California Independent System Operator Corporation



December 11, 2017

The Honorable Kimberly D. Bose Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, DC 20426

Re: California Independent System Operator Corporation Docket No. ER18-251-___

Amendment to Pending Filing of CAISO Rate Schedule No. 103 and Request for Confidential Treatment

Dear Secretary Bose:

The California Independent System Operator Corporation ("CAISO") submits this amendment to the pending filing it submitted on in Docket No. ER18-251-004 on November 3, 2017 ("November 3 Filing") of the CAISO-BC Hydro Data Sharing Agreement ("Original Agreement") between the CAISO and British Columbia Hydro and Power Authority ("BC Hydro").¹

The CAISO hereby files an amended version of the Original Agreement ("Amended Agreement") solely to correct the inadvertent omission of Section 5.1.3 from the Original Agreement.² For the same reasons explained in the November 3 Filing, the CAISO requests confidential treatment of Schedule C to the Amended Agreement and requests that the Commission accept the Amended Agreement effective February 15, 2018.

I. The November 3 Filing and the Amended Agreement

In the November 3 Filing, the CAISO inadvertently omitted Section 5.1.3, which the CAISO and BC Hydro had previously agreed upon, from its submittal of the Original Agreement. The CAISO did, however, explain that Section 5.1.3 requires the CAISO, in cooperation with BC Hydro and Powerex Corp. ("Powerex"), to determine whether the systems and processes BC Hydro has

¹ The CAISO submits this amendment pursuant to section 205 of the Federal Power Act (FPA), 16 U.S.C. § 824d.

² Like the Original Agreement, the Amended Agreement is designated as CAISO Rate Schedule No. 103.

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established are sufficient to support Powerex's participation in the Energy Imbalance Market ("EIM"). The CAISO went on to explain that, pursuant to Section 5.1.3, it expects to incorporate the data shared by BC Hydro into the CAISO's full network model for the purposes of supporting the power flow model, state estimator, and EIM market applications. Section 5.1.3 specifies that the CAISO will remove the BC model from its full network model promptly upon termination of the agreement, except as otherwise permitted by another valid and enforceable agreement.³

Pursuant to the Commission's notice of filing regarding the November 3 Filing, Powerex submitted comments in support of the November 3 Filing and other entities submitted motions to intervene. No other comments were submitted.

The provisions of the Amended Agreement contained in the instant filing differ from those of the Original Agreement in just one respect: the Amended Agreement includes the Section 5.1.3 referenced in the November 3 Filing but inadvertently not included in the Original Agreement. For the reasons explained in the November 3 Filing, the Commission should grant confidential treatment of Schedule C to the Amended Agreement and should accept the Amended Agreement, including Section 5.1.3, effective February 15, 2018.

II. Service

The CAISO has served copies of this filing on all intervenors in Docket No. ER18-251, the proceeding in which the CAISO filed the Original Agreement.

III. Enclosures

The following attachments, in addition to this transmittal letter, support the instant filing:

Attachment A	Executed Amended Agreement (public version with redactions applied to Schedule C); and
Attachment B	Executed Amended Agreement (confidential version of Schedule C)

³

Transmittal letter for November 3 Filing at 9.

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IV. Conclusion

The CAISO respectfully requests that the Commission accept this filing and permit the Amended Agreement, CAISO Rate Schedule No. 103, to be effective February 15, 2018, as requested. If there are any questions concerning this filing, please contact the undersigned.

Respectfully submitted,

By: /s/ John C. Anders

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Attorneys for the California Independent System Operator Corporation Attachment A – Executed Amended Data Sharing Agreement between BC Hydro and the California Independent System Operator Corporation CAISO Rate Schedule No. 103

CONFIDENTIAL PRIVILEGED INFORMATION REDACTED PURSUANT TO 18 C.F.R. § 388.112

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

AND

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

DATA SHARING AGREEMENT



DATA SHARING AGREEMENT

THIS DATA SHARING AGREEMENT (the "**Agreement**") is established this <u>8th</u> day of December, 2017 and accepted by and between:

British Columbia Hydro and Power Authority ("**BC Hydro**"), a Provincial Crown corporation, established by statute under the laws of the Province of British Columbia and having a principal office located at 333 Dunsmuir Street, Vancouver BC V6B 5R3, Canada, the "**Providing Party**";

and

California Independent System Operator Corporation ("**CAISO**"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate, the "**Receiving Party**."

BC Hydro and CAISO are hereinafter referred to as the "Parties."

RECITALS

- A. Whereas, the Parties operate Balancing Authority Areas in the Western Interconnection, and coordinate operations where necessary to achieve mutually beneficial goals;
- B. Whereas, CAISO operates a real-time Energy Imbalance Market in the United States, subject to the jurisdiction of the US Federal Energy Regulatory Commission;
- C. Whereas, BC Hydro is a sovereignly held regulated utility that engages in generation, transmission, and balancing authority operations and activities in the Province of British Columbia, Canada;
- D. Whereas, BC Hydro does not participate directly or indirectly in US wholesale electricity markets, including the CAISO Energy Imbalance Market;
- E. Whereas, CAISO has entered into an Implementation Agreement with BC Hydro's wholly owned subsidiary, Powerex Corp., to permit Powerex Corp. to participate in the Energy Imbalance Market as a Canadian EIM Entity, such participation requiring the coordination of data and information;
- F. Whereas, CAISO's Energy Imbalance Market operation requires a physical network model that provides a detailed representation of the modeled resources,



transmission, and loads that will be included in the Energy Imbalance Market optimization;

- G. Whereas, BC Hydro has elected to make available certain data necessary to enable CAISO to establish the requisite functionality to facilitate Powerex's election to participate as a Canadian EIM Entity in the Energy Imbalance Market;
- H. Whereas, information on BC Hydro's customers, generation and transmission facilities, and demand is subject to Provincial rules, regulations, and other legal requirements, including, but not limited to, the privacy laws of British Columbia; and
- I. Whereas, the Parties wish to enter into this Agreement to establish the terms and conditions that will permit BC Hydro to share specified data and information with the CAISO.

