

Committee Item No. 10
Board Item No. 26

AGENDA PACKET CONTENTS LIST

Date July 16, 2019

Date July 14, 2019

<input type="checkbox"/>	<input type="checkbox"/>	Motion
<input type="checkbox"/>	<input type="checkbox"/>	Resolution
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Ordinance
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Legislative Digest
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Budget and Legislative Analyst Report
<input type="checkbox"/>	<input type="checkbox"/>	Youth Commission Report
<input type="checkbox"/>	<input type="checkbox"/>	Introduction Form
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Department/Agency Cover Letter and/or Report
<input type="checkbox"/>	<input type="checkbox"/>	MOU
<input type="checkbox"/>	<input type="checkbox"/>	Grant Information Form
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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Contract/Agreement
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<input type="checkbox"/>	<input type="checkbox"/>	Application
<input type="checkbox"/>	<input type="checkbox"/>	Public Correspondence

[illegible]

Completed by: Linda Wong Date July 5, 2019
Completed by: Linda Wong Date July 11, 2019

[Authorizing Agreement - Retroactive - California Independent System Operator - Reliability Coordinator Services - Not to Exceed \$3,000,000]

Ordinance retroactively approving an agreement between the San Francisco Public Utilities Commission and the California Independent System Operator for Reliability Coordinator services for an initial term of 18 months from January 7, 2019, through July 6, 2020, with an automatic renewal of the contract term in excess of ten years and a maximum cost not to exceed \$3,000,000; and waiving Administrative Code, Section 21.9(b), regarding automatic renewal of contract term.

NOTE: Unchanged Code text and uncodified text are in plain Arial font.
Additions to Codes are in *single-underline italics Times New Roman font*.
Deletions to Codes are in ~~*strikethrough italics Times New Roman font*~~.
Board amendment additions are in double-underlined Arial font.
Board amendment deletions are in ~~strikethrough Arial font~~.
Asterisks (* * * *) indicate the omission of unchanged Code subsections or parts of tables.

Be it ordained by the People of the City and County of San Francisco:

Section 1. Background and Findings.

(a) The North American Electric Reliability Corporation (NERC) adopts mandatory electric reliability standards that apply to all electric utilities, including Hetch Hetchy Water and Power (HHWP). These mandatory electric reliability standards are approved by the Federal Energy Regulatory Commission (FERC). One of the mandatory electric reliability standards is to perform real-time assessment of an electric utility's transmission system.

(b) HHWP previously received real-time assessment services from Peak Reliability by Agreement No. CS-1084. However, in July of 2018, Peak Reliability announced that it would cease operations at the end of 2019.

1 (c) In August 2018, the California Independent System Operator (CAISO) filed for
2 FERC approval of amendments to its tariff to allow CAISO to provide Reliability Coordinator
3 (RC) services similar to those being provided to HHWP by Peak Reliability. CAISO's tariff
4 amendments included a pro forma Reliability Coordinator Services Agreement (RCSA),
5 which FERC approved on November 14, 2018, with an effective date of November 15, 2018.

6 (d) Once Peak Reliability completes the winding down of its operations, CAISO will be
7 the only entity in California qualified to provide the RC services required under the mandatory
8 electric reliability standards.

9 (e) The estimated cost of the services is \$150,000 per year. CAISO has only
10 projected estimated costs for the first four years of the agreement; therefore, it is difficult to
11 determine the exact maximum contract cost in advance. The estimated maximum not to
12 exceed cost of \$3,000,000 is based on a 20-year contract term at a cost of \$150,000 per
13 year. Funds are available from HHWP operating and programmatic budgets.

14 (f) On March 12, 2019, the San Francisco Public Utilities Commission (SFPUC)
15 approved Resolution No. 19-0048, a copy of which is in on file with the Clerk of the Board of
16 Supervisors in File No. 190436, retroactively approving the Agreement between the City and
17 County of San Francisco and the California Independent System Operator for Reliability
18 Coordinator services, and authorizing the General Manager of the SFPUC to seek retroactive
19 approval from the Board of Supervisors.

20
21 Section 2. Waiver of Administrative Code Section 21.9(d).

22 (a) The Western Electricity Coordinating Council (WECC), which enforces NERC
23 standards in the Western region, has authority to impose substantial monetary penalties on
24 HHWP for failure to perform the real-time analyses required by the standards.

25 (b) The RCSA is necessary to meet mandatory federal electric reliability standards.

1 (c) The RCSA was approved by FERC and added to the CAISO tariff on a non-
2 negotiable basis. The SFPUC has no ability to add to or modify the provisions of the RCSA,
3 which does not contain any of the City's standard contracting provisions.

4 (d) The initial term of the RCSA is 18 months, with automatic renewal thereafter.
5 Although the terms of the RCSA allow the City to terminate the RCSA for any reason, HHWP
6 expects the RCSA to continue indefinitely, and likely for more than 10 years, because the
7 current electric reliability standards require HHWP to have such an agreement.

8 (e) Administrative Code Section 21.9(d) prohibits the City from entering into contracts
9 with provisions that would automatically renew the contract term without further action by the
10 City.

11 (f) For the reasons specified in subsections (a)-(d) of this Section 2, Administrative
12 Code Section 21.9(d) shall not apply to the RCSA with CAISO. This waiver of the provisions
13 of Section 21.9(d) is reasonable and in the public interest.

14
15 Section 3. Approval of Reliability Coordinator Services Agreement with CAISO.

16 (a) CAISO set forth a strict schedule for transitioning utilities to its RC services,
17 requiring HHWP to execute an RCSA with CAISO on a compressed timeline. The General
18 Manager executed the pro forma RCSA on January 7, 2019, due to timing considerations and
19 what would have been the adverse consequences of not executing the RCSA.

20 (b) HHWP expects the RCSA to exceed 10 years because the current electric
21 reliability standards require HHWP to have such an agreement.

22 (c) In accordance with Charter Section 9.118(b), the Board of Supervisors hereby
23 approves the Agreement between the City and County of San Francisco and the California
24 Independent System Operator for Reliability Coordinator Services for a term in excess of 10
25

1 years. The executed Reliability Coordinator Services Agreement is on file with the Clerk of
2 the Board of Supervisors in File No. 190436.

3
4 Section 4. Effective Date; Retroactivity.

5 (a) This ordinance shall become effective 30 days after enactment. Enactment occurs
6 when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not
7 sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the
8 Mayor's veto of the ordinance.

9 (b) Upon the effective date of this ordinance, this ordinance shall be retroactive to
10 January 7, 2019.

11
12 APPROVED AS TO FORM:
13 DENNIS J. HERRERA, City Attorney

14 By:


15 SUZY HONG
16 Deputy City Attorney

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LEGISLATIVE DIGEST

[Authorizing Agreement - Retroactive - California Independent System Operator - Reliability Coordinator Services - Not to Exceed \$3,000,000]

Ordinance retroactively approving an agreement between the San Francisco Public Utilities Commission and the California Independent System Operator for Reliability Coordinator services for an initial term of 18 months from January 7, 2019, through July 6, 2020, with an automatic renewal of the contract term in excess of ten years and a maximum cost not to exceed \$3,000,000; and waiving Administrative Code, Section 21.9(b) regarding automatic renewal of contract term.

Existing Law

Section 9.118(b) of the Charter requires approval by the Board of Supervisors for agreements with an expected term longer than ten years or requiring expenditures of 10 million dollars or more.

Administrative Code Section 21.9(d) prohibits the City from entering into contracts with provisions that would automatically renew the contract term without further action by the City.

Amendments to Current Law

This ordinance would not amend current law.

Background Information

All electric utilities, including Hetch Hetchy Water and Power (HHWP), are subject to mandatory electric reliability standards adopted by the North American Electric Reliability Corporation (NERC) and approved by the Federal Energy Regulatory Commission (FERC). One of the mandatory electric reliability standards is to perform real-time assessment of an electric utility's transmission system.

The Western Electricity Coordinating Council (WECC), which enforces NERC standards in the Western region, has authority to impose substantial monetary penalties on HHWP for failure to perform the real-time analyses required by the standards.

As of the end of this year, the California Independent System Operator (CAISO) will be the only entity in California qualified to provide the services required under the mandatory electric reliability standards. CAISO provides services to perform the required real-time assessment of HHWP's transmission system pursuant to a tariff approved by FERC. CAISO's tariff includes a pro forma Reliability Coordinator Services Agreement (RCSA).

FILE NO. 190436

The RCSA is necessary to meet mandatory federal electric reliability standards. The RCSA was approved by FERC and added to the CAISO tariff on a non-negotiable basis. HHWP has no ability to add to or modify the provisions of the agreement.

The initial term of the RCSA is 18 months, with automatic renewal thereafter. HHWP expects the RCSA to continue indefinitely, and likely exceed 10 years, because the current electric reliability standards require HHWP to have such an agreement.

This ordinance would waive Administrative Code Section 21.9(d), which prohibits entering into contracts with provisions that would automatically renew the contract term without further action by the City. Further, this ordinance would retroactively approve the RCSA between the City and County of San Francisco and the California Independent System Operator for a term in excess of 10 years.

**CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

AND

CITY AND COUNTY OF SAN FRANCISCO

**RELIABILITY COORDINATOR SERVICES
AGREEMENT**

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**AND****CITY AND COUNTY OF SAN FRANCISCO****RELIABILITY COORDINATOR SERVICES AGREEMENT (RCSA)**

THIS AGREEMENT is dated this 7th day of January, 2019, and is entered into, by and between:

- (1) **City and County of San Francisco**, having its registered and principal place of business located at 525 Golden Gate, San Francisco, California 94102 (the "RC Customer");

and

- (2) **California Independent System Operator Corporation** (the "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 RC Customer and the CAISO are hereinafter referred to as the "Parties".

Whereas:

- A. WHEREAS, the CAISO has registered with and will be certified by NERC as a Reliability Coordinator prior to the RC Services Date identified in this Agreement;
- B. WHEREAS, the RC Customer is registered with and certified by NERC as a Balancing Authority and/or Transmission Operator;
- C. WHEREAS, the RC Customer has determined that there is a need for the RC Customer to identify a Reliability Coordinator for its operations, currently and into the foreseeable future; and
- D. WHEREAS, pursuant to this Agreement, the CAISO agrees to provide to the RC Customer services as set forth herein.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, the Parties agree as follows:

ARTICLE I

DEFINITIONS AND INTERPRETATION

1.1 Specific Definitions.

1.1.1 CAISO Tariff: The CAISO electric tariff, as amended from time to time.

1.1.2 Confidential Information: Documents, materials, data, or information ("Data") provided to it by any other Party that reflects or contains: (a) Data treated as confidential or commercially sensitive under the confidentiality provisions of Section 20 of the CAISO Tariff; (b) Critical Energy Infrastructure Information, as defined in Section 388.113(c)(1) of FERC's regulations; (c) Critical Electric Infrastructure Information defined in Section 215A of the Federal Power Act and regulations published by the Department of Energy; (d) pricing of third party vendor software costs for services under this Agreement; or (e) technical information and materials that constitute valuable, confidential, and proprietary information, know-how, and trade secrets belonging to a Party, including, but not limited to, information relating to drawings, maps, reports, specifications, and records and/or software, data, computer models, and related documentation.

