground and/or surface structures including excavation and backfilling allowing the installation of elements such as conduits, foundation blocks, access shafts, electrical connection boxes and chambers, pedestals, etc. For work on Hydro-Québec’s aerial grid, civil works exclude the work of removing, setting and guying poles;
- m) “**HYDRO-QUÉBEC ELECTRICAL WORK**” means the work of electrical wiring carried out by Hydro-Québec or its contractor for connection of the *Electrical Installation* and for connection and, if required, strengthening of the *distribution/transport line*, including installation of electrical wiring and equipment, commissioning and transfer of customers. For work on the aerial grid, electrical work includes the work of removal, setting and guying of poles;
- n) “**CRYPTOGRAPHIC USE APPLIED TO BLOCKCHAINS**” means the use of electricity for operation of computer equipment for the purpose of cryptographic calculations permitting validation of successive transactions conducted between *Blockchain* users.

1.3 the following schedules form an integral part of the *Agreement*:

Schedule 1: Characteristics of the *Electrical Installation*;

Schedule 2: *Technical solution*;

Schedule 3: Technical requirements;

Schedule 4: Mandate – Signature. **[if applicable]**

2. OBJECTIVES OF THE *DRAFT DESIGN*

2.1 The purpose of the *Draft Design* is to specify the preliminary estimate of the cost of *Hydro-Québec Electrical Work* indicated in Section 4.1 as well as the *Planned date for initial power-up*, according to the *Technical Solution*. This information will serve as the basis for the *Connection Agreement* to be concluded between the Parties.

2.2 The characteristics of the *Electrical installation* that will be used by Hydro-Québec to carry out the *Draft design* are indicated in Schedule 1.

3. PAYMENT OF THE COST OF THE *DRAFT DESIGN*

3.1 The Customer shall pay Hydro-Québec an amount of \$X, plus applicable taxes, to cover the costs of producing the *Draft design*.

3.2 This amount is payable according to the terms of the invoice to be sent by Hydro-Québec. (note: it will sent at the latest with the *Agreement* to be signed by the Customer). Cashing of this amount by Hydro-Québec is a prerequisite for the start of the *Draft design*.

4. ESTIMATED COST OF *HYDRO-QUÉBEC ELECTRICAL WORK*

4.1 Based on the characteristics indicated in Schedule 1, the estimated cost of *Hydro-Québec Electrical Work* is \$X, with an accuracy of 30% as to the final amount, plus applicable taxes, which include the cost of completion of the *Draft design*.

4.2 Hydro-Québec will assume a surplus above the amount of \$X + 30% for the cost of *Hydro-Québec Electrical Work* and for the cost of the *Draft design*.

4.3 The preliminary estimate of the cost of *Hydro-Québec Electrical Work* mentioned at Section 4.1 does not include the following activities which shall be performed at

the Customer's expense: acquisition of rights of way or other easements, deforestation and/or felling, cadastral subdivision, acquisition of goods and services supplied by third parties as well as any costs invoiced by a third party such as a telecommunication company and *Civil Works*.

- 4.4 In the event that *Civil Works* are required for underground power supply and that they are carried out by the Customer, the Customer undertakes to conclude an agreement with Hydro-Québec relating to the design, construction, integration and assignment in favour of Hydro-Québec of the assets resulting from the *Civil Works*.

5. CONNECTION AGREEMENT

- 5.1 At the *End of the Draft Design*, Hydro-Québec will send to the Customer the *Connection Agreement* in which it will confirm the *Hydro-Québec Electrical Work* required to supply the *Electrical Installation*, along with its costs and the *Planned date for initial power-up*.
- 5.2 The *Planned date for initial power-up* which will be confirmed at the *End of the Draft Design* will not take into account restrictions on the civil and electrical grids, authorizations required to be issued by any governmental or municipal authority, weather conditions and, if applicable, work to be carried out by the *Commission des services électriques de Montréal*.

6. OWNERSHIP

- 6.1 Hydro-Québec remains owner of the installations upstream of the connection point, including materials necessary for extension or modification of the distribution/transport grid, as well as drawings, estimates, designs and other studies and activities carried out by or for Hydro-Québec, even if the Customer bears the cost of *Hydro-Québec Electrical Work*. Hydro-Québec also remains owner of its measuring equipment installed upstream or downstream of the connection point, to measure the electricity covered by the *Cryptographic use applied to blockchains*.

7. ORDER OF THE RÉGIE DE L'ÉNERGIE

7.1 The *Agreement* will be automatically modified to take account of any order by the Régie de l'énergie that may have an impact on the *Agreement*, completion of the *Draft design*, the *CS* or the *Tariffs*.

8. ABANDONMENT

8.1 There is *Abandonment* in any of the following situations:

- a) When the Customer notifies Hydro-Québec in writing that it is abandoning its request for power supply;
- b) When the Customer changes one of the characteristics of the *Electrical Installation* indicated in Schedule 1;
- c) When the Customer postpones the *Planned date for initial power-up*, unless its request for postponement is justified by exceptional circumstances, is authorized by Hydro-Québec and a deferred date is agreed with Hydro-Québec;
- d) When the Customer is in default in relation to payment of the cost of the *Draft design* according to the terms of Section 3;
- e) When the Customer has not returned the signed *Connection Agreement* to Hydro-Québec within six (6) months of its receipt;
- f) When the Customer disposes of its property for the benefit of all its creditors, files a notice of intention to make a proposal or a proposal within the meaning of the *Bankruptcy and Insolvency Act* (R.S.C., 1985, c. B-3);
- g) When the Customer appoints, consents to or approves the appointment of a trustee, receiver or liquidator in relation to the Customer or to its property;
- h) When a legal proceeding relating to the Customer or its property is initiated pursuant to an insolvency law; or
- i) When an initial order is sought under the *Companies' Creditors Arrangement Act* (R.S.C., ch. C-36) in relation to the Customer or to its property.

- 8.2 In the event of *Abandonment*, the Customer shall pay Hydro-Québec the following amounts:
- a) The actual cost of the *Draft design*, net of the depreciated value of equipment and materials recovered for reuse by Hydro-Québec; and
 - b) The costs incurred by purchases and service contracts as well as compensation to be paid; and
 - c) The cost of work performed, if any; and
 - d) The cost of work required for the *Abandonment*, including the cost of dismantling the installations; and
 - e) The actual costs of engineering and claims management, the whole up to the amount indicated in Section 3.1.
- 8.3 If the amount paid by the Customer under Section 3.1 exceeds the amount of the invoice related to the cost of *Abandonment*, the balance will be reimbursed to the Customer.
- 8.4 In all cases where Hydro-Québec bills the Customer for costs related to the *Abandonment*, the Customer shall pay them in full before it agrees to consider any other request for power supply from the Customer.
- 9. ADMINISTRATION COSTS**
- 9.1 Any amount payable under this *Agreement* and any amount payable under Section 11 must be paid within 21 days after the date of Hydro-Québec's invoice.
- 9.2 Any invoice unpaid by the due date incurs administration fees on the arrears, at the rate applicable on the invoice due date and calculated in accordance with the "*administrative fees applicable to Hydro-Québec billing*" provided for in the *Tariffs*.
- 10. TECHNICAL REQUIREMENTS**
- 10.1 The Customer declares that it is aware of the following standards, accessible at the internet addresses indicated in Schedule 3, which it undertakes to respect for the *Electrical Installation*:

- a) Standard E.21-10 - Low voltage electricity service;
- b) Standard E.21-11 - Low voltage electricity service from distributor substations;
- c) Standard E.21-12 - Medium voltage electricity service.

OR

- d) Standard F.22-01 – Measurement of medium voltage or high voltage electricity;
- e) Standard C.25-01 - Technical requirements for connection of distorting loads to Hydro-Québec's distribution grid;
- f) Standard C.22-03 – Technical requirements for connection of fluctuating loads to Hydro-Québec's distribution grid.

11. TAXES

- 11.1 Values indicated for prices, payments, fees or other amounts indicated in the *Agreement* do not include any tax on the sale of taxable goods and services, which taxes shall be added when applicable.
- 11.2 However, if a payment made by the Customer to Hydro-Québec under this *Agreement* is not taxable under the general provisions, but is instead deemed to include the Goods and Services Tax ("GST") and the Québec Sales Tax ("QST"), in accordance with the *Excise Tax Act* and the *Act respecting the Québec sales tax*, the amount of the payment shall be increased to take into account any tax deemed to be included in such payment.