NOW THEREFORE in consideration of the mutual covenants set forth herein, THE PARTIES AGREE as follows:

ARTICLE 1. PURPOSE, TERM, AND TERMINATION

1.1 Purpose

This Agreement sets forth requirements that must be satisfied by BC Hydro and CAISO for the duration of the period BC Hydro elects to facilitate Powerex participation in the Energy Imbalance Market ("EIM") and CAISO elects to use Covered Data provided by BC Hydro in its capacity as the EIM Market Operator. The intent and objective of this Agreement is to facilitate sharing of Covered Data with CAISO for the sole purpose of enabling Powerex Corp. ("Powerex") to independently engage in EIM activity as a Canadian EIM Entity using residual capability of the BC Hydro system. Any use of the Covered Data shared pursuant to this Agreement to achieve any other purpose is prohibited. This Agreement shall be interpreted consistent with this statement of purpose.

1.2 Effective Date

This Agreement shall be effective as of the date set forth above unless this Agreement is accepted for filing and made effective by the Federal Energy Regulatory Commission ("**FERC**") or by a Canadian Regulatory Authority on some other date, if FERC filing or filing with a Canadian Regulatory Authority is required, in which case this Agreement shall be effective on the later of the effective dates specified by FERC or the Canadian Regulatory Authority and shall continue in effect until terminated.



1.3 Termination

- 1.3.1 This Agreement may be terminated by either Party upon not less than sixty (60) days' prior written notice to the other Party or upon mutual consent of both Parties.
- 1.3.2 CAISO shall timely file any required notice of termination with FERC. The filing of the notice of termination will be considered timely if CAISO files the notice of termination within sixty (60) days after receipt of the notice of termination.
- 1.3.3 Notwithstanding any provision to the contrary and except as provided in Section 6.6, BC Hydro's obligations to CAISO under this Agreement will terminate as of the termination date provided in the written notice of termination or the date of the Parties' mutual consent to terminate, whichever comes first, regardless of any action or inaction by FERC with respect to any application by CAISO to terminate this Agreement.
- 1.3.4 CAISO shall not levy an exit fee or other charge associated with CAISO systems, procedures, or other changes required by BC Hydro's termination of the Agreement.
- 1.3.5 Notwithstanding any provision to the contrary, if FERC attempts to regulate any of BC Hydro's activities as a result, in whole or in part, of BC Hydro entering into this Agreement or performing any obligation under this Agreement, this Agreement shall immediately be void, except as provided in Section 6.6.

1.4 FERC Order

In the event FERC requires CAISO to make any modification to this Agreement or imposes any other modification or condition upon its acceptance or approval of this Agreement, or upon its acceptance or approval of a Party's application pursuant to Section 8.10 to amend the terms and conditions of this Agreement, each Party shall have fifteen (15) business days to notify the other Party that any such modification or condition is unacceptable to that Party as determined in that Party's sole discretion. If neither Party provides such notice, then this Agreement, as modified or conditioned by FERC, shall take effect as of the date determined under Section 1.2. If either Party provides such notice to the other Party, the Parties shall take any one or more of the following actions:

(a) Meet and confer and agree to accept any modifications or conditions imposed by such FERC order;



- (b) Jointly agree that CAISO will seek specified further administrative or legal remedies with respect to such FERC order, including a request for rehearing or clarification, in which case all further FERC orders on rehearing, clarification, or otherwise will be subject to the same rights of the Parties under this section as the original FERC order; or
- (c) Enter into negotiations with respect to accommodation of such FERC order.
- (d) Provided however, if the Parties have not agreed to accept or accommodate any modifications or conditions imposed by such FERC order under clauses (a)-(c) of this section within thirty (30) days after the date on which such FERC order becomes a final and non-appealable order, such order shall be deemed an adverse order and this Agreement will immediately terminate without further action of the Parties and the Parties shall have no further rights or obligations under the Agreement except with regard to the survival provision in Section 6.6.

ARTICLE 2. DEFINITIONS

2.1 General Definitions

Except as defined below, terms and expressions used in this Agreement shall have the same meanings as those contained in the NERC Glossary.

2.2 Specific Definitions

- 2.2.1 **Applicable Regulatory Authority**. For CAISO and other United States entities, FERC; for BC Hydro, the Canadian Regulatory Authority.
- 2.2.2 **Applicable Reliability Standard**. Reliability Standards promulgated by NERC and accepted by the Party's Applicable Regulatory Authority.
- 2.2.3 **Applicable Legal Authority**. For CAISO, United States laws and the laws of any relevant state of the United States; for BC Hydro, the laws of the Province of British Columbia and the federal laws of Canada.
- 2.2.4 **Applicable Standards of Conduct**. Requirements approved by an Applicable Regulatory Authority establishing the separation of transmission and energy merchant or market functions for jurisdictional entities.