1.1.3 FERC: The Federal Energy Regulatory Commission.

1.1.4 Initial Term: The Initial Term of the Agreement is eighteen (18) months from the RC Services Date.

1.1.5 Person: Any individual, corporation, cooperative corporation, municipal corporation, quasi-municipal corporation, non-profit corporation, joint operating entity, limited liability company, mutual association, partnership, limited partnership, limited liability partnership, association, joint stock company, trust, unincorporated organization, government entity or political subdivision thereof (including a federal power marketing administration), or organization recognized as a legal entity by law in the United States, Mexico, or Canada, as applicable.

1.1.6 RC Services: The Reliability Coordinator services provided by the CAISO and described in Section 19 of the CAISO Tariff. RC Services do not include the supplemental services also offered under this Agreement, as described in Sections 2.2.1 and 2.2.2.

1.1.7 RC Services Date: The date upon which the CAISO becomes the Reliability Coordinator of record for an RC Customer and the RC Customer begins receiving RC Services from the CAISO.



1.2 Rules of Interpretation. The following rules of interpretation and conventions will apply to this Agreement:

- (a) if there is any inconsistency between this Agreement and Section 19 of the CAISO Tariff, Section 19 of the CAISO Tariff will prevail to the extent of the inconsistency;
- (b) the singular will include the plural and vice versa;
- (c) the masculine will include the feminine and neutral and vice versa;
- (d) "includes" or "including" will mean "including without limitation";
- (e) references to a Section, Article or Schedule will mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;
- (f) a reference to a given agreement or instrument will be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;
- (g) unless the context otherwise requires, references to any law will be deemed references to such law as it may be amended, replaced or restated from time to time;
- (h) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;
- (i) any reference to a day, week, month or year is to a calendar day, week, month or year;
- (j) the captions and headings in this Agreement are inserted solely to facilitate reference and will not have any bearing upon the interpretation of any of the terms and conditions of this Agreement; and
- (k) unless otherwise defined in this Agreement, terms and expressions used in this Agreement will have the same meanings as those contained in the "NERC Glossary of Terms Used in Reliability Standards".

ARTICLE II

GENERAL RESPONSIBILITIES OF THE PARTIES

- 2.1 Agreement.** This Agreement is subject to Section 19 of the CAISO Tariff, which is incorporated herein.
- 2.2 Description of CAISO Responsibilities.** The CAISO agrees to provide RC Services to the RC Customer, commencing on the RC Services Date, in accordance with Section 19 of the CAISO Tariff. The CAISO will establish a Reliability Coordinator Oversight Committee in accordance with Section 19.11 of the CAISO Tariff.
- 2.2.1 Supplemental Services – Hosted Advanced Network Application (HANA).** The CAISO agrees to provide HANA services to the RC Customer at its request for an additional charge, as set forth in Section 19.3 of the CAISO Tariff.
- (a) The RC Customer shall: (i) notify the CAISO 90 calendar days in advance of the RC Customer's requested start date of initial HANA services and which HANA services the RC Customer desires to take in accordance with Section 19.3(c) of the CAISO Tariff; and (ii) pay for such services in accordance with Section 19.8 of the CAISO Tariff. The start date of taking the initial HANA services will establish the anniversary date for the minimum three years of taking the HANA services and the billing date.
 - (b) Each subsequent year, the RC Customer will notify the CAISO in writing 90 calendar days in advance of the anniversary date of the HANA services as to which HANA services it is electing to take for the following calendar year. If the RC Customer does not provide such notice to the CAISO 90 calendar days in advance of the anniversary date of the HANA services, the CAISO will continue to provide the RC Customer with the same HANA services it is providing to the RC Customer during the then current year.
 - (c) If the RC Customer elects to receive HANA services, the RC Customer agrees to pay for three years of services regardless of whether it takes HANA services for the entire three year term, and will be invoiced one-third of that amount annually during the initial three year term. Thereafter, the RC Customer will be invoiced annually for HANA services as described in Section 2.2.1(b) above.
 - (d) The CAISO will post the HANA service costs on the RC secure website.
- 2.2.2 Supplemental Services – Physical Security Review.** The CAISO agrees to provide physical security review services to the RC Customer at its request for an additional charge, as set forth in Section 19.4 of the CAISO Tariff, in accordance with applicable Reliability Standards (currently, NERC CIP-014).

2.3 Description of RC Customer Responsibilities. The RC Customer agrees to comply with the provisions of Section 19 of the CAISO Tariff. The RC Customer shall notify the CAISO in the event there is a change in the registered reliability functions applicable to the RC Customer or, if it is a Transmission Operator, a change in its Balancing Authority Area.

2.4 RC Customer Entity Status. The RC Customer is either a (check all of the boxes that apply):

- (a) Balancing Authority (settled based on Net Energy for Load (NEL) of the BAA) ☐
- (b) Generator Only Balancing Authority (settled based on Net Generation (NG) of the BAA) ☐
- (c) Transmission Operator:
 - 1) Outside CAISO BAA with no load (settled based on fee) ☐
 - 2) Outside CAISO BAA with load (settled based on Transmission Owner load or share of BAA NEL) ☐
 - 3) Inside CAISO BAA with no load (settled based on fee) ☐
 - 4) Inside CAISO BAA with load (settled based on share of CAISO BAA NEL) ☒

2.4.1 Conflict of Designation. If there is a conflict between the Balancing Authority and the Transmission Operator regarding who will be billed and pay for the RC Services, the CAISO will give precedence to the Balancing Authority.

2.5 Identification of Transmission Operators and Transmission Owners. Each RC Customer that is a Balancing Authority will provide the CAISO with a list of the Transmission Operators and corresponding Transmission Owners it is representing for RC Services in Schedule 1, if any. Each RC Customer that is a Transmission Operator will provide the CAISO with a list of the Transmission Owners it is representing for RC Services in Schedule 1 and will identify the Balancing Authority Area in which it and any Transmission Owners are located. Any changes to Schedule 1 will not constitute an amendment to this Agreement.

2.6 Non-Jurisdictional Entities. For an RC Customer that is an exempt entity as described in section 201(f) of the Federal Power Act, 16 U.S.C. 824(f), the CAISO acknowledges that this Agreement does not extend FERC's jurisdiction over the RC Customer.

ARTICLE III

TERM AND TERMINATION

- 3.1 Term.** This Agreement will be effective as of the later of the date it is executed by the Parties or the date accepted for filing and made effective by FERC ("Effective Date"). The Agreement will remain in full force and effect for eighteen (18) months from the RC Services Date ("Initial Term"). Upon expiration of the Initial Term, this Agreement will automatically renew and will remain in full force and effect until terminated pursuant to Sections 3.2.1 or 3.2.2 of this Agreement.
- 3.2 Termination.**
- 3.2.1 Termination by CAISO.** In the event the RC Customer commits any material default under this Agreement, which, if capable of being remedied, is not remedied within sixty (60) days after the CAISO has given written notice to the RC Customer of the default, the CAISO may terminate this Agreement at any time upon thirty (30) days prior written notice of termination, provided the notice of termination incorporates a transition plan for the RC Customer to transition to a new Reliability Coordinator to ensure that the termination of this Agreement results in no harm to the Western grid. The CAISO shall inform all RC Customers at the time it sends written notice of termination to any RC Customer. Any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the RC Customer that has arisen while that RC Customer was receiving services under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, will survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a notice of termination with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. For avoidance of doubt, if the CAISO terminates the Agreement under this Section 3.2.1 prior to expiration of the Initial Term, the RC Customer will still be required to pay the RC Service Charge for the remainder of the Initial Term and the HANA services charge, if applicable.
- 3.2.2 Termination by RC Customer.** The RC Customer may terminate this Agreement, without penalty, by giving the CAISO not less than twelve (12) months advance written notice after the Initial Term. This notice will be given on or before April 1 of the current calendar year and such termination will become effective on April 1 of the following year. If the RC Customer gives the CAISO less than twelve (12) months' notice after the Initial Term and is being billed directly for the RC Services in accordance with Section 5.3, the RC Customer will be charged an amount equal to the balance of the RC Service Charge remaining on the twelve (12) month required notice period. Any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the RC Customer that has arisen while that RC Customer was receiving services under this Agreement, and any provision of this Agreement necessary to give effect to such

right or obligation, will survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must timely file a notice of termination with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. For entities defined under Section 201(f) of the Federal Power Act, 16 U.S.C. 824(f), termination will be effective upon twelve (12) months' notice irrespective of acceptance by FERC.

- 3.2.3 Transition Assistance.** Except in the case of a CAISO termination for a default by the RC Customer, if the RC Customer requests in their notice of termination, the CAISO will reasonably assist the RC Customer to transition to another Reliability Coordinator prior to the effective date of the transition, including providing data and assistance, provided that the RC Customer will reimburse the CAISO for its reasonable costs for such assistance.

ARTICLE IV

PENALTIES AND SANCTIONS

- 4.1 Allocation of Reliability Related Penalty Costs.** The CAISO will have the right to allocate reliability-related penalty costs assessed to the CAISO by FERC, NERC and/or WECC to the RC Customer in accordance with Section 19.14 of the CAISO Tariff.

ARTICLE V

BILLINGS AND SETTLEMENTS

- 5.1 Data and Submission.** The RC Customer will be responsible for submitting its RC Services' settlements data and related information to the CAISO in accordance with Section 19.6 of the CAISO Tariff.
- 5.2 Default MWh.** At the time it executes this Agreement, the RC Customer will provide an initial default MWh volume in Schedule 1. The default MWh volume will be used to calculate the RC Customer's Net Energy for Load or Net Generation to the extent it fails to submit the Net Energy for Load or Net Generation in accordance with Section 19.6 of the CAISO Tariff. If the RC Customer's installed capacity changes, the default Net Generation MWh volume set forth in Schedule 1 must be amended.
- 5.2.1 Validation of Default MWh Amount.** The CAISO reserves the right to request that the RC Customer provide it with data to validate the RC Customer's stated default MWh amount in Schedule 1. The RC Customer agrees to provide in a timely manner such requested data necessary for the CAISO to perform such validation, and the CAISO agrees to use this information solely for this purpose.