12. GENERAL PROVISIONS

- 12.1 **Applicable law and election of domicile.** The *Agreement* is governed by the laws and regulations applicable in Québec. The Parties agree, for any claim or legal action for any reason, in relation to the *Agreement*, to choose the judicial district of Montréal, Province of Québec, Canada, as the appropriate place for hearing said claims or legal actions, to the exclusion of any other judicial district that may have jurisdiction over such a dispute as prescribed by law.
- 12.2 **Amendment of the Agreement.** Any amendment of the *Agreement* only takes effect when it is recorded in writing duly signed by both Parties and attached to the *Agreement*.

- 12.3 **Titles and subtitles.** The titles and subtitles of the sections, paragraphs and subparagraphs of the *Agreement* are inserted therein solely to facilitate reading and must not be used for its interpretation.
- 12.4 **Assignment.** The Customer may not assign or otherwise transfer the *Agreement* or the obligations contained therein, without the prior written authorization of Hydro-Québec. The request for authorization shall include a written confirmation from the Customer's successor to the effect that the successor acknowledges that it is bound by the *Agreement* and undertakes to assume all the Customer's obligations under the *Agreement*.
- 12.5 **Two originals.** The *Agreement* is signed in two original copies.
- 12.6 **No waiver.** The failure of or delay by either Party to exercise a right provided for in the *Agreement* does not constitute a waiver of such right, and neither Party will be prevented from later exercise of a right to which it has not previously exercised, in whole or in part.

13. COMMUNICATIONS

13.1 Any notice or any invoice shall be given in writing and sent to the recipient, either by hand, or by mail or email, to the representative indicated below:

CUSTOMER	HYDRO-QUÉBEC
To the attention of	To the attention of
Name	Name
Title	Commercial Delegate
Mailing address	Complexe Desjardins, East Tower, 18 th floor
Telephone:	P.O. Box 10000, Place Desjardins
Email:	Branch
	Montréal (Québec) H5B 1H7
	Telephone:
	Email:

14. NOTICE OF MODIFICATION AND REORGANIZATION

14.1 The Customer shall notify Hydro-Québec without delay in the following cases:

- a) Any change of its address indicated on the first page of this *Agreement*; and
- b) Any modification of its corporate name; and
- c) Any change in the direct or indirect control of its business, including any change in control resulting from a sale of assets and/or shares or other transactions of the same kind.

14.2 The Customer shall provide Hydro-Québec with all supporting documents relating to the situations described in Section 14.1 within 30 days of Hydro-Québec's request.

14.3 This section does not affect Hydro-Québec's rights under Section 12.4 of the *Agreement*.

15. FORCE MAJEURE

- 15.1 The expression “force majeure” in the *Agreement* means any unforeseeable and irresistible event, independent of a Party’s will, which delays, interrupts or prevents full or partial performance by such Party of all or part of its obligations under the *Agreement*. Without limiting the scope of the above, any of the following events constitutes a case of force majeure: war, riot, vandalism, unsolicited intervention of third parties, rebellion, lightning, earthquake, strike, flood, fire and explosion. The Party invoking a case of force majeure shall give immediate notice to the other Party and indicate in this notice, as precisely as possible, the effect of this force majeure on its ability to perform its obligations provided by the *Agreement*.
- 15.2 The Party invoking a case of force majeure shall have its obligations suspended only to the extent that it is unable to carry them out and as long as it acts diligently to eliminate or correct the effects of such force majeure. However, settlement of a strike is left to the entire discretion of the Party facing such difficulty. However, any case of force majeure has no effect on the obligation to pay an amount of money that is due.
- 15.3 When the *Agreement* establishes a due date for fulfillment of an obligation and this date cannot be respected due to a force majeure, this date is extended for a period equivalent to that for which the Party affected by the case of force majeure has been unable to take action. Subject to the notice under Section 15.1 and notwithstanding any other provision of the *Agreement*, non-performance of an obligation due to a case of force majeure, regardless of which Party invokes it, does not constitute a case of default hereunder and does not result in damages or remedies by execution of the obligation itself or of any other nature.

16. TERM

- 16.1 The *Agreement* comes into force on the date mentioned in the header hereof and ends:
- a) at the signing of a *Connection Agreement*, or
 - b) in the event of *Abandonment*, after payment of amounts due by the Customer under the *Agreement* or after reimbursement by Hydro-Québec of the balance referred to in Section 8.3, if any.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties, acting through their duly authorized representatives, have signed the *Agreement* on the date referred to in the header hereof.

Customer Name

by:

Name
Title

Acting here on behalf of the Customer in accordance with the mandate attached in Schedule 4 of the *Agreement*. [if applicable]

Hydro-Québec

by:

Name

**SCHEDULE 1
OF THE AGREEMENT**

Characteristics of the *Electrical Installation*

The characteristics described in the bid will be reproduced here.

**SCHEDULE 2
OF THE AGREEMENT**

Technical solution

SCHEDULE 3 OF THE AGREEMENT

Technical requirements

for *Electrical Installations* connected to the distribution grid

- 1) **Standard E.21-10:** *Low voltage electricity service.*
<http://www.hydroquebec.com/documents-data/official-publications/standard-blue-book.html>
and
- 2) **Standard E.21-11:** *Low voltage electricity service from distributor substations.*
<http://www.hydroquebec.com/data/documents-donnees/pdf/livre-vert.pdf>
and
- 3) **Standard E.21-12:** *Medium voltage electricity service*
<http://www.hydroquebec.com/data/documents-donnees/pdf/livre-rouge.pdf>

OR

for *Electrical Installations* connected to the transport grid

Standard F.22-01: *Measurement of medium voltage or high voltage electricity.*
http://www.hydroquebec.com/publications/fr/norme_fourniture/pdf/moyenne_haute.pdf
(in French only)

Standard C.25-01: *Technical requirements for the emission of harmonics by the installations of customers connected to the Hydro-Québec distribution grid.*
<http://www.hydroquebec.com/transenergie/fr/commerce/pdf/c2501-a1.pdf> (in French only)

Standard C.22-03: *Technical requirements for connection of fluctuating loads to Hydro-Québec's distribution grid.*
<http://www.hydroquebec.com/transenergie/fr/commerce/pdf/c22-03-a1.pdf>
(in French only)

SCHEDULE 4 OF THE AGREEMENT

Mandate – Signature [if applicable]

Annex 7

Standard connection agreement

This Connection Agreement template is for information purposes and will be adjusted to reflect the Customer's electrical installation profile and commitments.

CONNECTION AGREEMENT

Entered into in Montreal, Quebec, on _____

BETWEEN:

NAME, individual residing at address OR legal person duly constituted, located at address, Quebec City, POSTAL CODE, acting here as the authorized representative,

Hereinafter called the "**Customer.**"

AND:

HYDRO-QUÉBEC, legal person established in the public interest under the *Hydro-Québec Act* (RLRQ, c. H-5), whose head offices are located at 75 Boulevard René-Lévesque West, Montreal, Quebec, H2Z 1A4, acting here through its Hydro-Québec Distribution division and its authorized representative,

Hereinafter called "**Hydro-Québec,**"

With the Customer and Hydro-Québec, hereinafter jointly referred to as the "**Parties**" or individually as a "**Party.**"

WHEREAS:

- A.** Further to Hydro-Québec's Request for Proposals A/P 2019-01 to allocate a 300 MW block of power and associated energy to non-firm service to consumers for cryptographic use applied to blockchains, the Customer's bid was selected;

- B. The Customer has asked Hydro-Québec to connect a new electrical installation or add loads to an electrical installation for cryptographic use applied to blockchains;
- C. (If applicable) The Customer requires an increase in load for ~~XX~~ months, from DATE to DATE;
- D. The Customer's commitments will begin on the initial power-up date;
- E. In return for the Customer's commitment to pay all costs for the work set out herein, Hydro-Québec agrees to perform the electrical work described below;

THE PARTIES THEREFORE AGREE TO THE FOLLOWING:

1 DEFINITIONS AND INTERPRETATION

- 1.1 The preamble is an integral part of the *Agreement*.
- 1.2 Hydro-Québec's *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*, its *Electricity Rates* for electricity distribution activities, and its *Conditions of Service* for electricity distribution activities apply to this *Agreement* and to contracts for *Cryptographic Use Applied to Blockchains*.
- 1.2 The definitions in this *Agreement* are added to those set out in the *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*, the *Electricity Rates*, and the *Conditions of Service*, which are available through the links in Appendix 1.
- 1.3 In this *Agreement*, its appendices, or any supplementary materials, the following terms and phrases have the meanings ascribed below unless the context dictates otherwise:
- 1.4
 - a) "**WITHDRAWAL**" refers to any of the situations set out in Section 19.1;
 - b) "**CONTRACT**" means any agreement entered into between a Customer and Hydro-Québec for electricity service provided to a service address, defined as any location on the load side of the connection point served by Hydro-Québec. "Electricity service" means the power-up or energizing of the connection point and the maintaining of voltage there, whether or not electricity is used;
 - c) "**CONTRACT YEAR**" means each period of 12 consecutive months starting on the *initial power-up date* and ending on the 365th day (or 366th day for a leap year), the date on which the next contract year begins;
 - d) "**ELECTRICAL EQUIPMENT**" means all objects; machinery; electrical, electronic or mechanical devices; specialized systems; and cables to be supplied with electricity for *cryptographic use applied to blockchains*;

- e) **“BLOCKCHAIN”** means a distributed and secure database, in current and future versions, where successive transactions (blocks) between users are recorded in chronological order. Each block is linked to the block before it and so forth, going back to the first block in the chain;
- f) **“ELECTRICITY USE AVOIDED THROUGH HEAT RECOVERY”** means annual energy savings, in electrical kWh and/or thermal kWh, achieved by the *User* through the harnessing of *recovered energy*;
- g) **“CS”** means Hydro-Québec's conditions of service for electricity distribution activities, determined by the Régie de l'énergie, which apply to this *Agreement* and include its *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*;
- h) **“DATE ON WHICH SERVICE IS FIRST ESTABLISHED/INITIAL POWER-UP DATE”** means the date when Hydro-Québec will energize an *electrical installation's* **new or added load** for *cryptographic use applied to blockchains*;
- i) **“CONTRACTUAL ENERGY,”** expressed in kWh-year, is calculated by multiplying *contractual power* by *contractual UF* and the number of hours in the *contract year* in question. Contractual energy for each *contract year* is shown in Article 7.1;
- j) **“ENERGY NOT DELIVERED DURING A CURTAILMENT REQUEST”** for a given *contract year* means an amount of energy, expressed in kWh, disconnected after a curtailment request for a *non-firm service*;
- k) **“RECOVERED ENERGY”** means a quantity of heat, in thermal kWh, contained in thermal discharges recovered from the Customer's *electrical equipment*;
- l) **“CONSUMED REAL ENERGY”** means an amount of energy (in kWh) for a given *contract year* that corresponds to the Customer's actual energy consumption;
- m) **“CONSUMPTION COMMITMENT”** has the same meaning as in Section 7;
- n) **“ENVIRONMENTAL COMMITMENT”** has the same meaning as in Section 11;
- o) **“ECONOMIC SPINOFF COMMITMENTS”** has the same meaning as in Section 10;
- p) **“AGREEMENT”** means this connection agreement, and “herein,” “hereto,” “hereunder,” “hereby,” and similar expressions refer to the agreement as a whole rather than a specific section, paragraph, or clause;
- q) **“PRE-PROJECT AGREEMENT”** means the pre-project agreement entered into on **[DATE]** between the Parties;
- r) **“CONTRACTUAL UF”** means the utilization factor associated with *contractual power*. Utilization factor, which is ___%, is the ratio of energy (in kilowatt hours) actually consumed to energy that could be consumed using total maximum power demand throughout the *consumption period*;
- s) **“ELECTRICAL INSTALLATION”** means any electrical equipment, which includes any generating equipment connected and operated in parallel to the power

- distribution system, and any customer substation to which Hydro-Québec supplies or is to supply electricity and is located on the load side of the connection point. The electrical installation includes the customer's service entrance;
- t) "LETTER OF CREDIT" means an irrevocable and unconditional *standby* letter of credit;
 - u) (Where applicable) "INCREASE IN LOAD" means the Customer's requested start-up period for attaining *contractual power*, expressed in kW, each month where the increase in load applies;
 - v) "CONSUMPTION PERIOD" means a period when electricity is delivered to the Customer, which extends between the two dates used by Hydro-Québec to calculate the bill;
 - w) "CONTRACTUAL POWER," expressed in kilowatts (kW)/megawatts (MW), is the Customer's requested amount of power;
 - x) "ENERGY SAVINGS RATIO" has the same meaning as in Section 11.2;
 - y) "TECHNICAL SOLUTION" means the line route and work required to power the *electrical installation*. The technical solution, determined by Hydro-Québec, is described in Appendix 2;
 - z) "NON-FIRM SERVICE" has the same meaning as in Section 8;
 - aa) "DISINCENTIVE RATE" means a rate of 15/kWh or any other applicable rate under Hydro-Québec's *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*;
 - bb) "RATES" means Hydro-Québec's current *electricity rates* for its distribution activities (determined and approved by the Régie de l'énergie), which apply to this *Agreement* and supplement Hydro-Québec's *Rates and Conditions of Service for Cryptographic Use Applied to Blockchains*;
 - cc) "CIVIL WORKS" means work to be performed on Hydro-Québec underground and/or surface civil projects, including excavation and backfilling, to install elements such as conduits, duct banks, access shafts, connection boxes, jointing chambers, pads, etc. Civil works for Hydro-Québec's overhead network do not include pole removal, planting, or guy wiring;
 - dd) "HYDRO-QUÉBEC ELECTRICAL WORK" means electrical wiring work carried out by Hydro-Québec, or its contractor, to connect the *electrical installation* and to connect and, where applicable, reinforce the *distribution/transmission* line, including wiring and equipment installation, commissioning, and customer transfer. Electrical work on Hydro-Québec's overhead network includes pole removal, planting, and guy wiring;
 - ee) "CRYPTOGRAPHIC USE APPLIED TO BLOCKCHAINS" means The use of electricity for the purpose of operating computer equipment dedicated to cryptographic

calculations which, in particular, serve to validate successive transactions made by users of a *blockchain*;

ff) “USER” means a legal person, a company, a trust acting through its trustee, or an organization reclaiming *recovered energy* for commercial or industrial use outside the perimeter of the *electrical installation* and *electrical equipment*.

1.5 The following appendices are an integral part of the *Agreement*:

Appendix 1: Related Links;

Appendix 2: *Technical Solution*;

Appendix 3: Cost Summary;

Appendix 4: Sample Contact List - Curtailment Requests;

Appendix 5: Conditions to be met by the issuer of a letter of credit

Appendix 6: *Letter of Credit*;

Appendix 7: Sample Annual Statement;

Appendix 8: Technical Requirements;

Appendix 9: Terms of Reference – Communications; **[where applicable]**

Appendix 10: Terms of Reference – Signature. **[where applicable]**

2 PURPOSE OF THE AGREEMENT

2.1 The purpose of the Agreement is to cost and outline *Hydro-Québec electrical work* to meet Customer demands, indicate the amount to be paid by the Customer for said work, and set out the Parties' various commitments.

3 HYDRO-QUÉBEC ELECTRICAL WORK - DESCRIPTION AND COSTS

3.1 The cost of the *Hydro-Québec electrical work* (\$X before tax) is the sole responsibility of the Customer. No basic services apply to the Customer's connection request. The *technical solution* is detailed in Appendix 2.

3.2 These costs are detailed in the Cost Summary in Appendix 3.

3.3 Hydro-Québec calculates the cost of its *electrical work* pursuant to sections 9.1, 9.1.1, 9.1.2, 9.6, 9.7.1, 9.7.2, and 9.7.4 of the *Conditions of Service (CS)*, using the calculation table in Schedule IV thereof.

3.4 The *Hydro-Québec electrical work* does not include the following activities, which must be done at the Customer's expense: acquisition of rights of way or other

easements, deforestation and/or pruning, cadastral subdivision, procurement of third-party goods and services, any charges billed by a third party such as a telecommunications company, and *civil works*.