- 2.2.5 **BC**. The Province of British Columbia, Canada.
- 2.2.6 **BC Hydro**. British Columbia Hydro and Power Authority, a Provincial Crown corporation, established by statute under the laws of the Province of British Columbia and having a principal office located at 333 Dunsmuir Street, Vancouver BC V6B 5R3, Canada.
- 2.2.7 **BC Model**. The physical network model of the BC Hydro Balancing Authority Area that provides a representation of the modelled generation resources, transmission, and load that will be included in the EIM optimization.
- 2.2.8 **BCUC**. British Columbia Utilities Commission.
- 2.2.9 **CAISO**. **California Independent System Operator Corporation**, a California non-profit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.
- 2.2.10 **CAISO Tariff**. CAISO Operating Agreement, Protocols, and Tariff as amended from time to time, together with any attachments thereto.
- 2.2.11 **Canadian EIM Entity**. An entity that participates in the EIM supported by resources and facilities located in a balancing authority area wholly in Canada and outside the United States, and that assumes applicable EIM Entity obligations as stated in an agreement whose terms reflect the legal and regulatory considerations applicable to EIM participation supported by Canadian resources and facilities.
- 2.2.12 **Canadian Regulatory Authority**. The BCUC and any other agency or agencies established under the laws of Canada or British Columbia having jurisdiction over BC Hydro in respect of the subject matter of this Agreement, as applicable.
- 2.2.13 **Covered Data**. Data provided by BC Hydro to CAISO pursuant to the Parties' responsibilities described in Article 5 and specified in Schedule C, as may be modified by the Parties from time to time. Covered Data will be treated as confidential pursuant to Article 6.
- 2.2.14 **Critical Energy Infrastructure Information ("CEII")**. Specific engineering, or detailed design information about proposed or existing critical infrastructure (physical or virtual) that:



- (a) Relates details about the production, generation, transmission, or distribution of energy;
- (b) Could be useful to a person planning an attack on critical infrastructure;
- (c) Is exempt from mandatory disclosure under the Freedom of Information Act; and
- (d) Gives strategic information beyond the location of the critical infrastructure.
- 2.2.15 **Critical Infrastructure Information ("CII").** Information not customarily in the public domain and related to the security of critical infrastructure or protected systems.
- 2.2.16 **EIM Full Network Model**. CAISO's physical network model that provides a detailed representation of the modelled resources, transmission, and loads that will be included in the EIM optimization.
- 2.2.17 **EIM Market Operator**. CAISO when acting as market operator of the EIM.
- 2.2.18 **Energy Imbalance Market ("EIM")**. The real-time energy imbalance market operated by CAISO in accordance with section 29 of the CAISO Tariff.
- 2.2.19 **FERC**. Federal Energy Regulatory Commission.
- 2.2.20 **Good Utility Practice**. Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be limited to any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods or acts generally accepted in the region.
- 2.2.21 **Merchant/Market Function**. The sale for resale in interstate commerce, or the submission of offers to sell in interstate commerce of electric energy or capacity, demand response, virtual transactions, or financial or physical transmission rights, all



as subject to an exclusion for bundled retail sales. Merchant/Market Function does not include an entity acting as an independent market operator or administrator.

- 2.2.22 **NERC**. North American Reliability Corporation.
- 2.2.23 **NERC Glossary**. The Glossary of Terms Used in NERC Reliability Standards, including, unless the parties so specify in writing, any amendments or changes to that document as may be made from time to time after Effective Date.
- 2.2.24 **Power Flow Model**. A network model used by CAISO to model voltages, power injections, and power flows.
- 2.2.25 **Providing Party.** BC Hydro.
- 2.2.26 **Receiving Party.** CAISO.
- 2.2.27 **Reliability Coordinator ("RC")**. Peak Reliability or such other RC as may be identified by either Party pursuant to an agreement duly executed, and if required, filed and approved by an Applicable Regulatory Authority.
- 2.2.28 **State Estimator**. A computer software program that provides CAISO with a near real-time assessment of system conditions.
- 2.2.29 **Supervisory Control and Data Acquisition ("SCADA") Data**. A computer system that allows an electric system operator to remotely monitor and control elements of an electric system.
- 2.2.30 **WECC**. Western Electricity Coordinating Council or any successor organization.
- 2.2.31 **Western Interconnection**. The interconnected electrical systems that encompass all or portions of the 14 western states of the United States, the provinces of Alberta and British Columbia, Canada, and the northern portion of Baja California, Mexico.

ARTICLE 3. JURISDICTIONAL ACKNOWLEDGMENTS

BC Hydro and CAISO each acknowledge that neither the Parties' entry into this Agreement nor their actions taken in furtherance of their performance of obligations under this Agreement will result in, or be construed or characterized in any forum by either Party as:

(a) CAISO engaging in any activity within British Columbia;



- (b) BC Hydro engaging in any activity within the United States;
- (c) CAISO being subject to the jurisdiction of the BCUC;
- (d) BC Hydro providing any jurisdictional service under the Federal Power Act or otherwise being subject to the jurisdiction of FERC or any inference that BC Hydro intends by this Agreement to subject itself to such jurisdiction;
- (e) BC Hydro being subject to or bound by the CAISO Tariff;
- (f) BC Hydro ceasing to be immune from the jurisdiction of the United States or of any of the States; or
- (g) BC Hydro acting as a participant in a CAISO market including, but not limited to, as the following: "Market Participant," "EIM Entity," "EIM Entity Scheduling Coordinator," "EIM Entity BAA," "EIM Participating Resource" or "Participating Resource Scheduling Coordinator," as defined in the CAISO Tariff.