5.3 Invoice and Payment Process. If the RC Customer is a Balancing Authority, or if it is a Transmissions Operator who elects to be billed directly in exchange for the RC Services provided by this Agreement, said RC Customer will be invoiced for RC Services in accordance with Section 19.7 of the CAISO Tariff and will have the right to dispute the RC Services invoiced amount in accordance with Sections 19.7 and 19.10 of the CAISO Tariff. If the RC Customer is a Transmission Operator and does not elect to be billed directly, the costs for its RC Services will be borne by its Balancing Authority. If the RC Customer is within the CAISO Balancing Authority Area, the Transmission Operator will be billed in accordance with Section 11.20.9 of the CAISO Tariff. For billing purposes in accordance with this Section, the RC Customer represents that it is either a (check the box that applies):

- (a) Balancing Authority ☐
- (b) Transmission Operator (direct billing elected) ☐
- (c) Transmission Operator (billed to Balancing Authority) ☐
- (d) Transmission Operator within the CAISO BAA ☒

The invoice and payment process for the HANA services will be in accordance with Section 19.8 of the CAISO Tariff. The invoice and payment process for other supplemental services will be in accordance with Section 19.9 of the CAISO Tariff.

5.4 Payment Default. The CAISO will have the right to recover unpaid RC Services invoiced amounts from the RC Customer pursuant to Section 19.7 of the CAISO Tariff. For RC Customers in the CAISO Balancing Authority Area, the CAISO will have the right to recover unpaid RC Services invoiced amounts from the RC Customer pursuant to Section 11.20.9 of the CAISO Tariff.

ARTICLE VI

CONFIDENTIALITY

6.1 Confidentiality. Each Party's Confidential Information will be treated in accordance with the NERC Operating Reliability Data agreement and Section 19.15 of the CAISO Tariff and any other applicable confidentiality rules such as provided in the NERC Rules of Procedure, or data sharing agreements in effect between the Parties.

ARTICLE VII

GOVERNING LAW

- 7.1 Governing Law and Forum.** This Agreement will be deemed to be a contract made under, and for all purposes will be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply will be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the FERC.

ARTICLE VIII

LIABILITY

- 8.1 Liability.** Except as expressly provided in this Agreement, neither Party, nor any of its directors, officers, employees, consultants or agents will be liable to the other Party under any circumstances, whether any claim is based in contract in tort, in equity for any punitive, or otherwise, for any special, consequential, indirect or incidental damages of any nature whatsoever, including, but not limited to, lost profits, loss of earnings or revenue, loss of use, loss of contract or loss of goodwill, or for any costs or expenses (including legal expenses) arising out of or in connection the performance or non-performance of its obligations under this Agreement.
- 8.2 No Third-Party Enforcement.** No third-party will be entitled to enforce this Agreement against any Party hereto. This Agreement is made and entered into for the sole protection and legal benefit of the Parties. No other Person will be a direct or indirect legal beneficiary, or have any direct or indirect cause of action or claim in connection with, this Agreement. No other Person will be a third-party beneficiary under this Agreement.
- 8.3 Recovery for Third-Party Indemnity.** To the extent that the CAISO suffers any loss as a result of any third-party claims arising out of the performance of this Agreement, the CAISO will be entitled to seek recovery of such loss through Section 14.4 of the CAISO Tariff, except that any reference in Section 14.4 of the CAISO Tariff to Market Participants will be read to include a reference to the RC Customer and references to the CAISO Tariff will be read to include a reference to this Agreement.

ARTICLE IX**DISPUTE RESOLUTION**

- 9.1 Dispute Resolution.** The Parties will make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties must adhere to the dispute resolution procedures as set forth in Section 19.10 of the CAISO Tariff.

ARTICLE X**MISCELLANEOUS**

- 10.1 Representation and Warranties.** 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 authorized by law.
- 10.1.1 Information Exchange.** All information, including Confidential Information provided by any Party under this Agreement, is accurate to the extent of the providing Party's knowledge. The receiving Party receives the information "as is" and with the understanding that the information is accurate to the best of the providing Party's knowledge at the time of receipt.
- 10.2 Uncontrollable Forces Tariff Provisions.** Section 19.12 of the CAISO Tariff will be incorporated by reference into this Agreement.
- 10.3 Consistency with Federal Laws and Regulations.** This Agreement incorporates by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.
- 10.3.1 Federal Entity Contract Requirements.** The provisions of Schedule 2 hereto contain provisions applicable to certain contracts entered into with the federal government. The provisions of Schedule 2 are applicable to a Party that is a federal entity if and to the extent required by applicable law and if not otherwise exempted.
- 10.3.2 No Waiver of Federal Rights.** By entering into this Agreement, no federal entity shall be deemed to have waived its rights to protest or challenge in any action or proceeding, any allocation of reliability related penalties, nor does any federal entity waive its sovereign immunity.
- 10.4 Assignments.** The RC Customer may assign or transfer any or all of its rights and/or obligations under this Agreement with the CAISO's prior written consent. Such consent will not be unreasonably withheld. Any such transfer or assignment will be conditioned upon the successor in interest accepting the

rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

- 10.5 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement will be deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return e-mail if sent by e-mail, or (d) upon delivery if delivered by prepaid commercial courier service, and unless otherwise stated or agreed must be made to the representative of the other Party indicated in Schedule 3. A Party must update the information in Schedule 3 of this Agreement as information changes. Such changes will not constitute an amendment to this Agreement.
- 10.6 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, will not constitute or be deemed a waiver with respect to any subsequent default or other 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 will not constitute or be deemed a waiver of such right.
- 10.7 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.
- 10.8 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 will 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 will not be affected thereby, but will remain in force and effect and the Parties will 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.
- 10.9 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval will not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein will be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to

FERC's rules and regulations promulgated thereunder, and the RC Customer will have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party will have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement will limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

10.10 Counterparts. This Agreement may be executed in one or more counterparts at different times, each of which will be regarded as an original and all of which, taken together, will constitute one and the same Agreement. Each individual signing this Agreement certifies that the Party represented has duly authorized such individual to sign, bind, and obligate such Party.



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 hereinabove written.

California Independent System Operator Corporation

By: DocuSigned by:
Eric Schmitt
0971A84CB55B4B8...
Name: Eric Schmitt
Title: VP, Operations
Date: 12/11/2018

City and County of San Francisco

By: DocuSigned by:
Harlan J Kelly Jr
DE682C28A6E743B...
Name: Harlan Kelly, Jr.
Title: General Manager, SFPUC
Date: 1/7/2019

**SCHEDULE 1****RC Customer Required Information****(Sections 1.1.6, 2.5 and 5.2)**

The RC Customer represents the following Transmission Operators and corresponding Transmission Owners for RC Services:

Balancing Authority Area ("BAA")	Transmission Operator ("TOP")		Transmission Owner ("TO")
	Name	Direct Billed (Yes/No)	
CAISO	Hetch Hetchy Water and Power	No	Hetch Hetchy Water and Power

RC Services Date: July 1, 2019

Default MWH*: 978,608.21 MWH

MWH are based on what period (MM-YY to MM-YY)? January 1 to December 31, 2017

**Default MWh will be used to determine the first year's RC service charge.*

Installed MW: N/A

**Applies to Generation Only BAAs only*

SCHEDULE 2**FEDERAL GOVERNMENT CONTRACT PROVISIONS****(Section 10.3.1)**

This Schedule 2 contains provisions that are necessary for the United States of America, acting by and through the Western Area Power Administration ("Western") and the Bonneville Power Administration ("Bonneville") to enter into the Agreement.

1. Billing and Payment

Notwithstanding Section 5.3 of the body of the Agreement, the CAISO will submit an annual invoice to Bonneville and Western for RC Services for the current year. The invoice will contain information specified in 5 C.F.R. § 1315.9(b). The amount of the invoice will be paid on a monthly basis to the CAISO in an amount equal to 1/12 of the invoiced amount calculated for Bonneville and Western, respectively, pursuant to Section 19.7 of the CAISO Tariff and sent to the persons designated by Bonneville and Western. Bonneville and Western may change the persons designated to receive the invoices at any time by written notice to the CAISO. Bonneville and Western will make each monthly payment by the twentieth day of the month, and such payments will be in accordance with the Prompt Payment Act, 31 U.S.C. § 3900 et seq.

2. Contingent Upon Appropriations and Authorization

Where activities provided for in this Agreement extend beyond the current fiscal year, continued expenditures by Western are contingent upon Congress making the necessary appropriations required for the continued performance of Western's obligations under the Agreement. In case such appropriation is not made, (i) Western will promptly give each of the other Parties written notice of such failure. (ii) Western will from and after the occurrence of any such failure no longer be a party to this Agreement, and (iii) the Parties hereby release Western from its contractual obligations and from all liability due to the failure of Congress to make such appropriation.

3. Covenant Against Contingent Fees

Each of the Parties warrants to each of the other Parties that no person or selling agency has been employed or retained by it to solicit or secure the Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by any Party for the purpose of securing business. For breach or violation of this warranty by any Party other than Western or Bonneville, Western and Bonneville will have the right to annul the contract with respect to Western and Bonneville without liability or in its discretion to deduct from the contract price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

4. Contract Work Hours and Safety Standards

The Agreement, to the extent that it is of a character specified in Section 103 of the Contract Work Hours and Safety Standards Act (Act), 40 U.S.C. § 3701, as amended or supplemented, is subject to the provisions of the Act, 40 U.S.C. §§ 3701-3708, as amended or supplemented, and to regulations promulgated by the Secretary of Labor pursuant to the Act.

5. Equal Opportunity Employment Practices

Section 202 of Executive Order No. 11246, 30 Fed. Reg. 12319 (1965), as amended by Executive Order No. 12086, 43 Fed. Reg. 46501 (1978), as amended or supplemented, which provides, among other things, that the Parties will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin, is incorporated herein by reference the same as if the specific language had been written into the contract.

6. Use of Convict Labor

The Parties agree not to employ any person undergoing sentence of imprisonment in performing the Agreement except as provided by 18 U.S.C. § 3622(c), as amended or supplemented, and Executive Order No. 11755, 39 Fed. Reg. 779 (1973), as amended or supplemented.

SCHEDULE 3**NOTICES**
(Section 10.5)**RC Customer**

Name of Primary Representative: Margaret Hannaford
Title: Division Manager
Company: Hetch Hetchy Water and Power
Address: Junction of Hwy 49 and Hwy 120
City/State/Zip Code: Moccasin, CA 95347
Email address: MHannaford@sflower.org
Phone: (209) 989-2063

Name of Alternative Representative: Theresa Mueller
Title: Deputy City Attorney
Company: City and County of San Francisco
Address: 1 Carlton B. Goodlett Place
City/State/Zip Code: San Francisco, CA 94102
Email address: Theresa.Mueller@sfcityattys.org
Phone: (415) 554-4640

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

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



San Francisco
Water Power Sewer
Services of the San Francisco Public Utilities Commission

Contract Administration Bureau
525 Golden Gate, 8th Floor
San Francisco, CA 94102
T 415.551.4603
F 415.554.3225

April 3, 2017

Matthew Yates
Peak Reliability
4850 Hahns Peak Drive, Suite 120
Loveland, CO 80537-6001
Email: myates@peakrc.com

RE: 1) Notice of Contract Award - Hosted Advanced Applications (CS-1084)
2) Transmittal - Executed Agreement between the City and County of San Francisco
Public Utilities Commission and Peak Reliability

Dear Mr. Yates:

This letter provides a *notification of contract award* for the following contracted work:

BLANKET PURCHASE ORDER NO: BPUC17000080
- Work may not be charged against this
blanket purchase order number

SCOPE: To provide services for the Hosted
Advanced Applications system, a set of
reliability tools to provide enhanced
situational awareness of pre- and post-
contingency system conditions that help
Transmission Operators to reliably
monitor their system and to meet their
compliance obligations.