- 3.5 Hydro-Québec will pay any costs in excess of those set out in Section 3.1 for *Hydro-Québec Electrical Work* only.
- 3.6 If civil works are required for underground wiring and will be carried out by the Customer, the Customer must sign an agreement with Hydro-Québec regarding the design, construction, integration, and transfer to Hydro-Québec of resulting assets.

4 INITIAL POWER-UP DATE

- 4.1 The Parties agree to bring the **new or added load** online on [DATE].
- 4.2 Hydro-Québec will make every reasonable effort to respect this date, and no costs or damages may be claimed against it if it cannot do so.
- 4.3 This date does not take into account restrictions on civil and electricity networks, approvals to be issued by government or municipal authorities, weather conditions, or, where applicable, work to be performed by the Commission des services électriques de Montréal.

5 TERMS OF PAYMENT

- 5.1 The Customer must pay Hydro-Québec for the cost of *electrical works* set out in Section 3.1. This amount is non-refundable unless Section 19.5 applies.
- 5.2 The amount of \$X paid by the Customer to cover costs under the *pre-project agreement* has been deducted from the amount specified in Section 3.1.
- 5.3 The amount specified in Section 3.1 will be payable in the manner set out in the Hydro-Québec invoice (note: the invoice will be sent later along with the *Agreement* for the Customer to sign).
- 5.4 Receipt of the payment referred to in Section 5.1, and issuance of the *letter of credit* referred to in Section 9.1, are required before *Hydro-Québec electrical works* can begin.

6 APPLICABLE RATES

- 6.1 As of the *initial power-up date*, the price of energy and power components for any *cryptographic use applied to blockchains* will reflect the rates set out in *Rates* (Section 1 of Chapter 4 or Section 2 of Chapter 5).

7 CONSUMPTION COMMITMENT

- 7.1 The Customer will undertake, over a period of five (5) consecutive years after the *initial power-up date*, to consume a quantity of energy for *cryptographic use applied to blockchains* at least equal to the following *contractual energy*:

7.1.1 For *Contract Year 1* (if there is an increase in load): XX kWh-year;

7.1.2 For each of *contract years 2, 3, 4, and 5*: XX kWh- year;

(“*Consumption Commitment*”)

- 7.2 At the end of each *contract year*, Hydro-Québec reviews the Customer's *actual energy consumption*

- 7.3 In cases where *actual energy consumption* is less than *contractual energy* for a given *contract year*, the Customer is billed for an amount equal to 1¢/kWh multiplied by the difference in consumption in kWh. For the purpose of this calculation, any amount of energy not delivered to the *Customer* during a curtailment request for *non-firm service* will be added to the *actual energy consumption*.

For a given *contract year*, the amount payable by the Customer for failing to meet the *consumption commitment* is equal to:

$(\text{contractual energy} - (\text{actual energy consumption} + (\text{energy not delivered during a curtailment request})^1) \times 1\text{¢/kWh}$

Note 1: The result of this formula cannot be less than 0.

The total amount payable by the Customer for failing to meet its *consumption commitment* may at no time exceed the financial guarantee amount set out in Section 9.1.

- 7.4 Hydro-Québec may revise *contractual power* under Section 15.2.2. of the CS.

8 NON-FIRM SERVICE

- 8.1 Service offered under the Customers' *contract* is a non-firm service.
- 8.2 Hydro-Québec may make demand curtailment requests on 2 hours' notice prior to the start of any given period, during which the Customer's maximum power demand under the *contract* must not exceed 5% of the maximum recorded during the 12 previous *consumption periods*. Curtailment requests may apply to a maximum of 300 hours per year, that is, from April 1 of one year through March 31, inclusive, of the next year, without compensation and without further restrictions as to the number or duration of curtailment periods.
- 8.3 Hydro-Québec will send its notice by automated email and text message to the email addresses and cell numbers on the Customer's contact list, and by automated call to the phone numbers in the order indicated in the list. Appendix 4 has a sample contact list.
- 8.4 Notice sent by automated email and text message will be deemed validly given by Hydro-Québec, and the Customer will be deemed to have received it whether receipt is confirmed or not.
- 8.5 The Customer must provide the contact list on or before the date the *Agreement* is signed and update it annually or as required by sending a new one with the changes clearly indicated. Such changes will take effect seven (7) days after the new list is provided.
- 8.6 If the Customer uses electricity during a requested curtailment period, the Customer will be billed for all consumption exceeding the 5% base during said period at the rate of 50¢/kWh;

9 FINANCIAL GUARANTEE

- 9.1 The Customer must give Hydro-Québec a *letter of credit* for \$X to secure its *consumption commitment*.
- 9.2 The *letter of credit* must be issued by a financial institution that meets all Appendix 5 conditions for such issuers. The *letter of credit* must be pre-approved in writing by Hydro-Québec and attached to Appendix 6 before the *agreement* is signed.
- 9.3 Any *letter of credit* must have an initial term of at least a year and automatically renew at the end of this period unless written notice of non-renewal (with a read receipt) is given at least 90 days in advance.
- 9.4 If a bill is unpaid as a *consumption commitment*, Hydro-Québec may use the *letter of credit* to cover any amount owing without further notice or delay.

- 9.5 Within 90 days after the *agreement* ends, as set out in Section 26.2, Hydro-Québec will release the *letter of credit* if the Customer is not in default under the *agreement*.
- 9.6 The *letter of credit* required under this Section is in addition to any other financial guarantee required by the *conditions of service*.

10 ECONOMIC SPINOFF COMMITMENTS

This section concerns the commitments set out in the Customer's bid.

- 10.1 For a period of five (5) consecutive years after the *electrical installation's initial power-up date*, the Customer will endeavour to meet the following economic spinoff commitments:

10.1.1 Number of direct jobs in Quebec/MW

10.1.2 Total payroll of direct jobs in Quebec/MW

10.1.3 Capital investment in Quebec/MW

(“*Economic Spinoff Commitments*”)

11 ENVIRONMENTAL COMMITMENT

This section concerns the commitments set out in the Customer's bid.

- 11.1 For a period of five (5) consecutive years after the *electrical installation's initial power-up date*, the Customer will endeavour to recover a portion of heat energy from the *electrical equipment* and send it to the *User* wishing to reclaim the *recovered energy*.

- 11.2 The energy savings ratio is set at ()% (hereinafter called the “**environmental commitment**”) and applies for each *contract year*.

$$\text{Ratio d'économie d'énergie} = \frac{\text{Consommation électrique évitée par la récupération de chaleur}}{\text{Consommation électrique totale}} \times 100$$

Energy savings ratio = Electricity consumption avoided through heat recovery/Total electricity consumption x 100

(“Energy Savings Ratio”)

- 11.3 The *recovered energy user*, designated by the Customer, is an ENTITY that operates TYPE OF BUSINESS at ADDRESS (to be modified if the Customer designates multiple users).
- 11.4 Within a maximum of 12 months from the *electrical installation's initial power-up date*, the Customer must arrange, at its own expense, a performance test to confirm that it has met its environmental commitment. The test must be carried out and signed by an independent engineering firm, which must send Hydro-Québec a report on the results within 30 days.
- 11.5 Two (2) months before the performance test, the engineering firm must inform Hydro-Québec of the test procedure. Hydro-Québec will then reserve the right to give input and/or observe the test first-hand.
- 11.6 A Customer wishing to change the *User* in Section 11.3 must get Hydro-Québec's permission and then send it all required information on its *environmental commitment*.

12 STATEMENTS AND CERTIFICATIONS

- 12.1 The Customer must give Hydro-Québec an annual statement, based on the template in Schedule 7, certifying that it has met its *economic spinoff commitments* (and its *environmental commitment*, where applicable). The statement must be sent to the email address on the template and:
- Be signed by one of the Customer's senior executives
 - Be provided within 30 days after each anniversary of the *electrical installation's initial power-up date*
 - Contain all information needed to confirm that the Customer has met its commitments

- 12.2 At its discretion, Hydro-Québec may require the Customer to provide, at its own expense, a statement from an independent firm certifying that it has met its *economic spinoff commitments* (and its *environmental commitment*, where applicable).