ARTICLE 4. COMMUNICATIONS

4.1 Communications

- 4.1.1 CAISO and BC Hydro shall establish and maintain technical and communication protocols and requirements in furtherance of their performance of obligations under this Agreement, as specified in Article 5 and Schedule C, which shall be based on or otherwise not inconsistent with Inter-Control Center Communication Protocol and Applicable Reliability Standards. These protocols will include redundant protocols to be used in the case of loss of communications, as consistent with Good Utility Practice and as specified in Schedule C.
- 4.1.2 BC Hydro will implement reasonable confidentiality and nondisclosure measures necessary to obtain and maintain the certificates that permit the Parties to establish and maintain the technical and communication requirements specified in Schedule C. Such measures shall be specified by the CAISO in writing provided to BC Hydro and subject to the Parties' mutual agreement. The Parties will engage in reasonable good faith efforts to resolve differences arising under this Section. If the Parties cannot reach resolution, this Agreement may be terminated pursuant to Section 1.3.



4.1.3 Notwithstanding any reference to the contrary, as related to the EIM, no other communications between the Parties, including the use of pre-existing or standard CAISO documents and agreements to establish access to or to maintain secure communications, are intended to or shall establish any relationship between BC Hydro and the CAISO beyond that expressly agreed in this Agreement, to imply any participation by BC Hydro in CAISO markets, or to expand BC Hydro's liability or activities beyond what is expressly set out in this Agreement. To the extent there are conflicts between such other communications, documents, or agreements and this Agreement, the conflict shall be resolved consistent with the provisions and purpose of this Agreement.

4.2 Loss of Communications

CAISO and BC Hydro shall by mutual agreement establish procedures to address an interruption of communications, which shall include steps to restore communications and address any impact on system or market operations. Primary and alternative points of contact for operational and technical matters are identified in Schedule A. A Party must update the information in Schedule A relating to its address as that information changes. Such changes shall not constitute an amendment to this Agreement.

ARTICLE 5. SCOPE OF RESPONSIBILITIES

5.1 Party Responsibilities and Obligations

- 5.1.1 Pursuant to the descriptions and limitations contained in this Agreement, BC Hydro and CAISO shall work to establish a sufficiently accurate model of the BC Hydro Balancing Authority Area, the BC Model, to be incorporated in CAISO's EIM Full Network Model.
- 5.1.2 Pursuant to the descriptions and limitations contained in this Agreement, BC Hydro
 - (a) Shall work as necessary with CAISO and Powerex to assess the BC Model;
 - (b) Shall provide updates to the BC Model to CAISO in a format and at reasonable intervals as specified in the CAISO's Full Network Model schedule for incorporation into CAISO's EIM Full Network Model, which procedures and schedules are published annually on the CAISO website and applicable to all Full Network Model updates;



- (c) Shall recommend model modifications by CAISO to improve the BC Model if needed;
- (d) Shall provide real time telemetry measurements associated with the most current version of the BC Model, as specified in Schedule C, as is necessary for CAISO to run CAISO's Power Flow Model, State Estimator, and EIM market applications;
- Shall provide CAISO with equipment outage information, as specified in Schedule C as necessary to support CAISO's Power Flow Model, State Estimator, and EIM market applications;
- (f) Shall provide load forecasts to CAISO as specified in Schedule C;
- (g) Shall inform CAISO, as BC Hydro deems necessary, of a contingency and/or operational disturbance within British Columbia; and
- (h) May engage contractor(s) or other entities to provide information and/or support for the performance of operational and management tasks under this Agreement. Any such third party activities shall treat the Covered Data or information exchanged under this Agreement consistent with applicable legal and regulatory requirements and this Agreement, and shall be bound hereto in all respects to the satisfaction of the Parties.
- 5.1.3 Pursuant to the descriptions and limitations contained in this Agreement, CAISO
 - Shall, in cooperation with BC Hydro and Powerex, determine whether the systems and processes BC Hydro has put into place are sufficient to support Powerex's EIM participation;
 - (b) Shall incorporate Covered Data into CAISO's EIM Full Network Model for purposes of supporting CAISO's Power Flow Model, State Estimator, and EIM market applications; and
 - (c) Except as otherwise permitted by another valid and enforceable agreement, shall promptly remove the BC Model from CAISO's EIM Full Network Model upon termination of this Agreement.



5.2 Party Responsibility for Balancing Authority Areas

The Parties are individually responsible for the efficient use and reliable operation of their Balancing Authority Areas consistent with Applicable Reliability Standards and in accordance with their respective transmission tariffs, business practices, and Good Utility Practice. Nothing in this Agreement is intended to change, supersede, or alter either Party's obligations to abide by Applicable Reliability Standards and the directives or operating instructions issued by the Reliability Coordinator, or to provide open and non-discriminatory transmission access in accordance with the terms of their respective transmission tariffs. If BC Hydro or the CAISO, each in its sole discretion, determines that an action required by this Agreement will harm the reliability of its transmission system, or will otherwise be inconsistent with tariff or other legal or regulatory standards or obligations, each retains the right to take any appropriate action consistent with those standards or obligations.