EFFECTIVE DATE: April 3, 2017 to December 31, 2017

CONTRACT TO DATE: Total value of contract not to exceed
\$86,250.00

Invoices must be charged against specific task orders only after a *Notice to Proceed* has
been issued.

Should you have any questions, please do not hesitate to contact Rosiana Angel at (415)
554-1549.

Enclosure: Executed Agreement

cc: Margaret Hannaford
File/NCA-CS-1084

Edwin M. Lee
Mayor

Anson Moran
President

Ike Kwon
Vice President

Ann Moller Caen
Commissioner

Francesca Vietor
Commissioner

Vince Courtney
Commissioner

Harlan L. Kelly, Jr.
General Manager



HOSTED ADVANCED APPLICATIONS AGREEMENT

This Hosted Advanced Applications Agreement (the "**Agreement**"), dated as of April 1, 2017 (the "**Effective Date**"), is by and between the City and County of San Francisco ("**Customer**"), a municipal corporation, acting by and through its Public Utilities Commission ("SFPUC"), and Peak Reliability, a Utah non-profit Corporation with offices located at 7600 NE 41st Street, Vancouver, WA, and 4850 Hahn's Peak Drive, Loveland, CO ("**Peak**").

WHEREAS, Peak is willing to provide the Services in accordance with the terms of this Agreement and Customer wishes to procure them; and

WHEREAS, the Services will enable the SFPUC to transmit power reliably in accordance with good utility practice consistent with San Francisco Administrative Code Sections 21.04(a)(6) and 12B5-1(f); and

WHEREAS, the SFPUC surveyed available tools and determined that there is no other tool currently available that meets SFPUC's needs cost-effectively;

Now, THEREFORE, the parties agree as follows:

1. Definitions.

"**Authorized Users**" means all Persons authorized by Customer to access and use the Services through Customer's account under this Agreement each of which shall be identified by Customer's written notice to Peak as set forth in Schedule A as the same may be amended by Customer from time to time. Each Customer shall ensure that any Authorized User is approved for access to real-time transmission and generation information. Access to this information is governed by the Peak Reliability Universal Data Sharing Agreement executed by each Customer or any subsequent version thereof as may be amended, revised, renewed or some combination the preceding (the "Universal Data Sharing Agreement"). Information accessed through or available via use of the Services may not be shared with individuals associated with the marketing of energy.

"**Business Day**" means a day other than a Saturday, Sunday or any federally recognized holiday.

"**Documentation**" means all generally available documentation relating to the Services, including all user manuals, operating manuals and other instructions, specifications, documents and materials, in any form or media, that describe any component, feature, requirement or other aspect of the Services, including any functionality, testing, operation or use thereof.

"Intellectual Property Rights" means any and all rights comprising or relating to: (a) patents, patent disclosures and inventions (whether patentable or not); (b) trademarks, service marks, trade dress, trade names, logos, corporate names and domain names, together with all of the goodwill associated therewith; (c) authorship rights, copyrights and copyrightable works (including computer programs) and rights in data and databases; (d) trade secrets, know-how and other confidential information; and (e) all other intellectual property rights, in each case whether registered or unregistered and including all applications for, and renewals or extensions of, such rights, and all similar or equivalent rights or forms of protection provided by applicable Law in any jurisdiction throughout the world.

"Law" means any statute, law, ordinance, regulation, rule, code, order, constitution, treaty, common law, judgment, decree or other requirement or rule of any federal, state, local or foreign government or political subdivision thereof, or any arbitrator, court or tribunal of competent jurisdiction.

"Loss" means any and all losses, damages, liabilities, deficiencies, claims, actions, judgments, settlements, interest, awards, penalties, fines, costs or expenses of whatever kind, including reasonable attorneys' fees and the costs of enforcing any right to indemnification hereunder and the cost of pursuing any insurance providers.

"Person" means an individual, corporation, partnership, joint venture, Limited Liability Company, governmental authority, unincorporated organization, trust, association or other entity.

2. Services.

2.1 Services. Throughout the Term and at all times in connection with its actual or required performance under this Agreement, Peak shall, in accordance with all terms and conditions set forth in this Agreement and any applicable Service Order, provide to Customer through Customer's Authorized Users the following services ("Services"):

(a) Peak will host, manage and operate the Services and other services for remote electronic access and use by the Customer and its Authorized Users as described herein. More specifically, Peak will make available to Customer read only Supervisory Control and Data Acquisition information (SCADA), network information results, and output as determined by the Peak state estimator (RTNET) and real-time contingency analysis (RTCA). Additionally, Peak will make available its study network applications (STNET) for those Customers that have demonstrated their possession of an appropriate license from Alstom Grid, Inc. ("Alstom");

(b) To facilitate providing the Services, Peak will make available to Customer appropriate Clones, sometimes referred to as Seats, as agreed to with Peak's Energy Management System vendor Alstom. Alstom defines a Clone to be an EMS instance of

an application and the associated databases required to run an application. For purposes of this Agreement, Peak and Customer agree on this definition of the term Clone. The Customer study Clones will reside on a single operating system instance to facilitate the sharing of data and savecases amongst the Customers. The Customer network application sharing environment will have the following requirements associated with the use of study application Clones:

- (i) If a Customer is approved for STNET access as indicated by Customer's possession of an appropriate license from Alstom, such Customer's will be allocated up to four STNET Clones that allow for study functionality.
 - (ii) Alstom PERMIT application will be used as necessary to model different user roles to ensure that Customer Authorized Users have access to the appropriate application clones.
- (c) RTNET – Peak RTNET executes every minute. Peak will create a savecase once for each five (5) minute interval that results in a "Valid" or "Solved with Mismatch" solution. Except for Scheduled Downtime, Peak will transfer to a shared environment and upload into RTNET the "Valid" or "Solved with Mismatch" savecase. Customer will be able to use RTNET application displays to review solution quality, solution input, and solution output.
- (d) RTCA - The Peak RTCA tool runs every five (5) minutes. Except for Scheduled Downtime, Peak will transfer and upload to a shared environment the most current RTCA result at least every five (5) minutes. The RTCA results transferred to a shared environment are subject to the following parameter(s):
- (i) Peak's RTCA uses the single facility contingencies (SFC), the multiple facility contingencies (MFC), and the Remedial Action Schemes (RAS) models that Peak uses in real-time operations thus any simulations Peak transfers to Customer will have resulted from simulations using these parameters, factors, or inputs.
- (e) Study Network Applications or STNET Capability – Peak STNET includes both Power Flow (PF) and Study Contingency Analysis (STCA). Except for Scheduled Downtime, Peak will provide access to its STNET for those Customers that have demonstrated their possession of a valid and appropriate license from Alstom.
- (i) Peak will provide the capability for appropriately licensed Customers to retrieve RTNET cases into their respective STNET clone.

- (ii) Peak will provide to Customer Peak's STNET one-line diagrams, both substation and area overview, for ease of reviewing STNET solution information.
 - (iii) The STCA will provide simulation results for all the single facility contingencies (SFC), the multiple facility contingencies (MFC), and the Remedial Action Scheme (RAS) models that are used by Peak for use in real-time operations, however, Customer can alter or add to, at Customer's discretion those SFC, MFC, or RAS within Customer's STNET Clone.
 - (iv) The STCA available from Peak will also provide a user interface that allows the Customer to disable groups of contingencies or individual contingencies.
- (f) Peak will provide Customer capability to share certain studies including among Customer Clones. Peak shall meet the following requirements for case sharing:
- (i) Except for Scheduled Downtime, Peak will automatically move a RTNET savecase as previously described to the Customer's shared file system every five (5) minutes. For appropriately licensed customers as described in this Agreement, the RTNET savecase will be able to be loaded into a Customer's STNET application using standard STNET user interfaces.
 - (ii) Peak will provide the ability for Customers to create their own STNET savecases and make those available to other Customers on a common, shared file system.
 - (iii) Customers are prohibited from using other Customer's Clones, however, STNET functionality will allow any Customer to initialize its STNET session from another Customer's STNET clone.
 - (iv) Peak will provide for RTNET savecases to be available for upload to STNET via Alstom Savecase Manager for thirty (30) consecutive days.
- (g) Peak will enable the export of STNET study cases into Alstom's bus branch PTI version 30 format and in whatever current version of Csv – Flat File format that Peak currently produces.
- (h) SCADA – Peak will transfer and upload to a shared environment the most current SCADA data at least every five (5) minutes to enable Customers to utilize SCADA substation online displays and overview displays that are used by Peak in real-time operations

(i) Time Format - Savecase and other export timestamps will be provided in MST.

2.2 License to Use the Services. In accordance with the Services provided by Peak and described herein, and subject to the terms and conditions of this Agreement and any and all applicable Service Orders, Peak hereby grants to Customer a nonexclusive, non-transferable, non-assignable, royalty-free, worldwide, cost free license to access and use the Services during the Term of the Agreement subject to termination by Customer or Peak in accordance with Section 6.

2.3 Service Orders. Service Orders will be effective only when signed by Customer and Peak. Any modifications or changes to the Services under any executed Service Order will be effective only if and when memorialized in a mutually agreed written change order ("**Change Order**") signed by both Parties, provided, however, that for any Services provided on a limited basis (for example, on a per user, server, CPU or named-user basis), Customer may, request additional services from Peak hereunder subject to a corresponding forward-going adjustment of the Fees to reflect these changes in accordance with any necessary pricing change or otherwise in an applicable Service Order. Any Services Orders executed by Customers are by this reference incorporated in and made a part of this Agreement.

2.4 Compliance with Laws. Peak shall comply with all applicable Laws as they concern this Agreement or the subject matter hereof, including by securing and maintaining all required and appropriate visas, work permits, business licenses and other documentation and clearances necessary for performance of the Services.

2.5 Subcontracting. Peak may subcontract any Services, in whole or in part without Customer's prior written consent, provided, however, that any such subcontractors or contractors will be bound by confidentiality obligations consistent with Peak's confidentiality obligations expressed herein or in other agreements specifically including the Universal Data Sharing Agreement.

3. Commencing Service and Access Paths.

3.1 Commencing Service.

(a) Peak will not provide access to the Services for Customer's Authorized Users unless Customer has in place the Universal Data Sharing Agreement. Additionally, each Customer shall ensure that any Authorized User is approved for access to real-time transmission and generation information by Customer.

(b) Peak will define and maintain a process for receiving requests for access to the tool and implementation of those access requests. Peak will use the same access process for the Services as is used for access to the confidential materials available at

Peakrc.org as that access process may be modified from time to time. Upon a Party's execution of a Service Order, Peak shall take all steps necessary to make the Services procured thereunder ready and available for Customer's use in accordance with the Service Order and this Agreement, including any applicable milestone date or dates set forth in such Service Order.