13 AUDITS

- 13.1 Hydro-Québec may perform audits at any time at its own expense, or hire an independent firm to do so, to ensure the Customer has met its *economic spinoff commitments* (and its *environmental commitment*, where applicable). In this case, Hydro-Québec may ask the Customer in writing to provide the information needed for it or the firm in question to perform the audits. The Customer must provide said information within 30 days after Hydro-Québec has sent the request.
- 13.2 If it does not provide said information within the allotted timeframe or confirm that it has met each of the aforementioned commitments, the Customer will be deemed in default and the *disincentive rate* will apply.

14 RATE INCREASE

- 14.1 If the Customer fails to meet, in whole or in part, one of its *economic spinoff commitments* (or its *environmental commitment*, where applicable), its electricity rates will increase.
- 14.2 This increase is determined as follows:
- 14.2.1 If the Customer meets 50% or more of each of its *economic spinoff commitments* (or its *environmental commitment*, where applicable), the increase will reflect the difference between the first-tier energy price for Rate M or the energy price for Rate LG and the *disincentive rate* based on the number of unmet commitments, as follows:

- Only one unmet commitment: 33% of the difference
- Two unmet commitments: 66% of the difference
- Three or more unmet commitments: 100% of the difference

The increase is applied for a maximum of 12 months or until the Customer corrects all identified shortcomings, whichever comes first. If at the end of this period the Customer has still not met its commitments, the *disincentive rate* is applied.

14.2.2 If the Customer fails to meet 50% or more of any of its *economic spinoff commitments* (or its *environmental commitment*, where applicable), the *disincentive rate* is applied until the Customer corrects all identified shortcomings in whole or in part, in which case the increase set out in Section 14.2 is applied.

15 METERING

15.1 *Electrical installation* for the *cryptographic use applied to blockchains* should always have a separate contract, separate metering, and separate billing.

16 ADMINISTRATIVE EXPENSES

16.1 Any amount owing under this *agreement* must be paid within 21 days of Hydro-Québec's billing date.

16.2 Any bill unpaid on the due date will incur administration charges on the arrears at the rate applicable on that date, calculated based on the "*Hydro-Québec billing – applicable administration charges*" set out in *Rates*.

17 OWNERSHIP

17.1 Hydro-Québec retains ownership of installations on the supply side of the connection point, including material needed to extend or modify the distribution/transmission network as well as plans, specifications, drawings, and all other studies and activities conducted by or for Hydro-Québec, even if the Customer bears the cost of *Hydro-Québec electrical work*. Hydro-Québec also retains ownership of metering equipment installed on the supply or load side of the connection point to measure electricity subject to *cryptographic use applied to blockchains*.

18 RÉGIE DE L'ÉNERGIE ORDER

18.1 The *agreement* will be automatically amended to reflect any Régie de l'énergie order that could affect the *agreement*, the performance of *Hydro-Québec electrical work*, the *conditions of service*, or the *Rates*.

19 WITHDRAWAL

19.1 Withdrawal occurs when:

- 19.1.1 The Customer notifies Hydro-Québec in writing that it is withdrawing its connection request;
- 19.1.2 The Customer changes one of the features of the *electrical installation* that helped determine the *technical solution*, unless its request for modification is approved by *Hydro-Québec*.
- 19.1.3 The Customer postpones the *initial power-up date*, unless its postponement request is justified by exceptional circumstances, is approved by Hydro-Québec, and a postponement is agreed on with Hydro-Québec;
- 19.1.4 The Customer has not, within the timeframes, paid the amount set out in Section 5.3 or provided the *letter of credit* referred to in Section 9.1;
- 19.1.5 The Client makes an assignment for the benefit of all its creditors or files a notice of intent or a proposal under the *Bankruptcy and Insolvency Act* (R.S.C., c. 1985, c. B-3);
- 19.1.6 The Client appoints, consents to, or approves the appointment of a trustee, receiver, or liquidator in respect of the Customer or its property;
- 19.1.7 Legal action regarding the Customer or its property is taken under an insolvency law; or
- 19.1.8 An initial order regarding the Customer or its property is sought under the *Companies' Creditors Arrangement Act* (R.S.C., c. C-36).

19.2 In the event of withdrawal, the Customer must pay Hydro-Québec the following amounts:

- a) The actual cost of the work, minus the depreciated value of equipment and material recovered for re-use by Hydro-Québec
- b) Costs incurred for purchases and service contracts as well as compensation to be paid
- c) The cost of work done, where applicable

- d) The cost of work made necessary by the *withdrawal*, including the dismantling of installations
- e) Actual costs for engineering and request management

Up to the amount specified in Section 3.1.

19.3 The amount owed under Section 19.2 is in addition to amounts owed by the Customer under the *agreement*, including those set out in sections 6, 7, 8, 14, and 16 of the *agreement*.

19.4 The Customer will be refunded for all overpayments where applicable.

20 TECHNICAL REQUIREMENTS

20.1 The Customer declares that before signing the *agreement* it reviewed the following standards (available at the Internet addresses listed in Appendix 8), which it will endeavour to meet for the *electrical installation*:

20.1.1 Standard E.21-10 – Low-Voltage Electrical Service

20.1.2 Standard E.21-11 - Low-Voltage Electrical Service from Hydro-Québec Distribution Substations

20.1.3 Standard E.21-12 - Medium-Voltage Electrical Service

OR

20.1.4 Standard F.22-01 – Electricity Metering for Medium-and High-Voltage Installations; Without limiting the foregoing, the Customer will specifically work to develop and install, at its own expense, a structure to house metering equipment and a cabinet for the meters;

20.1.5 Standard C.25-01 - Technical Requirements for Connecting Distorted Loads to Hydro-Québec's Distribution System

20.1.6 Standard C.22-03 – Technical Requirements for Connecting Fluctuating Loads to Hydro-Québec's Distribution System

20.2 The Customer must, at any time and upon request, provide studies demonstrating to Hydro-Québec's satisfaction that it has met all technical requirements.

20.3 The Client must obtain and maintain all permits and authorizations required under Quebec laws and regulations. The electrical installation's connection and operation must at all times comply with current legal and regulatory standards and provisions.

21 TAXES

21.1 The values shown for rates, payments, costs, or other amounts under this *agreement* do not include tax on the sale of taxable goods and services, which must be added where applicable.

21.2 However, if a payment made by the Customer to Hydro-Québec under this *agreement* is not taxable under the general provisions but is deemed to include the Goods and Services Tax ("GST") and the Québec Sales Tax ("QST") pursuant to the *Excise Tax Act* and the *Act respecting the Québec sales tax*, the payment amount must be increased to reflect any tax deemed to be included in such a payment.

22 GENERAL PROVISIONS

22.1 **Applicable law and place of residence.** The *agreement* is subject to Quebec laws and regulations. For legal proceedings or claims of any kind concerning the Agreement, the Parties agree to choose the judicial district of Montreal, province of Quebec, Canada as the proper venue to hear such claims or proceedings, to the exclusion of any other judicial district that may have jurisdiction over such a dispute under the law.

22.2 **Amending the *agreement*.** Amendments to this *agreement* will take effect only when evidenced in writing, duly signed by both Parties, and appended hereto.

22.3 **Titles and subtitles.** Headings and subheadings in the *agreement's* sections, paragraphs, and clauses are added for readability only and must not be used to interpret the *agreement*.

22.4 **Successors.** The *agreement* is binding on the Parties and on their successors and assigns.

22.5 **Assignment.** The Customer may not assign or otherwise transfer the *agreement* or the obligations therein without prior written permission from Hydro-Québec. The authorization request must include written confirmation from the Customer's

successor that the successor agrees to be bound by the *agreement* and assume all the Customer's obligations thereunder. It must also include a *letter of credit* pursuant to the *agreement*.

22.6 **Two originals.** The *Agreement* is signed in two original copies.

22.7 **No waiver.** Failure or delay by either Party to exercise a right under this *agreement* is not a waiver of such right, and neither Party will be prevented in future from exercising a right not previously enjoyed in whole or in part.

22.8 **Currency.** All amounts under the *agreement* are in Canadian currency (\$/¢).

23 COMMUNICATIONS

23.1 Under the *Agreement*, unless otherwise specified, all communications, including any notices, authorization requests, invoicing or other, as the case may be, must be provided in writing and properly transferred to their destination, either by hand, or via courier or email, to the representatives indicated below, or under the terms of reference attached to Schedule 9.