ARTICLE 6. DATA SHARING AND CONFIDENTIALITY

6.1 Limitations on Data Sharing

- 6.1.1 Nothing in this Agreement shall be understood to authorize, and provisions shall be interpreted as to not authorize:
 - (a) The use or sharing of Covered Data in a manner prohibited by Applicable Standards of Conduct or other Applicable Legal Authority;
 - (b) The release of information where release is prohibited or limited by Applicable Reliability Standards; or
 - (c) The release of information where release is prohibited or limited by another agreement or any other applicable law or regulation.
- 6.1.2 BC Hydro and CAISO each acknowledge that:
 - BC Hydro's data sharing obligations under this Agreement will not exceed those elements that have been mutually agreed by BC Hydro and CAISO to be necessary to support Powerex's EIM participation, as specified in Schedule C;
 - (b) BC Hydro's obligations to provide Covered Data as specified in this Agreement do not obligate BC Hydro to provide any data inputs or underlying calculations to the



Covered Data, unless and only to the extent specified in Article 5 and Schedule C;

- (c) BC Hydro shall have and maintain full control and ownership of any Covered Data it provides; and
- (d) Except as explicitly set forth in this Agreement and its Schedules on the date of execution of this Agreement, CAISO does not require, and will not seek or be permitted access to:
 - i. BC Hydro customer information;
 - ii. BC Hydro non-public forecasts or analyses of generation resources, including, but not limited to, water in-flows or discharge information, snowpack, reservoir or storage levels, or other related data inputs; or
 - iii. BC Hydro non-public forecasts or analyses of load information beyond that which is mutually agreed to be necessary to support Powerex's EIM participation.

6.2 No Third Party Right

This Agreement creates no third party right of access to Covered Data.

6.3 Confidentiality of Covered Data

- 6.3.1 Covered Data to be shared pursuant to this Agreement is to be treated as non-public, confidential, business sensitive, and potentially harmful to competition if inappropriately disseminated, unless and until it is made publicly available by BC Hydro or pursuant to Section 6.3.2(c).
- 6.3.2 CAISO agrees, both as a condition to its right to receive Covered Data under this Agreement and as a contractual obligation under this Agreement, to treat any Covered Data received herein as follows:
 - (a) CAISO shall take all necessary precautions to not disclose Covered Data received from BC Hydro pursuant to this Agreement to third parties and in so doing shall not, even under conditions of confidence, make available, disclose, provide or communicate the Covered Data to a third party without BC Hydro's prior written consent.



- (b) The Covered Data is not to be used, or made available for use, in Merchant/Market Function activities as defined herein, except as permitted by the Applicable Standards of Conduct.
- (c) CAISO shall not disclose the Covered Data obtained from BC Hydro in the course of carrying out its responsibilities as EIM Market Operator, except (i) as permitted in writing by BC Hydro, (ii) under compulsion of law, to the extent ordered by Applicable Regulatory Authority or court of competent jurisdiction, or (iii) when aggregated without attribution to BC Hydro in the course of CAISO carrying out its responsibilities as EIM Market Operator.
- (d) In the event that CAISO receives a request to disclose the Covered Data pursuant to applicable legal or regulatory requirements, including under Section 6.3.2(c)(ii), CAISO shall notify BC Hydro promptly of such request, and prior to disclosure to the extent possible, so as to provide BC Hydro an opportunity to assist CAISO in asserting why the information requested is not subject to release, and why release of the Covered Data will harm BC Hydro's interests. Each Party shall bear its own costs in responding to such a request. Following disclosure, CAISO shall specify in writing to BC Hydro any Covered Data it is ultimately required to release pursuant to applicable legal or regulatory requirements
- (e) In the event that CAISO inadvertently discloses Covered Data to a third party, CAISO shall request that the third party destroy, delete or return any originals or copies. CAISO shall take reasonable steps to ensure and verify that the materials are returned or destroyed. CAISO must advise BC Hydro of any such inadvertent disclosure and confirm the resolution of the return or destruction of the Covered Data.
- (f) CAISO officers, trustees, directors, employees, subcontractors and subcontractors' employees, and agents are permitted to use and access Covered Data as necessary to perform their roles, to the extent this is consistent with this Agreement's stated purpose as described in Section 1.1. However, CAISO must ensure that such individuals are under legally binding obligations of confidentiality that are at least as restrictive as those contained herein.



6.4 Data Return or Destruction

All Covered Data shall remain the property of BC Hydro, and CAISO shall be responsible for ensuring that the Covered Data is safeguarded and returned to BC Hydro without limitation, upon written request from BC Hydro or upon termination of this Agreement. Alternatively, and upon mutual written agreement with BC Hydro, original Covered Data and any copies may be destroyed. Notwithstanding the foregoing, CAISO may, following a request for the return of some or all of the Covered Data or upon termination of this Agreement, keep one copy of the returned Covered Data if required to support CAISO activities in the course of carrying out its responsibilities as EIM Market Operator or as otherwise required by Applicable Regulatory Authority, but may not use or disclose the Covered Data for any other reason. In each case, all Covered Data not otherwise returned or destroyed pursuant to written request by BC Hydro will be destroyed in accordance with CAISO's document retention policies.