3.2 Access Paths. Customer will be able to access the Services via two different connectivity paths. One path will be via Customer's general internet connectivity. The other will be via a secure wide area network interconnection provided by Harris Corporation similar to the wide area network utilized for the Western Interconnection Synchrophasor Program.

4. Service Availability.

4.1 Availability Requirement. "Available" means the Services are available and operable for access and use by Customer and its Authorized Users. "Availability" has a correlative meaning. Peak will use best efforts to ensure that the Services are Available such that down time does not exceed nine (9) hours cumulative in a twelve (12) month period with no single instance of unavailability exceeding sixty (60) consecutive minutes. This includes any down time related to patching, upgrades and hardware maintenance but expressly excludes application unavailability due to solution quality issues. Additionally, the Services are Available as long as the Services are accessible at either Peak location even if Customers are required to log out and log in to a different Peak location to access the Services and Availability of the Services is measured by the Harris wide area network access path rather than a general internet connectivity path.

(a) RTNET shall have a minimum solution availability of ninety-seven percent (97%) of the five (5) minute intervals over the course of a calendar year. For purposes of RTNET, "RTNET solution availability" is defined as a converged state estimator solution that results in either a "valid" or "solved with excessive mismatch" solution. RTNET solution availability will be measured on the Peak RC production environment.

(b) RTCA shall have a minimum solution availability of ninety-seven percent (97%) of fifteen (15) minute intervals over the course of a calendar year. For purposes of RTCA, "RTCA Solution Availability" is defined as any converged RTCA basecase and the completed execution of the desired set of Peak contingencies. RTCA solution availability will be measured on the Peak RC production environment.

4.2 Peak will communicate to Customer via an automated email message any failure to transfer cases that lasts greater than five (5) minutes.

4.3 Exceptions. The following circumstances or actions shall not be included in the calculation of Availability:

- (a) Customer's misuse of the Services;
- (b) failures of Customer's or its Authorized Users' internet or other broadband data service connectivity;
- (c) internet or other network traffic problems other than problems arising in or from networks actually or required to be provided or controlled by Peak or its Subcontractor;
- (d) Customer's or any of its Authorized Users' failure to meet any minimum hardware or software requirements necessary to access the Services; or
- (e) Scheduled Downtime as set forth in Section 4.4.

4.4 Scheduled Downtime. Peak shall notify Customers at least twenty-four (24) hours in advance of planned outages for patching, upgrades, hardware upgrades, Model updates and other foreseeable maintenance. Outage communication will be provided to the Customer's control center or other designated personnel (Authorized Users), provided that Peak may request for Customer's approval extensions of Scheduled Downtime above one (1) hour and such approval by Customer may not be unreasonably withheld or delayed.

4.5 Service Availability Reports. Commencing thirty (30) days from the end of the first quarter following the Effective Date, Peak shall report Services Availability to Customers within 30 days of the end of each calendar quarter unless otherwise agreed to by Peak and Customers. The report shall be in electronic form.

5. Support and Maintenance Services. Peak shall provide the following support:

5.1 Telephone technical support, excluding engineering support, that includes being available during the hours of 8 a.m. to 6 p.m. PST on Business Days;

(a) Provide online access to technical support bulletins and other user support information and forums, to the full extent Peak makes such resources available to its other customers; and

(b) Respond in a timely manner to Support Requests submitted electronically but, in any case, not later than one (1) Business Day after receipt of such message.

5.2 Service Monitoring and Management. Peak shall continuously monitor and manage the Services to optimize Availability as set forth in section 4.1 that meets or exceeds the Availability Requirement. Such monitoring and management shall include:

(a) proactively monitor on a twenty-four (24) hour by seven (7) by three-hundred and sixty-five (365) day basis all servers, firewall and other components of Services security;

(b) if such monitoring identifies, or Peak otherwise becomes aware of, any circumstance that is reasonably likely to threaten the Availability of the Services, taking all necessary and reasonable remedial measures to promptly eliminate such threat and ensure full Availability;

(c) if Peak receives knowledge that the Services or any Services function or component is not Available including by written notice from Customer pursuant to the procedures set forth herein:

(i) confirming (or disconfirming) the outage by a direct check of the associated facility or facilities;

(ii) if Peak's facility check in accordance with clause (i) above confirms a Services outage in whole or in part: (A) notifying Customers via any available method that the Services are currently unavailable and providing such details as may be available, including a Peak trouble ticket number, if appropriate, and time of outage; and (B) working all problems causing and caused by the outage until they are resolved, or, if determined to be an internet provider problem, open a trouble ticket with the internet provider; and

(iii) notifying Customer that Peak has fully corrected the outage and any related problems, along with any pertinent findings or action taken to close the trouble ticket.

5.3 Service Maintenance. Peak shall continuously maintain the Services to optimize Availability that meets or exceeds the Availability requirement set forth in Section 4.1. Such maintenance services shall include providing to Customer and its Authorized Users:

(a) all updates, bug fixes, enhancements, new releases, new versions and other improvements to the Services that Peak provides at no additional charge to its other similarly situated customers; and

(b) all such services and repairs as are required to maintain the Services or are ancillary, necessary or otherwise related to Customer's or its Authorized Users' access to or use of the Services, so that the Services operate properly in accordance with this Agreement and the Documentation.

5.4 Maintenance (Model) - Peak will update the transmission network or other Models used by its SCADA, RTNET, RTCA, and STNET as needed and as determined at Peak's sole discretion. Peak will incorporate into its transmission network and other

Models Customer provided updates only if Peak agrees that the update is appropriate for use for its real-time operations and operations planning. Additionally, Peak will implement the following Model changes at its sole discretion:

(a) Peak shall update and deploy contingency definitions provided to it by a Customer that Customer has demonstrated to be incorrectly defined and for which the Customer has provided all relevant information necessary to update Peak's Model.

(b) Peak may add or update RAS definitions provided to it by a Customer, however, Peak will determine at its sole discretion the prioritization of new or updated RAS definition implementation and Peak will provide to Customer an estimated time of implementation.

5.5 Engineering Support - Customer engineering staff will support the use of the network applications within their respective organizations. Peak will provide engineering support to facilitate identifying Model deficiencies, improving Model accuracy and implementing enhancements.

5.6 Application Support for Real-time Operations -- Peak will provide support twenty four hours (24) per day, seven (7) days a week to address application availability of RTNET and RTCA only. Customer acknowledges and agrees that Peak will provide this availability support only and that Peak will not provide this level of support for solution quality problems. If possible based on any advanced knowledge or indicators available to Peak, it will notify Authorized Users or Customer generally that Peak is aware of unavailability of RTNET or RTCA only and that Peak is working to make them available. Customer agrees and acknowledges that the level of support described in this section is not provided by Peak as it pertains to solution issues in the study environment (STNET).

5.7 Enhancements and Customization -- Customers may request enhancements or customization affecting only the requesting Customer's use of the Services but the expenses of any such enhancements or customization will be borne by the requesting Customer only and will be memorialized in a corresponding Service Order. Customers agree and acknowledge that Peak retains complete and sole authority to deny any enhancements deemed to jeopardize the reliability of the Peak systems or Peak's ability to oversee the reliable operations of the interconnection.

6. Term and Termination.

6.1 Term. The initial term of this Agreement commences as of the later of the Effective Date or the date on which it is executed by Customer and Peak and will continue in effect until and including December 31, 2017 unless and until terminated as provided under this Agreement (the "Initial Term").

6.2 Termination for Cause. In addition to any right of termination set forth elsewhere in this Agreement:

(a) either Party may terminate this Agreement by written notice to the other party effective as of the date specified in such notice, if the other party materially breaches this Agreement and such breach: (i) cannot be cured; or (ii) being capable of cure, remains uncured thirty (30) days after the breaching party receives written notice thereof; and

(b) either party may terminate any and all of this Agreement effective immediately, by written notice to the other party if that other party: (i) becomes insolvent or admits inability to pay its debts generally as they become due; (ii) becomes subject, voluntarily or involuntarily, to any proceeding under any domestic or foreign bankruptcy or insolvency law, which is not fully stayed within seven (7) Business Days or is not dismissed or vacated within forty-five (45) days after filing; (iii) is dissolved or liquidated or takes any corporate action for such purpose with no permitted successor or assignee having assumed and given the other party adequate written assurance of its continued full performance of this Agreement; (iv) makes or seeks to make a general assignment for the benefit of creditors; or (v) has or is made subject to the appointment of a receiver, trustee, custodian or similar agent by order of any court of competent jurisdiction to take charge of or sell any material portion of its property or business.

(c) Since Peak has not previously provided the Services and because Peak cannot foresee every possible circumstance that may impact Peak's costs to provide the Services, Peak may terminate this Agreement by written notice to Customer provided sixty (60) days in advance of receipt of an annual payment with termination effective at or on the due date of the annual payment if the annual Customer payments will be insufficient as compared to the planned costs for Peak to provide the Services. Insufficiency will be indicated by the most current measures possible of the total Customer payments compared to the total costs for Peak to provide the Services to Customer. Notwithstanding the preceding, the Parties may negotiate new future Customer payments to address any funding shortfalls previously described without having to amend this Agreement, provided that such new payments are documented in a writing signed by the Parties.

6.3 Termination for Convenience. Customer may terminate this Agreement by written notice to Peak effective as of the date specified in such Notice, however, Customer shall pay to Peak all remaining amounts due in the Initial Term.

6.4 Effect of Termination; Data Retention. Upon and after the termination or expiration of this Agreement for any or no reason:

(a) subject to the continuing rights, licenses and obligations of either party under this Agreement, all licenses granted hereunder will immediately terminate and the

respective Parties shall cease all activities concerning, including all use of, in the case of Customer, the expired or terminated Services;

(b) Customer shall pay to Peak, all undisputed charges and amounts due and payable to Peak, if any, for Services actually performed under the terminated or expired Service Order or Service Orders.

6.5 Survival. The rights, obligations and conditions set forth in this section and Section 1 (Definitions), Section 6.5 (Effect of Termination; Data Retention), Section 8 (Ownership), Section 10 (Indemnification), Section 12 (Limitations of Liability), Section 13 (Representations and Warranties), and Section 15 (General Provisions), and any right, obligation or condition that, by its express terms or nature and context is intended to survive the termination or expiration of this Agreement, shall survive any such termination or expiration hereof.

7. Fees and Expenses.

7.1 Fees. Subject to the terms and conditions of this Agreement and any applicable Service Order, including the provisions of this Section 7, Customer shall pay the fees set forth in the applicable Service Order, which shall be determined and invoiced by Peak, subject to such increases and adjustments as may be permitted pursuant to this Agreement including but not limited to agreed upon enhancements or customization.

7.2 Fees During Renewal Terms. Peak's Fees are fixed during the Initial Term.

7.3 Responsibility for Costs associated with Licensing and Utilizing the Services. Customer shall be responsible for all costs and expenses incurred in or incidental to obtaining licensure from Alstom or any other necessary licenses to use the Services and any and all costs of using the Services.