CLIENT	HYDRO-QUÉBEC
To the attention of	To the attention of
Name Title: Mailing Address Telephone: Email:	Name Sales Representative Complex Desjardins, East Tower, 18th floor P.O. 10000, Place Desjardins branch Montreal, Quebec H5B 1H7 Telephone: Email:

24 LEGAL NAME CHANGE AND CHANGE OF CONTROL NOTICES

24.1 The Customer shall notify Hydro-Québec without delay of:

24.1.1 Any change of address as indicated on the first page of this *Agreement*;
and

24.1.2 Any change to its legal name; and

24.1.3 Any change in the direct or indirect control of its business, including, without limitation, any change of control resulting from the sale of assets and/or shares, sale, merger, acquisition or other transaction of the same kind.

24.2 The Client must provide Hydro-Québec with any supporting documentation with respect to the situations described in the preceding paragraph within 30 days of Hydro-Québec's request.

24.3 This section does not affect Hydro-Québec's rights under section 22.5 of the *Agreement*.

25 FORCE MAJEURE

25.1 The expression *force majeure* in this *Agreement* means any unforeseen or unavoidable event beyond the control of a Party that delays, interrupts or prevents the Party from the total or partial fulfilment of its obligations under this *Agreement*. Without limiting the foregoing, any of the following events are considered Acts of God: war, riot, vandalism, unsolicited third party intervention, rebellion, lightning, earthquake, strike, flood, fire or explosion. The Party invoking *force majeure* shall promptly notify the other Party of such *force majeure* and in such notice shall, as accurately as possible, indicate how the *force majeure* affects its ability to fulfil its obligations under the *Agreement*.

25.2 The Party invoking a case of *force majeure* shall have its obligations suspended only to the extent that it is unable to act and provided it acts swiftly to eliminate or correct the effects of that force majeure. However, the settlement of a strike is left to the full discretion of the Party facing this problem. Any case of force majeure has no effect on the obligation to pay any amounts owing.

25.3 Whenever the *Agreement* sets out a deadline for fulfilment of an obligation, and in the event this deadline cannot be met, as the result of a *force majeure*, this deadline is postponed for a period of time equal to that during which the Party affected by a case of force majeure is unable to act. Subject to the notification set out at section 25.1 and notwithstanding any other provision of the *Agreement*, failure to fulfil an obligation due to a case of *force majeure*, regardless of the Party invoking it, does not constitute a case of default under these conditions and will not result damages or recourse in carrying out the obligation itself or those of any other nature.

26 DURATION

26.1 This *Agreement* shall become effective on the date first mentioned above.

26.2 It shall terminate at the earlier of the following contingencies, after payment of amounts due by the Client under this *Agreement*:

26.2.1 five (5) years after the *Initial Live-up Date*; or

26.2.2 when the *Subscription* ends; or

26.2.3 in the event of *Abandonment*.

[NEXT PAGE AND SIGNATURE PAGE]

IN WITNESS WHEREOF, the Parties, acting through their duly authorized representative, have executed the *Agreement* on the date first mentioned above.

CLIENT'S Name

by:

Name

Title

Acting here on behalf of the CLIENT in accordance with the terms of reference attached to Schedule 10 of the *Agreement*. *(if applicable)*

HYDRO-QUÉBEC

by:

Name

Title:

SCHEDULE 1 OF THE AGREEMENT

Relevant links

Electricity rates and Conditions of Service:

<http://www.hydroquebec.com/documents-data/official-publications/electricity-rates-conditions-electricity-service.html>

Pricing and Service Conditions for Cryptographic Use Applied to Blockchain Operations:

<https://www.hydroquebec.com/data/chaines-de-blocs/pdf/annexe-8-tarifs-et-conditions-chain-de-blocs.pdf>

(in French only)

SCHEDULE 2
OF THE AGREEMENT

Technical Solution

SCHEDULE 3
OF THE AGREEMENT

Summary of Costs

SCHEDULE 4
OF THE AGREEMENT

Contact List Template - Clearance Requests

Name, First
Name
Function Call
Order
Telephone + ext

Phone number to receive SMS
message Email Address

SCHEDULE 5
OF THE AGREEMENT

Conditions to be met by the issuer of a letter of credit

Any letter of credit must be issued by a financial institution that meets the following conditions, otherwise another financial institution may be required:

1. It is a Canadian financial institution or a foreign financial institution with a Canadian branch.
2. It has at least \$10 billion in assets.
3. It maintains a minimum credit rating of A- by Standard & Poor's at all times, A3 by Moody's or A (low) by DBRS. If a financial institution has a credit rating equal to this minimum threshold, and the credit rating is subject to a credit watch with a negative outlook, it is ineligible to provide a letter of credit. In the event that the credit rating agencies do not grant the same credit rating level to such financial institution, the lowest credit rating is retained.

SCHEDULE 6

OF THE AGREEMENT Letter of Credit

ABSOLUTE AND IRREVOCABLE STANDBY LETTER OF CREDIT

Montréal, the No:

RECIPIENT: HYDRO-QUÉBEC
75 boul. René-Lévesque West, 15th Floor
Montreal, Quebec H2Z 1A4

Senior Management - Strategic Finance and Risk

At the request of *(name of Applicant if different from the client)* (**Applicant**), on behalf of *(client's name)* (the **Client**), whose head office is located at *(Client's address)*, we, Bank *(name and address of the financial institution)*, issue, on your behalf, our irrevocable and unconditional Standby Letter of Credit (the **Letter of Credit**) for an amount not to exceed *(amount in figures)* CA\$ *(amount in words)* Canadian currency)
The (**Guaranteed amount**) to secure payment of amounts owing to

the Beneficiary by the Client and to ensure the fulfilment of the Client's obligations arising from the Connection Agreement for an electrical load of _____ kW/MW for

cryptographic use applied to blockchains, which may be amended from time to time.

Funds will be made available under the Letter of Credit upon presentation of the following documents:

1. your written request for payment signed by a duly authorized representative, specifying the amount of the draw requested, which may exceed the Guaranteed Amount;
2. the original or copy of the Letter of Credit.

Partial draws are permitted up to the Guaranteed Amount.

Any correspondence or requests for payment must be made to us or forwarded to our above address and must refer to the Letter of Credit. We will process your request for payment no later than the business day following receipt of such request for payment in writing, provided it is received no later than 3:00 p.m. Montreal time. If such a request is received after 3:00 p.m. Montreal time, we will process your request for payment within two (2) business days of receipt. Your payment request may be submitted by hand or registered mail.

Any costs related to the Letter of Credit are to be paid by the Applicant or the Client.

The Letter of Credit will remain in effect until (expiry date must be at least 1 year after date of issue), 3:00 p.m. Montreal time. The Letter of Credit will be automatically extended from year to year from its expiry date, unless we notify you, in writing with acknowledgement of receipt, at least 90 days prior to the applicable expiry date, that we choose not to renew the Letter of Credit. Should we provide such notice, the Letter of Credit will continue to be available to submit a payment request until (and including) its then current expiry date.

We will honour any request for payment made in accordance with the Letter of Credit without enquiring about your right to make the request, and despite any objection from the Applicant or Client.

The Letter of Credit is non-transferable.