6.5 Cease Transfer of Covered Data

BC Hydro reserves the right to immediately cease the transfer of Covered Data if it determines that CAISO has breached any material requirements of this Agreement.

6.6 Survival

The terms of Article 6 shall survive the voiding or the Termination of this Agreement until the Covered Data is returned or destroyed in response to written request or otherwise in the normal course of business. Alternatively, upon request of either Party, the Parties may elect to execute an agreement encompassing the protections of Article 6 of this Agreement.

ARTICLE 7. LIMITATIONS OF LIABILITY

7.1 Limitation on Liability Between Parties

The Parties' duties and standard of care with respect to each other and the benefits and rights conferred on each other, shall be no greater than as explicitly stated herein. Neither Party, its directors, officers, trustees, employees, subcontractors, subcontractor's employees, or agents, shall be liable to the other Party for any loss, damage, claim, cost, charge, or expense arising from the Party's performance or non-performance under this Agreement, except to the extent of a Party's gross negligence or willful misconduct. Further, neither Party, its directors, officers, governors, employees, or agents shall be liable for or be entitled to recover from the other Party, in connection with that Party's performance or non-performance under this Agreement, any damages for business interruption or loss of



actual or anticipated profits or any indirect, consequential, special, incidental, economic, contingent, exemplary, or penal damages whatsoever. Each Party retains its legal and equitable remedies in the event that it believes disclosure will result in irreparable harm.

7.2 Limitation on Liability from Third Parties

Except as otherwise expressly provided herein, nothing in this Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty to, or standard of care with reference to any third party, or any liability or obligation, contractual or otherwise, on the part of CAISO or BC Hydro.

ARTICLE 8. MISCELLANEOUS

8.1 Uncontrollable Forces

An Uncontrollable Force means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause (including without limitation equipment failure) beyond the reasonable control of a Balancing Authority which could not be avoided through the exercise of Good Utility Practice.

Neither CAISO nor BC Hydro will be considered in default of any obligation under this Agreement or liable to the other for direct, indirect, or consequential damages to the extent prevented from fulfilling that obligation due to the occurrence of an Uncontrollable Force.

In the event of the occurrence of an Uncontrollable Force, which prevents either CAISO or BC Hydro from performing any obligations under this Agreement, the affected entity shall not be entitled to suspend performance of its obligations in any greater scope or for any longer duration than is required by the Uncontrollable Force. CAISO and BC Hydro shall each use all commercially reasonable efforts to mitigate the effects of such Uncontrollable Force, remedy its inability to perform, and resume full performance of its obligations hereunder.

8.2 Warranties and Representations

8.2.1 Each Party represents and warrants that the execution, delivery, and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent required by Applicable Legal Authority.



8.2.2 Covered Data exchanged under this Agreement carries no warranty or representation of any kind, either express or implied. CAISO receives the Covered Data "as is" and with all faults, errors, defects, inaccuracies, and omissions. BC Hydro makes no representations or warranties whatsoever with respect to the availability, timeliness, accuracy, reliability, or suitability of any Covered Data. CAISO disclaims and waives all rights and remedies that it may otherwise have with respect to all warranties and liabilities of BC Hydro, expressed or implied, arising by law or otherwise, with respect to any faults, errors, defects, inaccuracies, or omissions in or availability, timeliness, reliability, or suitability of the Covered Data, unless BC Hydro knowingly and deliberately provides false Covered Data. Each Party assumes any and all risk and responsibility for selection and use of, and reliance on, any Covered Data provided under this Agreement.

8.3 Notices

Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in writing and shall be deemed properly served, given, or made: (a) upon delivery if delivered in person; (b) upon delivery if delivered by email; (c) five (5) days after deposit in the mail if sent by first class United States mail or by Canada Post, postage prepaid; (d) upon receipt of confirmation by return facsimile if sent by facsimile; or (e) upon delivery if delivered by prepaid commercial courier service. A Party must update the information in Schedule B relating to its address as that information changes. Such changes shall not constitute an amendment to this Agreement.

8.4 Waivers

Any waiver at any time by either Party of its rights with respect to any default under this Agreement or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Agreement, shall not constitute or be deemed a waiver or be deemed a waiver of such right.

8.5 Venue, Forum, and Dispute Resolution

Any dispute, controversy or claim arising out of or relating to this Agreement that cannot be resolved within sixty (60) days of either Party's receipt of a notice requesting good faith negotiations shall be determined by arbitration in accordance with the International Arbitration Rules (the "IA Rules") of the American Arbitration Association. The place of arbitration shall be Portland,



Oregon, USA. The number of arbitrators shall be one and shall be selected from the Energy Panel of the American Arbitration Association. If the Parties cannot agree on the arbitrator, the arbitrator shall be selected from the Energy Panel under the IA Rules (all as provided for in the IA Rules). The costs of, and incidental to, the arbitration shall be paid as ordered by the arbitrator, provided that the Parties hereby express their mutual wish that the award of such costs shall follow the arbitration award, subject to the arbitrator's discretion to award costs otherwise if the circumstances warrant it. The arbitrator's decision shall be final, binding and without appeal. The language of the arbitration shall be English.