7.4 Taxes. All Fees and amounts set forth this Agreement or any Service Order are inclusive of sale taxes.

7.5 Invoices. Peak shall invoice Customer for all applicable costs, fees, or expenses annually in electronic format, via such delivery means and to such address as are specified by Customer in writing from time to time. If more than one Service Order is in effect, Peak shall provide an aggregate invoice for all amounts invoiced.

7.6 Payment Terms.

(a) Customer shall pay amounts payable and due hereunder within thirty (30) days after receipt of invoice therefor.

(b) All payments hereunder shall be in US dollars and made by check or wire transfer. Payments shall be made to the address or account specified by Peak or such other address or account as is specified by Peak in writing from time to time.

8. Data Ownership. As between Customer and Peak, Peak is and will remain the sole and exclusive owner of all right, title and interest in and to any Peak data and information developed or provided by Peak including but not limited transmission network models such as the West-wide System Model and other Peak processes. Nothing contained in this Agreement shall be construed as granting Customer or any third party any right, title, or interest in or to any Peak data and information unless explicitly stated herein or in another document.

9. Redundancy. Peak shall, in accordance with the provisions of this section maintain or cause to be maintained disaster avoidance procedures designed to sustain the availability of the Services, in each case throughout the Term and at all times in connection with its actual or required performance of the Services hereunder.

9.1 Redundant Hosting and Connectivity. Peak shall simultaneously operate a mirror system at either of Peak's facilities in Vancouver, Washington or Loveland, Colorado. Peak will make the Services available from one location if the other location is or becomes unavailable. Provided that Customers can access the Services from at least one Peak location, even if logging out and logging in again or starting a new session is required, the Services are considered Available for purposes of this Agreement.

10. Indemnification.

10.1 General Indemnification. To the maximum extent allowed by law, including any applicable anti-deficiency statutes, each party (the "**Indemnifying Party**") shall defend, indemnify and hold harmless the other party and each of the foregoing Persons' respective officers, directors, employees, agents, successors and assigns, (each of the foregoing Persons, a "**Indemnitee**") from and against all Losses arising out of or resulting from any third party claim, suit, action or proceeding (each, an "**Action**") to the extent that such Action does or is alleged to arise out of or result from:

(a) the Indemnifying Party's breach of any representation, warranty, covenant or obligation of the Indemnifying Party under this Agreement; or

(b) any action or failure to take a required action or more culpable act or omission (including recklessness or willful misconduct) in connection with the performance or nonperformance of any Services or other activity actually or required to be performed by or on behalf of the Indemnifying Party under this Agreement,

10.2 Infringement Indemnification by Customer. Customer shall indemnify, defend and hold each and all of the Peak Indemnitees harmless from and against all Losses

arising out of or resulting from any Customer failure to secure or maintain any required license to use the Services granted by a third party including but not limited to Alstom and:

(a) any claim that any Customer provided data or information is unlawful or actually does or threatens to infringe, misappropriate or otherwise violate any United States Intellectual Property Rights or other rights of any third party; or

(b) any use of the Services by Customer or any Authorized User that is beyond the scope of or otherwise fails to conform to this Agreement or any authorization or approval given in writing by Peak to Customer or such Authorized User.

11. No Reliability Standard Compliance Responsibility and Disclaimer.

11.1 Peak expressly disclaims any and all responsibility for demonstrating compliance with any laws or rules to which Customer is subject including but not limited to Customer's compliance with any applicable NERC national or regional reliability standards. Except as provided for herein, Peak will not generate or make available to Customer any documents, data, or other material in any form for purposes of Customer's demonstration of compliance with such laws, rules, or NERC national or regional reliability standards.

11.2 EXCEPT FOR THE EXPRESS WARRANTIES IN THIS AGREEMENT, PEAK HEREBY DISCLAIMS ALL WARRANTIES, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE UNDER OR IN CONNECTION WITH THIS AGREEMENT OR ANY SUBJECT MATTER HEREOF

12. Limitations of Liability. IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER PARTY OR TO ANY THIRD PARTY FOR (A) ANY CLAIMS ASSERTING OR BASED ON THE USE, INABILITY TO USE, LOSS, INTERRUPTION OR DELAY OF THE SERVICES, LOSS OF USE OF FACILITY OR EQUIPMENT, LOST BUSINESS, REVENUES OR PROFITS, LOSS OF GOODWILL, FAILURE TO ACHIEVE COST SAVINGS, FAILURE OR INCREASED COST OF OPERATIONS, LOSS, DAMAGE OR CORRUPTION OF DATA, LOSS RESULTING FROM SYSTEM OR SERVICE FAILURE, MALFUNCTION, DOWNTIME, SHUTDOWN, SERVICE INCOMPATIBILITY OR PROVISION OF INCORRECT COMPATIBILITY INFORMATION, FAILURE TO ACCURATELY TRANSFER, READ OR TRANSMIT INFORMATION, FAILURE TO UPDATE OR PROVIDE CORRECT INFORMATION OR BREACHES IN SYSTEM SECURITY, OR (B) FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, EXEMPLARY, SPECIAL, PUNITIVE OR ENHANCED DAMAGES, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR ITS SUBJECT MATTER EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR SUCH DAMAGES ARE OTHERWISE FORESEEABLE, REGARDLESS OF THE LEGAL OR EQUITABLE THEORY

(CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE) UPON WHICH THE CLAIM IS BASED, AND NOTWITHSTANDING THE FAILURE OF ANY AGREED OR OTHER REMEDY OF ITS ESSENTIAL PURPOSE.

12.1 IN NO EVENT SHALL EITHER PARTY'S LIABILITY UNDER THIS AGREEMENT EXCEED THE AGGREGATE FEES AND REIMBURSABLE EXPENSES UNDER THIS AGREEMENT (INCLUDING AMOUNTS ALREADY PAID AND AMOUNTS THAT HAVE ACCRUED BUT NOT YET BEEN PAID).

13. Representations and Warranties.

13.1 Mutual Representations and Warranties. Each party represents and warrants to the other party that:

(a) it is duly organized, validly existing and in good standing as a corporation or other entity as represented herein under the laws and regulations of its jurisdiction of incorporation, organization or chartering;

(b) it has, and throughout the Term and any additional periods during which it does or is required to perform the Services will retain, the full right, power and authority to enter into this Agreement and perform its obligations hereunder;

(c) the execution of this Agreement by its representative whose signature is set forth at the end hereof has been duly authorized by all necessary corporate action of the party; and

(d) when executed and delivered by such party, this Agreement will constitute the legal, valid and binding obligation of such party, enforceable against such party in accordance with its terms except as the enforceability thereof may be limited by bankruptcy and similar Laws affecting creditors' rights generally and by general equitable principles.

14. Force Majeure. Neither party shall be liable or responsible to the other party, or be deemed to have defaulted under or breached this Agreement, for any failure or delay in fulfilling or performing any term hereof, when and to the extent such failure or delay is caused by: acts of God, flood, fire or explosion, war, terrorism, invasion, riot or other civil unrest, embargoes or blockades in effect on or after the date of this Agreement, national or regional emergency, strikes, labor stoppages or slowdowns or other industrial disturbances, or any passage of law or governmental order, rule, regulation or direction, or any action taken by a governmental or public authority, including imposing an embargo, export or import restriction, quota or other restriction or prohibition, or national or regional shortage of adequate power or telecommunications or transportation facilities (each of the foregoing, a "Force Majeure Event"), in each case provided that such event

is outside the reasonable control of the affected party and the affected party uses diligent efforts to end the failure or delay and minimize the effects of such Force Majeure Event.

15. General Provisions.

15.1 Further Assurances. Each party shall, upon the reasonable request of the other party, execute such documents and perform such acts as may be necessary to give full effect to the terms of this Agreement.

15.2 Relationship of the Parties. The relationship between the parties is that of independent contractors. Nothing contained in this Agreement shall be construed as creating any agency, partnership, joint venture or other form of joint enterprise, employment or fiduciary relationship between the parties, and neither party shall have authority to contract for or bind the other party in any manner whatsoever.

15.3 Public Announcements. Neither party shall issue or release any announcement, statement, press release or other publicity or marketing materials relating to this Agreement or, unless expressly permitted under this Agreement, otherwise use the other party's trademarks, service marks, trade names, logos, domain names or other indicia of source, association or sponsorship, in each case, without the prior written consent of the other Party.

15.4 Notices. All notices, requests, consents, claims, demands, waivers and other communications hereunder shall be in writing and addressed to the parties as follows (or as otherwise specified by a party in a notice given in accordance with this Section):

If to Peak:

Peak Reliability

myates@peakrc.com

Attention: Matthew Yates

Title: Acting General Counsel

If to Customer:

Hetch Hetchy Water and Power Division Manager

Facsimile: 209-989-2529

E-mail: mhannaford@sfgwater.org

Attention: Margaret Hannaford

Title: Hetch Hetchy Water and Power Division
Manager

Notices sent in accordance with this section shall be deemed effectively given: (a) when received, if delivered by hand (with written confirmation of receipt); (b) when received, if sent by a nationally recognized overnight courier (receipt requested); (c) on the date sent by e-mail if sent during normal business hours of the recipient, and on the next business day, if sent after normal business hours of the recipient; or (d) on the 3rd day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid.

15.5 Headings. The headings in this Agreement are for reference only and shall not affect the interpretation of this Agreement.

15.6 Entire Agreement. This Agreement, including all Service Orders and other Schedules and Exhibits and any other documents, agreements or instruments incorporated by reference herein, constitutes the sole and entire agreement of the parties to this Agreement with respect to the subject matter contained herein, and supersedes all prior and contemporaneous understandings and agreements, both written and oral, with respect to such subject matter.

15.7 Assignment. Neither party shall assign or otherwise transfer any of its rights, or delegate or otherwise transfer any of its obligations or performance, under this Agreement, by operation of law or otherwise, without the other party's prior written consent, which consent shall not unreasonably be withheld or delayed.

15.8 No Third-party Beneficiaries. This Agreement is for the sole benefit of the parties hereto and their respective permitted successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer on any other person or entity any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

15.9 Amendment and Modification; Waiver. This Agreement may only be amended, modified or supplemented by an agreement in writing signed by each party hereto. No waiver by any party of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the party so waiving. Except as otherwise set forth in this Agreement, no failure to exercise, or delay in exercising, any right, remedy, power or privilege arising from this Agreement shall operate or be construed as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege.

15.10 Severability. If any term or provision of this Agreement is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the parties hereto

shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

15.11 Governing Law; Submission to Jurisdiction. This Agreement, and all related documents and all matters arising out of or relating to this Agreement, shall be governed by the laws of the state in which all or a substantial part of the cause(s) of action arose, or federal law, or both, to the degree applicable to the cause(s) asserted. In the event of a dispute under this Agreement, venue may be asserted in either the county in which all or a substantial part of the dispute occurred or the county in which the asserting party's principal office is located.