The Letter of Credit is governed by standard rules and practices for documentary credits, revision 2007, published by the International Chamber of Commerce (Publication No. 600) and, for any instances not governed by these rules, by the law in force in Quebec. We recognize the exclusive jurisdiction of the courts of Quebec to hear any legal action arising from the Letter of Credit.

by: _____ by: _____

financial institution's
signing authority

(please print)

financial institution's
signing authority

(please print)

(signature) (signature)

**SCHEDULE 7
OF THE AGREEMENT**

Annual Reporting Template

**(see attached
document)**

SCHEDULE 8

OF THE AGREEMENT

Technical requirements

for *Electrical Installations* connected to the distribution grid

- 1) **Standard E.21-10:** *Low voltage electricity service.*
<http://www.hydroquebec.com/documents-data/official-publications/standard-blue-book.html>
and
- 2) **Standard E.21-11:** *Low voltage electricity service from distributor substations.*
<http://www.hydroquebec.com/data/documents-donnees/pdf/livre-vert.pdf>
and
- 3) **Standard E.21-12:** *Medium voltage electricity service*
<http://www.hydroquebec.com/data/documents-donnees/pdf/livre-rouge.pdf>

OR

for *Electrical Installations* connected to the transport grid

Standard F.22-01: *Measurement of medium voltage or high voltage electricity.*
http://www.hydroquebec.com/publications/fr/norme_fourniture/pdf/moyenne_haute.pdf
(in French only)

Standard C.25-01: *Technical requirements for the emission of harmonics by the installations of customers connected to the Hydro-Québec distribution grid.*
<http://www.hydroquebec.com/transenergie/fr/commerce/pdf/c2501-a1.pdf> (in French only)

Standard C.22-03: *Technical requirements for connection of fluctuating loads to Hydro-Québec's distribution grid.*

<http://www.hydroquebec.com/transenergie/fr/commerce/pdf/c22-03-a1.pdf>
(in French only)

SCHEDULE 9
OF THE AGREEMENT

Terms of Reference – Communications [if applicable]

SCHEDULE 10
OF THE AGREEMENT

Terms of reference – Signature [if applicable]

Annual declaration

As part of its electric power distribution activities, Hydro-Québec (the **Distributor**) is an enterprise that provides services, such as electric power distribution, that are subject to the jurisdiction of the *Régie de l'énergie*, to the extent provided by the *Act respecting the Régie de l'énergie*.

In accordance with the *Connection Agreement*, the *client* must provide an annual statement attesting to the fulfilment of its *economic spinoff commitments* and, where applicable, its *environmental commitment*. This declaration must be signed by the *client's senior executive*, provided within 30 days of each anniversary date of the *initial power up of the electrical installation*, and must contain all the elements required to attest to the above commitments.

Please return this completed statement to the following email address: HQchainesdeblocs-declaration@hydro.qc.ca

Date of declaration	Quebec enterprise number (NEQ):	Account Number
Day/month/year	XXX	

<i>Client name and home address</i>
ABC Client 123 – Service address Montreal, Quebec H1H1H1

<i>Service address</i>
Provide the address

<i>Initial Release Date of Electrical Installation</i>
Day/month/year

<i>End date of the contract year in question</i>
Day/month/year

Number of direct jobs in Quebec per MW;	XX direct jobs / MW
Total payroll of direct jobs in Quebec per MW;	\$XX / MW
Capital investment in Quebec per MW;	\$XX / MW
Energy savings ratio (as a %)	XX%

Verification. At its discretion, the Distributor may require the <i>Client</i> to provide, at its own expense, certification from an independent firm establishing the results achieved with respect to its <i>economic spinoff commitments and environmental commitment</i> , if any.
--

The Distributor may, at any time, conduct audits or commission an independent company to conduct audits to ensure that the *client* meets its *economic spinoff commitments and environmental commitments*. In this case, the Distributor may request in writing that the *client* provide the information required to carry out the relevant audits. The *Client* must provide this information no later than 30 days following the date of the Distributor's written request. Failure to provide the requested information within the time limit or failure to confirm compliance with each of the foregoing undertakings will result in the *customer* being deemed in default and the *deterrent rate* will apply.

Client Attestation

The *Client* certifies that all information provided in this Declaration is in compliance.

Customer represented by:
Title:

DATE:

Annex 8

Rates and conditions of service for cryptographic use applied to blockchains

TEXTE DES

**TARIFS ET CONDITIONS DE SERVICE POUR
L'USAGE CRYPTOGRAPHIQUE APPLIQUÉ
AUX CHÂÎNES DE BLOCS**

(VERSION ANGLAISE)

(MISE À JOUR SUIVANT LA DÉCISION D-2019-119
RENDUE LE 27 SEPTEMBRE 2019)

*Original : 2019-05-15
Révision : 2019-10-02*

*HQD-4, document 1.2
En liasse*

RATES AND CONDITIONS OF SERVICE FOR CRYPTOGRAPHIC USE APPLIED TO BLOCKCHAINS

The following rates and conditions of service for cryptographic use applied to blockchains supplement the *Electricity Rates and Conditions of Service* approved by the Régie de l'énergie. The definitions set out in Article 1.1 of the *Electricity Rates* and in Section 21.1 of the *Conditions of Service* apply herein.

General Provisions

1. In these rates and conditions of service for cryptographic use applied to blockchains, the following definitions apply:

“blockchain”: A distributed and secure database, in its current and future versions, in which successive transactions (blocks) between users are recorded in chronological order. Each block is linked to the block before it and so forth going back to the first block in the chain.

“cryptographic use applied to blockchains”: The use of electricity for the purpose of operating computer equipment dedicated to cryptographic calculations which, in particular, serve to validate successive transactions made by users of a blockchain.

2. A contract is considered to be for cryptographic use applied to blockchains if the installed load corresponding to this use is at least 50 kW.

Existing Contracts

3. The rates provided for in Section 1 of Chapter 3, Section 1 of Chapter 4 or Section 2 of Chapter 5 of the *Electricity Rates*, as the case may be, shall continue to apply until the Régie de l'énergie sets new rates and conditions for the distribution of electricity by Hydro-Québec strictly for cryptographic use applied to blockchains in the following situations:
 - a. all existing contracts as at June 7, 2018, but only for the installed load already in place for cryptographic use applied to blockchains;
 - b. when the available capacity for cryptographic use applied to blockchains at the connection point was confirmed in writing by Hydro-Québec and agreed to in writing by the customer prior to June 7, 2018.

Terms and Conditions Applicable to Customers Selected Under the Request for Proposals

4. Hydro-Québec is launching a request for proposals to allocate a 300-MW block of power and associated energy to non-firm service for cryptographic use applied to blockchains. The specifications of the request for proposals are described in Appendix 1. All bids selected under this request for proposals will be subject to the following rates and conditions of service:



- a. The rates applicable will be those provided for in Section 1 of Chapter 4 or Section 2 of Chapter 5 of the *Electricity Rates*, as the case may be.
- b. The service offered is a non-firm service. Hydro-Québec may make demand curtailment requests on 2 hours' notice prior to the start of any given period, during which the maximum power demand under the contract must not exceed 5% of the maximum recorded during the 12 previous consumption periods. Curtailment requests may apply to a maximum of 300 hours per year, that is, from April 1 of one year through March 31, inclusive, of the next year, without compensation and without further restrictions as to the number or duration of curtailment periods. Should the customer consume electricity during a curtailment period, all consumption above the 5% limit during this period will be billed at 50¢/kWh.
- c. The customer must pay for the total cost of the work required to fulfill the related connection request, with no possibility of reimbursement. Hydro-Québec must receive payment in full before the work begins.
- d. The customer must fulfill the economic development undertakings and, if applicable, the environmental undertaking set out in the customer's bid for a 5-year period beginning on the date on which service to the customer's electrical installation is first established.
- e. Hydro-Québec may at any time mandate an independent firm to conduct an audit aimed at determining whether the customer is fulfilling the economic development undertakings and, if applicable, the environmental undertaking set out in the customer's bid. In such a case, Hydro-Québec will ask the customer in writing to send it the information required by the independent firm to perform the audit. The customer must provide this information within 30 days of the date of Hydro-Québec's written request.
- f. Should the customer fail to fulfill the economic development undertakings and, if applicable, the environmental undertaking set out in the customer's bid, Hydro-Québec may increase the price applicable to the energy consumed.

The increase will be applied as follows:

- i. Should the customer fulfill 50% or more of each of the economic development undertakings and, if applicable, the environmental undertaking set out in the customer's bid, the increase will be equal to the difference between the first-tier energy price at Rate M or the energy price at Rate LG, as the case may be, and the disincentive rate of 15¢/kWh, prorated to the number of undertakings not fulfilled, as follows:
 - a single undertaking not fulfilled – 33% of the difference;
 - two undertakings not fulfilled – 66% of the difference;
 - three or more undertakings not fulfilled – 100% of the difference.

The increase will be applied for a maximum period of 12 months or until the



undertakings set out in the customer's bid are fulfilled, whichever comes first. Should the customer's undertakings remain unfulfilled at the end of this period, the disincentive rate provided for in Article 5 hereinafter will apply.

- ii. Should the customer fail to fulfill 50% or more of each of the economic development undertakings and, if applicable, the environmental undertaking set out in the customer's bid, the disincentive rate provided for in Article 5 hereinafter will apply.
- g. The customer undertakes to consume the energy associated with the power demand provided for in the bid for a 5-year period.
- h. The customer must provide a financial guarantee in accordance with the specifications set out in Schedule 1.