8.6 Consistency with Laws and Regulations

Nothing in this Agreement shall compel a Party to violate any applicable statutes, regulations, court orders or orders of an Applicable Regulatory Authority.

8.7 Rules of Interpretation

- 8.7.1 To the extent possible, all provisions of this Agreement shall be construed in a manner consistent with the purpose set out in Section 1.1 of this Agreement;
- 8.7.2 if and to the extent a conflict arises between this Agreement and the CAISO Tariff, this Agreement shall govern;
- 8.7.3 the singular shall include the plural and vice versa;
- 8.7.4 the masculine shall include the feminine and neutral and vice versa;
- 8.7.5 "includes" or "including" shall mean "including without limitation";
- 8.7.6 references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;
- 8.7.7 a reference in this Agreement to a given agreement or instrument, including the CAISO Tariff, shall be construed as a reference to that agreement or instrument as it may subsequently be modified, amended, supplemented or restated, and any reference in this Agreement to a section, article, or schedule of such an agreement or instrument shall be a reference to that section, article, or schedule, as it may subsequently be renumbered, modified, amended, or supplemented, unless otherwise agreed by the Parties;



- 8.7.8 unless the context otherwise requires or the Parties otherwise agree, references to any law or governmental regulation shall be deemed references to such law or regulation as it may be amended, replaced or restated from time to time and any reference to a section, article, or schedule of such law or governmental regulation shall be a reference to that section, article, or schedule, as it may be renumbered, modified, amended, or supplemented;
- 8.7.9 unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;
- 8.7.10 any reference to a day, week, month or year is to a calendar day, week, month or year;
- 8.7.11 unless the context requires otherwise, "or" is used in the conjunctive sense; and
- 8.7.12 the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

8.8 Applicability

The Parties agree that this Agreement shall govern all data shared by BC Hydro, or caused to be shared by BC Hydro, in furtherance of the stated purpose in Section 1.1, including Covered Data made available prior to the execution or the effective date of this Agreement and data that may be found to fall outside the specifications set out in Article 5 and Schedule C.

8.9 Severability

If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination, unless a



court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

8.10 Amendments

The Parties intend that the terms of this Agreement control and supersede any prior, contemporaneous or subsequent course of performance, course of dealing, or written or oral communications between the Parties that could be construed to impose obligations or to establish any relationship between the Parties inconsistent with any of the terms herein. Notwithstanding this restriction, this Agreement and the Schedules herein may be amended from time to time by mutual agreement of the Parties, as formalized by a writing prepared solely for that purpose and signed by both Parties. Amendments to this Agreement that are subject to Applicable Regulatory Authority approval shall not take effect until the Applicable Regulatory Authority has or have, as applicable, accepted such amendments for filing and has or have made them effective. If the amendment does not require Applicable Regulatory Authority approval, the amendment will be filed with Applicable Regulatory Authority for information. The Parties agree that amendments to the Schedules attached hereto do not constitute amendments that are subject to approval of an Applicable Regulatory Authority.

8.11 Counterparts

This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.



IN WITNESS WHEREOF the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date first written above.

California Independent System Operator Corporation

	DocuSigned by:	
Byr	Eric Schmitt	
Dy	0971A84CB55B4B8	

Name: Endire contribute

Title: VP, VAP, ercepteiroantsions

Date: 1218/2017

British Columbia Hydro and Power Authority

Ву:	Paul Uloudluury 8CE5844E83F648F
Name:	Paul Choudhury
Title:	Direetorcter Jost Arster 200 Jost Arster 200 Direetors, OBE, HBErbydro
Date:	12 ¥8//2017



SCHEDULE A

POINTS OF CONTACT (OPERATIONAL)

BC Hydro

Name of Primary Representative:	Djordje Atanackovic
Title:	Engineering Division Manager
Address:	c/o BC Hydro Dunsmuir Office (333 Dunsmuir Street)
City/State/Postal Code:	Vancouver, BC V6B5re
Email Address:	djordje.atanackovic@bchydro.com
Phone:	604-455-4205
Fax No:	604-455-1911

Name of	
Alternate Representative:	Margaret Toussaint
Title:	Engineering team Lead
Address:	c/o BC Hydro Dunsmuir Office (333 Dunsmuir Street)
City/State/Postal Code:	Vancouver, BC V6B5re
Email Address:	Margaret.Toussaint@bchydro.com
Phone:	604-455-1794
Fax No:	604-455-1911



CAISO:

Name of Primary Representative:	Hani Alarian
Title:	Director, Power Systems Technology Operations
Address:	250 Outcropping Way
City/State/Postal Code:	Folsom, CA 95630
Email Address:	gandelidis@caiso.com
Phone:	916-351-2393

Name of Alternate Representative:	Khaled Abdul-Rahman
Title:	Executive Director
Address:	250 Outcropping Way
City/State/Postal Code:	Folsom, CA 95630
Email Address:	KAbdulRahman@caiso.com
Phone:	(916) 351-2315



SCHEDULE B NOTICES [Section 8.3]

BC Hydro

Name of Primary Representative:	Paul Choudhury
Title:	Director, Transmission & Distribution System Operations
Address:	c/o BC Hydro Dunsmuir Office (333 Dunsmuir Street)
City/State/Postal Code:	Vancouver, BC V6B 5R3
Email Address:	Paul.Choudhury@bchydro.com
Phone:	604-455-4204
Fax No:	604-455-1911