15.12 Equitable Relief. Each party to this Agreement acknowledges and agrees that (a) a breach or threatened breach by such party of any of its obligations under this Agreement would give rise to irreparable harm to the other party for which monetary damages would not be an adequate remedy and (b) in the event of a breach or a threatened breach by such party of any such obligations, the other party hereto shall, in addition to any and all other rights and remedies that may be available to such party at law, at equity or otherwise in respect of such breach, be entitled to equitable relief, including a temporary restraining order, an injunction, specific performance and any other relief that may be available from a court of competent jurisdiction, without any requirement to post a bond or other security, and without any requirement to prove actual damages or that monetary damages will not afford an adequate remedy.

15.13 Schedules and Exhibits. All Exhibits that are referenced herein and attached hereto, or are signed by both parties on or after the Effective Date, are hereby incorporated by reference. The following Schedules and Exhibits are attached hereto and incorporated herein:

Schedule A

Service Orders and Pricing

15.14 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement and will become effective and binding upon the parties as of the Effective Date at such time as all the signatories hereto have signed a counterpart of this Agreement. A signed copy of this Agreement delivered by e-mail or other means of electronic transmission (to which a signed PDF copy is attached) shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

15.15 San Francisco Contracting Provisions:

For purposes of this Section 15.14 City means the City and County of San Francisco and Contractor means Peak.

(a) **Certification of Funds:**

1. The City's obligation hereunder shall not at any time exceed the amount certified by the Controller for the purpose and period stated in such certification of funds.
2. Except as may be provided by laws governing emergency procedures, officers and employees of the City are not authorized to request, and the City is not required to reimburse Contractor for, services beyond the agreed-upon contract scope unless the changed scope is authorized by amendment and approved as required by law.
3. Officers and employees of the City are not authorized to offer or promise, nor is the City required to honor, any offered or promised additional funding in excess of the maximum amount of funding for which the contract is certified without certification of the additional amount by the Controller.
4. The Controller is not authorized to make payments on any contract for which funds have not been certified as available in the budget or by supplemental appropriation.

(b) **Audit and Inspection of Records.** Contractor agrees to maintain and make available to the City, during regular business hours, accurate books and accounting records relating to its Services. Contractor will permit City to audit, examine and make excerpts and transcripts from such books and records, and to make audits of all invoices, materials, payrolls, records or personnel and other data related to all other matters covered by this Agreement, whether funded in whole or in part under this Agreement. Contractor shall maintain such data and records in an accessible location and condition for a period of not fewer than five years after final payment under this Agreement or until after final audit has been resolved, whichever is later. The State of California or any Federal agency having an interest in the subject matter of this Agreement shall have the same rights as conferred upon City by this Section. Contractor shall include the same audit and inspection rights and record retention requirements in all subcontracts.

(c) **Submitting False Claims.** The full text of San Francisco Administrative Code Chapter 21, Section 21.35, including the enforcement and penalty provisions, is incorporated into this Agreement. Pursuant to San Francisco Administrative Code §21.35, any contractor or subcontractor who submits a false claim shall be liable to the City for the statutory penalties set forth in that section. A contractor or subcontractor will be deemed to have submitted a false claim to the City if the contractor or subcontractor: (a) knowingly presents or causes to be

presented to an officer or employee of the City a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by the City; (c) conspires to defraud the City by getting a false claim allowed or paid by the City; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property to the City; or (e) is a beneficiary of an inadvertent submission of a false claim to the City, subsequently discovers the falsity of the claim, and fails to disclose the false claim to the City within a reasonable time after discovery of the false claim.

(d) **Conflict of Interest.** By executing this Agreement, Contractor certifies that it does not know of any fact which constitutes a violation of Section 15.103 of the City's Charter; Article III, Chapter 2 of City's Campaign and Governmental Conduct Code; Title 9, Chapter 7 of the California Government Code (Section 87100 et seq.), or Title 1, Division 4, Chapter 1, Article 4 of the California Government Code (Section 1090 et seq.), and further agrees promptly to notify the City if it becomes aware of any such fact during the term of this Agreement.

(e) **Prohibition on Use of Public Funds for Political Activity.** In performing the Services, Contractor shall comply with San Francisco Administrative Code Chapter 12G, which prohibits funds appropriated by the City for this Agreement from being expended to participate in, support, or attempt to influence any political campaign for a candidate or for a ballot measure. Contractor is subject to the enforcement and penalty provisions in Chapter 12G.

(f) **Nondiscrimination Requirements**

(i) **Non Discrimination in Contracts.** Contractor shall comply with the provisions of Chapters 12B and 12C of the San Francisco Administrative Code. Contractor shall incorporate by reference in all subcontracts the provisions of Sections 12B.2(a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code and shall require all subcontractors to comply with such provisions. Contractor is subject to the enforcement and penalty provisions in Chapters 12B and 12C.

(ii) **Nondiscrimination in the Provision of Employee Benefits.** San Francisco Administrative Code 12B.2. Contractor does not as of the date of this Agreement, and will not during the term of this Agreement, in any of its operations in San Francisco, on real property owned by San Francisco, or where work is being performed for the City elsewhere in the United States, discriminate in the provision of employee benefits between

employees with domestic partners and employees with spouses and/or between the domestic partners and spouses of such employees, subject to the conditions set forth in San Francisco Administrative Code Section 12B.2.

(g) **Minimum Compensation Ordinance.** Contractor shall pay covered employees no less than the minimum compensation required by San Francisco Administrative Code Chapter 12P. Contractor is subject to the enforcement and penalty provisions in Chapter 12P. By signing and executing this Agreement, Contractor certifies that it is in compliance with Chapter 12P.

(h) **Consideration of Criminal History in Hiring and Employment Decisions**

(i) Contractor agrees to comply fully with and be bound by all of the provisions of Chapter 12T, "City Contractor/Subcontractor Consideration of Criminal History in Hiring and Employment Decisions," of the San Francisco Administrative Code ("Chapter 12T"), including the remedies provided, and implementing regulations, as may be amended from time to time. The provisions of Chapter 12T are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the Chapter 12T is available on the web at <http://sfgov.org/olse/fco>. A partial listing of some of Contractor's obligations under Chapter 12T is set forth in this Section. Contractor is required to comply with all of the applicable provisions of 12T, irrespective of the listing of obligations in this Section. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12T.

(ii) The requirements of Chapter 12T shall only apply to a Contractor's or Subcontractor's operations to the extent those operations are in furtherance of the performance of this Agreement, shall apply only to applicants and employees who would be or are performing work in furtherance of this Agreement, and shall apply when the physical location of the employment or prospective employment of an individual is wholly or substantially within the City of San Francisco. Chapter 12T shall not apply when the application in a particular context would conflict with federal or state law or with a requirement of a government agency implementing federal or state law.

(i) **Sunshine Ordinance.** Contractor acknowledges that this Agreement and all records related to its formation, Contractor's performance of Services, and City's payment are subject to the California Public Records Act, (California Government Code §6250 et. seq.), and the San Francisco Sunshine Ordinance,

(San Francisco Administrative Code Chapter 67). Such records are subject to public inspection and copying unless exempt from disclosure under federal, state or local law. As stated in the definition of Authorized Users herein, access to the information provided pursuant to this agreement is governed by the Peak Reliability Universal Data Sharing Agreement ("UDSA") and in responding to a request for information pursuant to the California Public Records Act and the San Francisco Sunshine Ordinance, the City will proceed in accordance with the UDSA including but not limited to Section VI, 2.

(j) **Government Code Claim Requirement.** No suit for money or damages may be brought against the City until a written claim therefor has been presented to and rejected by the City in conformity with the provisions of San Francisco Administrative Code Chapter 10 and California Government Code Section 900, et seq. Nothing set forth in this Agreement shall operate to toll, waive or excuse Contractor's compliance with the California Government Code Claim requirements set forth in San Francisco Administrative Code Chapter 10 and California Government Code Section 900, et seq.

(k) **MacBride Principles -Northern Ireland.** By signing this Agreement, Contractor confirms that Contractor has read and understood that the City urges companies doing business in Northern Ireland to resolve employment inequities and to abide by the MacBride Principles, and urges San Francisco companies to do business with corporations that abide by the MacBride Principles.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date by their duly authorized representatives.

Peak

By: [Signature]

Name: Marie Jordan

Title: President & CEO Peak Reliability

Date: 3/23/2017

Customer

By: [Signature]

Name: Archie Kelley

Title: Gen. Mgr. & CEO

Date: 3/29/17

Approved as to Form:

Dennis J. Herrera

City Attorney

By: [Signature]
Jeanne M. Solé
Deputy City Attorney

SCHEDULE A

SERVICE ORDERS AND PRICING

With this Service Order, Customer notifies Peak that it has met the requirements necessary to access the Services described in the Agreement. Customer agrees to pay the Fees and Expenses listed below in order to obtain access to the Services. If applicable, Customer also warrants that Customer has obtained an appropriate license from Alstom to access and use the STNET related Services as described in the Agreement.

All payments shall be in US dollars and made by check or wire transfer to Peak pursuant to the payment instructions on the applicable invoice.

SERVICE ORDER NO. 01

This Service Order, effective as of the last signature date set forth below, is a part of and incorporated into the Hosted Advanced Applications Agreement between City and County of San Francisco as Customer and Peak, dated April 1, 2017 ("Agreement"). Capitalized terms not defined in this Service Order are as defined in the Agreement. In the event of any conflict between the body of the Agreement and this Service Order, the body of the Agreement shall govern.

1. **Additional Services:** None

2. **Payment Schedule:**

(i) A lump sum payment of \$30,000 (initiation fee).

(ii) Upon initiation of the term: a lump sum payment of \$56,250.

Peak

By: 

Name: MARIE JORDAN

Title: President CEO Peak Reliability

Date: 3/23/2017

Customer

By: 

Name: HELEN KELLY JR

Title: GM SEDUC

Date: 3/29/17

PUBLIC UTILITIES COMMISSION

City and County of San Francisco

RESOLUTION NO. 19-0048

WHEREAS, The North American Electric Reliability Corporation (NERC) requires all registered Transmission Operators (TOP) to perform a real-time assessment of their transmission system. As a registered TOP, this requirement applies to Hetch Hetchy Water and Power (HHWP); and

WHEREAS, Peak Reliability developed a Hosted Advanced Application (HAA) to assist TOPs in performing the real-time assessments required by NERC. The San Francisco Public Utilities Commission (SFPUC) entered into Agreement No. CS-1084 with Peak Reliability ("Peak Agreement") to fulfill NERC's requirements; and

WHEREAS, In July of 2018, Peak Reliability announced that it would cease operations as of the end of 2019; and

WHEREAS, In August 2018, the CAISO filed for Federal Energy Regulatory Commission (FERC) approval of amendments to its tariff to allow CAISO to provide Reliability Coordinator (RC) services similar to those provided to HHWP under the Peak Agreement. CAISO's tariff amendments included a pro forma Reliability Coordinator Services Agreement (RCSA), which FERC approved on November 14, 2018, with an effective date of November 15, 2018; and

WHEREAS, Once Peak Reliability completes winding down, CAISO will be the only entity in California certified by NERC to provide the RC services required under the Standard. CAISO set forth a strict schedule for transitioning TOPs to its RC services, requiring TOPs to execute an RCSA with CAISO on a compressed timeline; and

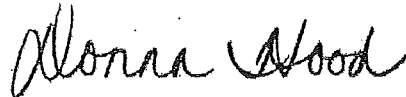
WHEREAS, The Western Electricity Coordinating Council (WECC), which enforces NERC standards in the Western region, has authority to impose substantial monetary penalties on TOPs for failure to perform the real-time analyses required by the standards; and

WHEREAS, The estimated cost of services is \$150,000 per year; funds are available from Hetch Hetchy Water and Power Operating and Programmatic budgets; and

WHEREAS, The General Manager executed the RCSA on January 7, 2019; now, therefore, be it

RESOLVED, That the Commission retroactively approves the Agreement between the City and County of San Francisco and the California Independent System Operator for Reliability Coordinator Services and authorizes the General Manager of the San Francisco Public Utilities Commission to seek retroactive approval from the San Francisco Board of Supervisors.