Disincentive Rate

- 5. The rates applicable to all contracts for cryptographic use applied to blockchains that are not covered by articles 3 or 4 herein are those provided for in Section 1 of Chapter 4 or Section 2 of Chapter 5 of the *Electricity Rates*, as the case may be, but energy consumption is billed at 15¢/kWh.
- 6. Should the customer replace an existing use of electricity by cryptographic use applied to blockchains or add installed load, the rate set out in Article 5 hereinabove will apply to the customer's contract.



PROVISIONAL RATES AND CONDITIONS OF SERVICE APPLICABLE TO MUNICIPAL SYSTEMS FOR CRYPTOGRAPHIC USE APPLIED TO BLOCKCHAINS

1. The rate applied by Hydro-Québec to a municipal system for power and energy associated with cryptographic use applied to blockchains is the same as that provided for in Article 2. However, Rate LG continues to apply to this power and energy until the Régie de l'énergie sets new rates and conditions for the distribution of electricity by Hydro-Québec for cryptographic use applied to blockchains in the following cases:
 - a. all existing contracts between a municipal system and its customers, but only for the installed load already in place for cryptographic use applied to blockchains;
 - b. when the available capacity for cryptographic use applied to blockchains at the connection point of the municipal system was confirmed in writing by the municipal system and agreed to in writing by the customer prior to June 7, 2018.
2. Rate LG applies to cryptographic use applied to blockchains, except that consumption is billed at 15¢/kWh.

APPENDIX 1

Main specifications of the request for proposals related to cryptographic use of electricity applied to blockchains

The specifications of the request for proposals that will be launched by Hydro-Québec take into account the concerns expressed by the Québec government in its Order-in-Council No. 646-2018 of May 30, 2018, and are consistent with Decisions D-2019-052, D-2019-078 and D-2019-119 of the Régie de l'énergie (the "Régie").

The *Electricity Rates and Conditions of Service* applicable to the customers selected under the request for proposals are those defined in these rates and conditions of service for cryptographic use applied to blockchains.

1. Quantity offered

The request for proposals is for a block of 300 MW $\pm 10\%$, including a block of at least 50 MW reserved for projects of 5 MW or less.

2. Agreement (the "Agreement")

An Agreement will be signed with each bidder selected under the request for proposals. The Agreement must be consistent with the rates and conditions of service set by the Régie and must include the information presented in the bid, as well as the terms of service and the penalty clauses for undertakings not fulfilled.

3. Selection process

Step 1: Evaluation of bids with respect to the minimum requirements

To qualify for this request for proposals, the projects submitted must meet the following minimum requirements:

1. The electricity service requested must be for *cryptographic use applied to blockchains*.
2. The power demand must be at least 50 kW and must not exceed 50 MW.
3. The bidder must commit to a 5-year period, and this period must be specified in the Agreement. A financial guarantee equal to one year's energy consumption at 1¢/kWh will be required upon signing the Agreement to cover any penalties applicable in the event that the bidder's consumption undertaking is not fulfilled. At the end of the initial 5-year term of the Agreement, the provision regarding the financial guarantee equal to one year's consumption will cease to apply and service will continue in accordance with the *Conditions of Service* in effect on the date the Agreement is renewed.
4. To participate in the request for proposals, the bidder is required to pay a non-refundable registration fee of \$2,000 at the time of registration.



5. The bidder must also include a bid bond in the form of a letter of credit for an amount equal to \$10/kW. Should the bid not be chosen, the bid bond will be released at the end of the selection process.
6. The bidder must specify the date on which electricity service is requested and the location at which connection to the main grid already exists or is requested.

Step 2: Classification of bids in accordance with the evaluation criteria

The bids meeting the minimum requirements listed in Step 1 will be evaluated on an individual basis according to the criteria and corresponding weightings set out in the following table.

Once the evaluation is completed, the bids will be classified based on the scores obtained. Only the bidders with the highest scores in Step 2 will move on to the next step in the selection process.

Criteria	Weighting
Economic development criteria: <ul style="list-style-type: none"> • Number of direct jobs in Québec/MW • Total payroll of direct jobs in Québec/MW • Capital investment in Québec/MW 	30 30 30
Environmental criterion: <ul style="list-style-type: none"> • Heat recovery: Avoided electricity use/Total electricity use¹ 	10
Total	100

1. Electricity use avoided through heat recovery/Total electricity use: Minimum of 7.5%.

Step 3: Simulation of combinations

The Distributor will establish and analyze different project combinations based on the highest-scoring bids in Step 2. This detailed analysis will involve determining the combination that will provide the Distributor with the most electricity sales revenue for the quantity offered. Consequently, projects for which service can be established sooner than others will gain an advantage.

Once Step 3 is completed, bidders whose projects have been selected will be notified by the Distributor of connection lead times as well as of the results of the parametric evaluation of the costs of connection to the distribution or transmission system.

Selected bidders who sign an Agreement must assume the costs of all work required on the distribution or transmission system. Bids may be withdrawn without penalty within 5 days of the bidder's receipt of information from the Distributor regarding these costs.



4. Steps in the request for proposals process

The main steps of the request for proposals process are outlined below. The deadline for each step will be indicated when the request for proposals is launched.

Launch of the request for proposals
Registration
Question/answer period
Publication of addenda(s), if required
Bid submission
Bid analysis and selection

Annex 9 Electricity Rates

All documents referenced herein form an integral part of the Request for Proposals.

You can access the Electricity Rates document by clicking the link below:

<http://www.hydroquebec.com/data/documents-donnees/pdf/electricity-rates.pdf?v=20190401>

Annex 10

Conditions of Service

All documents referenced herein form an integral part of the Request for Proposals.

You can access the Conditions of Service document by clicking the link below:

<http://www.hydroquebec.com/data/documents-donnees/pdf/conditions-service-en.pdf?v=20190426>

Annex 11

Summary of implications by connection type

Connection to Distribution system (Low or medium voltage)		Connection to Transmission system (High voltage)
Option A	Option B	Option C
< 6000 A at 347/600 V	< 260 A in three-phase either: 5,330 kW at 12 kV 10,657 kW at 25 kV And > 260 A	> 260 A in three-phase at 44 kV and up
Medium-voltage three-phase electricity is supplied up to a maximum of 260 A. Beyond that, Hydro-Québec determines if the <i>electrical installation</i> must be supplied at medium voltage or high voltage.		
Choice of Supply Voltage		
Any project requiring power matching the specifications of Option A will be automatically evaluated for a low voltage connection to the Distribution system. Bidders may ask to be supplied at medium voltage if they cover the additional costs of that option.	Any project requiring three-phase electricity supplied up to a maximum of 260 A will be automatically evaluated for a medium voltage connection to the Distribution system.	Any project requiring power matching the specifications of Option C will be automatically evaluated for a high voltage connection to the Transmission system. Hydro-Québec determines the appropriate voltage level on the Transmission system based on the technical feasibility.
Technical Requirements		
Bidders must comply with the <i>Conditions of Service</i> and the following applicable technical requirements: <ul style="list-style-type: none"> ▪ Low-Voltage Electrical Service (Standard E.21-10) ▪ Low-Voltage Electrical Service from Distribution Substations (Standard E.21-11) [in French only] ▪ Medium-Voltage Electrical Service (Standard E.21-12) [in French only] 	The identified site must have a medium-voltage customer substation to allow for the connection. Bidders must comply with the <i>Conditions of Service</i> and the following technical requirements: <ul style="list-style-type: none"> ▪ Medium-Voltage Electrical Service (Standard E.21-12) [in French only] ▪ Electricity Metering for Medium- and High-Voltage Installations (Standard F.22-01) [in French only] 	The identified site must have a high-voltage customer substation to allow for the connection. Bidders must comply with the <i>Conditions of Service</i> and the following technical requirements: <ul style="list-style-type: none"> ▪ Technical Requirements for Customer Facilities Connected to the Hydro-Québec Transmission System ▪ Emission Limits for Customer Facilities Connected to the Hydro-Québec Transmission System ▪ Electricity Metering for Medium- and High-Voltage Installations (Standard F.22-01) [in French only]