Name of Alternate Representative:	Djordje Atanackovic
Title:	Engineering Division Manager
Address:	c/o BC Hydro Dunsmuir Office (333 Dunsmuir Street)
City/State/Postal Code:	Vancouver, BC V6B5re
Email Address:	djordje.atanackovic@bchydro.com
Phone:	604-455-4205
Fax No:	604-455-1911



CAISO:

Name of Primary Representative:	Regulatory Contracts
Title:	N/A
Address:	250 Outcropping Way
City/State/Zip Code:	Folsom, CA 95630
Email address:	RegulatoryContracts@caiso.com
Phone:	(916) 351-4400
Fax:	(916) 608-5063

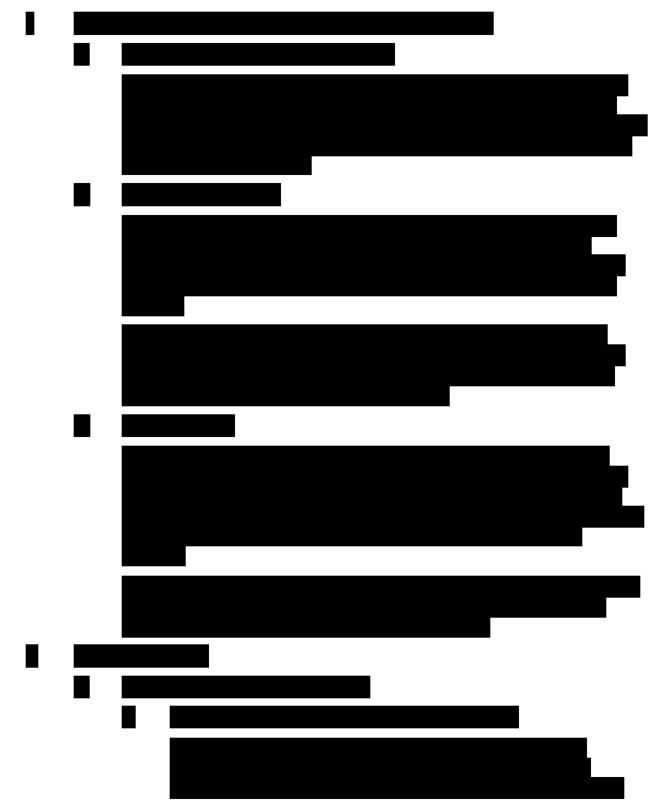
Name of Alternative Representative:	Christopher J. Sibley
Title:	Manager, Regulatory Contracts
Address:	250 Outcropping Way
City/State/Zip Code:	Folsom, CA 95630
Email address:	csibley@caiso.com
Phone:	(916) 608-7030
Fax:	(916) 608-5063

Confidential Privileged Information Redacted Pursuant to 18 C.F.R. § 388.112



DATA SHARING AGREEMENT

SCHEDULE C



Confidential Privileged Information Redacted Pursuant to 18 C.F.R. § 388.112



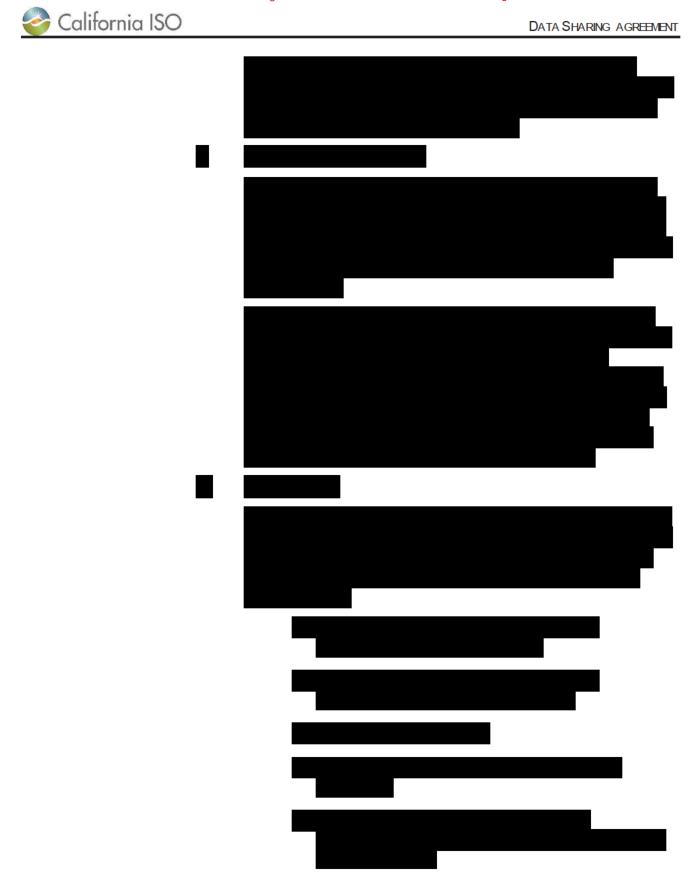
Confidential Privileged Information Redacted Pursuant to 18 C.F.R. § 388.112



DATA SHARING AGREEMENT



Confidential Privileged Information Redacted Pursuant to 18 C.F.R. § 388.112



Confidential Privileged Information Redacted Pursuant to 18 C.F.R. § 388.112