I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of March 12, 2019.

A handwritten signature in black ink, appearing to read "Monna Wood". The signature is fluid and cursive, with the first name "Monna" and the last name "Wood" clearly distinguishable.

Secretary, Public Utilities Commission

Item 10 File 19-0436	Department: Public Utilities Commission (PUC)
EXECUTIVE SUMMARY	
<p style="text-align: center;">Legislative Objectives</p> <ul style="list-style-type: none"> The proposed ordinance would retroactively authorize the San Francisco Public Utilities Commission (SFPUC) to enter into an agreement with the California Independent System Operator (CAISO) for (1) Reliability Coordinator services, and (2) a Hosted Advanced Network Application services from January 7, 2019 through July 6, 2020, with automatic annual renewals for a projected total term of 20 years and a total not to exceed amount of \$3,000,000 for the twenty year term, or an average annual cost of \$150,000. <p style="text-align: center;">Key Points</p> <ul style="list-style-type: none"> The SFPUC complies with some of the electric reliability standards mandated by the North American Electric Reliability Corporation (NERC) through services provided by Peak Reliability, a 501(c)4 social welfare organization created to provide utilities with Reliability Coordinator services after the Western Electric Coordinating Council reorganized in 2014. Peak Reliability has provided Reliability Coordinator services since 2014 to SFPUC for an approximate cost of \$55,000 per year. Separately, SFPUC has a contract with Peak Reliability for Hosted Advanced Network Application services to fulfill requirements for real-time testing of its transmission system conditions, at a cost of \$90,000 per year. In July 2018, Peak Reliability announced that it would cease operations in November 2019. In November 2018, the Federal Energy Regulatory Commission approved the California Independent System Operator (CAISO) to begin providing Reliability Coordinator services. CAISO is also able to provide Hosted Advanced Network Applications services, similar to what is now provided by Peak Reliability. The SFPUC executed the contract with CAISO on January 7, 2019 in order to participate in the confidential training and data sharing available to the first wave of customers transitioning from Peak Reliability to CAISO. <p style="text-align: center;">Fiscal Impact</p> <ul style="list-style-type: none"> As of April 17th, 2019, the SFPUC estimates that it will pay CAISO \$150,000 per year, or approximately \$5,000 more per year than it has paid Peak Reliability for the same services. The rates associated with Reliability Coordinator services are set by the Federal Energy Regulatory Commission. The funds to pay CAISO will be coming from the Hetch Hetchy Water and Power Operating and Programmatic Budgets. There will be some overlap in costs between Peak Reliability and CAISO between July and November 2019. <p style="text-align: center;">Recommendation</p> <ul style="list-style-type: none"> Approve the proposed ordinance. 	

MANDATE STATEMENT

City Charter Section 9.118(b) states that any contract entered into by a department, board or commission that (1) has a term of more than ten years, (2) requires expenditures of \$10 million or more, or (3) requires a modification of more than \$500,000 is subject to Board of Supervisors approval.

Administrative Code Section 21.9(b) states that Departments are prohibited from entering into contracts involving expenditure of City funds with provisions that would automatically renew the contract term without further action by the City.

BACKGROUND

The City and County of San Francisco through its SFPUC Division owns and operates generation and transmission assets considered part of the Bulk Electric System (BES). The North American Electric Reliability Corporation (NERC) adopts mandatory electric reliability standards that apply to all electric utilities, including Hetch Hetchy Water and Power. NERC Reliability Standards define the specific NERC Reliability Requirements for planning and operating the City's BES generation and transmission assets.

Prior to 2014, the Western Electrical Coordinating Council (WECC) performed reliability oversight and Reliability Coordinator functions required for electric utilities in the western region to be in compliance with NERC standards. In 2014, WECC was bifurcated into a Regional Entity, responsible for compliance monitoring and enforcement, and a Reliability Coordinator, with the latter performed by a 501(c)4 organization¹, Peak Reliability. In 2014, Peak Reliability began providing Reliability Coordinator services to Hetch Hetchy Water and Power previously provided by WECC. The cost for Peak Reliability to provide these mandatory services through the present has been approximately \$55,000 per year.

In April 2017, the North American Electric Reliability Corporation (NERC)² began requiring all registered transmission operators, such as Hetch Hetchy Water and Power, to perform real-time assessments of their transmission systems. Separate from Reliability Coordinator services, SFPUC entered in to a contract with Peak Reliability for Hosted Advanced Network Application services in 2017 to address the new NERC requirements for ongoing real-time testing of the Hetch Hetchy Water and Power system. SFPUC has never had an agreement with Peak Reliability for Reliability Coordinator services.

SFPUC's agreement with Peak Reliability for Hosted Advanced Network Application services established fees not to exceed \$86,250 for the period from April 3, 2017 through December 31, 2017, later amended to extend the term through December 31, 2020 and increase the annual fees to \$90,000 per year. According to Administrative Code Section 21.04(a)(6), the

¹ 501(c)4 organizations are tax-exempt social welfare organizations described in Internal Revenue Code (IRC) section 501(c)(4), that must be operated exclusively to promote social welfare.

² The North American Electric Reliability Corporation, commonly called NERC, is a non-profit corporation that sets and enforces standards for the reliability and security of the electricity grid.

SFPUC General Manager may directly purchase ancillary services such as voltage control or load scheduling as required for assuring reliable services.

In July 2018, Peak Reliability announced that it would cease operations in November 2019. In November 2018, the Federal Energy Regulatory Commission approved the California Independent System Operator (CAISO), a nonprofit organization, to begin providing Reliability Coordinator services similar to those provided by Peak Reliability. Currently, CAISO is the only entity in California certified by the Federal Energy Regulatory Commission to provide Reliability Coordination. CAISO will also soon have the capability to provide Hosted Advanced Network Application services.

The SFPUC General Manager executed the reliability services agreement with CAISO on January 7, 2019. The San Francisco Public Utilities Commission retroactively approved the agreement on March 12, 2019. SFPUC reports that as of July 1, 2019 CAISO is now the Reliability Coordinator of record for the agency.

DETAILS OF PROPOSED LEGISLATION

The proposed ordinance would retroactively authorize the San Francisco Public Utilities Commission (SFPUC) to enter into an agreement with the California Independent System Operator (CAISO) for services similar to those now provided by Peak Reliability: (1) Reliability Coordinator services, and (2) Hosted Advanced Network Application services³ for an initial term of 18 months from January 7, 2019 through July 6, 2020, with automatic annual renewals for a total projected term of 20 years and a total not to exceed amount of \$3,000,000 for the twenty year term, or an average cost of \$150,000 per year. This represents an increase of approximately \$5,000 per year compared to the cost of services now provided by Peak Reliability: \$90,000 per year Hosted Advanced Applications and approximately \$55,000 for Reliability Coordinator services, or a total of approximately \$145,000.

The proposed ordinance would also waive Administrative Code Section 21.9(b), which states that departments are prohibited from entering into contracts involving expenditure of City funds with provisions that would automatically renew the contract term without further action by the City. According to Mr. Christopher Whitmore, Local Policy Analyst for SFPUC, the agreement with CAISO includes a provision for automatic renewal that was non-negotiable according to the Federal Energy Regulatory Commission which establishes rates to be charged by CAISO.

Retroactive Approval

According to Ms. Cheryl Sperry, Administrative Services Manager, Hetch Hetchy Water and Power, the SFPUC executed the contract on January 7, 2019 in order to participate in the confidential training and data sharing available to the first wave of customers transitioning from Peak Reliability to CAISO. The second wave of transitions will occur in December 2019, one month after Peak Reliability ends service in November 2019. According to Ms. Sperry,

³ CAISO will support reliability coordination services through internet-based applications (rather than local software).

waiting until the second wave of transitions would have put the SFPUC out of compliance with federally mandated NERC electric reliability standards and subject to substantial fines by the Western Electricity Coordinating Council.

Parallel Service

As of July 1, 2019, CAISO became the SFPUC's Reliability Coordinator of record. However, according to Ms. Sperry, CAISO's real-time contingency analysis tool will not have the full functionality required for compliance with the Federal Energy Regulatory Commission's standards until after November 2019. Therefore, Hetch Hetchy Water and Power will continue to use Peak Reliability until the end of November 2019 and will engage and pay CAISO in full for services during the same five-month period. During this period of time, CAISO will be responsible for all reliability issues including operating instructions and approval of mitigation actions for exceedances of system operating limits, grid messaging, and outage coordination. Peak Reliability's services will be limited to the provision of the real-time contingency analysis tool.

FISCAL IMPACT

The SFPUC paid Peak Reliability \$90,000 on January 1, 2019 for Hosted Advanced Applications for the entire calendar year. Hosted Advanced Network Application services from Peak Reliability will continue until November 2019, when Peak Reliability will discontinue providing these services. The SFPUC anticipates a pro-rated refund for the month of December 2019 from Peak Reliability in the amount of \$7,500. In addition, the SFPUC is currently paying Peak Reliability approximately \$55,060 per year for Reliability Coordinator services through November 2019. These services are paid on an ongoing basis. Total costs of Peak Reliability's services are thus approximately \$145,000 per year, less \$7,500 for December.

As of April 17th, 2019, the SFPUC estimates that it will pay CAISO \$150,000 per year for Reliability Coordinator services and a Hosted Advanced Network Application services, or \$5,000 more per year than it is paying Peak Reliability for the same services. The rates associated with Reliability Coordinator services are set by the Federal Energy Regulatory Commission, and therefore cannot be negotiated. The estimated cost is composed of a Reliability Coordinator service charge (approximately \$24,000) and the hosted advanced network application (approximately \$126,000). The funds to pay CAISO will be coming from the Hetch Hetchy Water and Power Operating and Programmatic Budgets.

Because of overlap in contract terms, SFPUC will be paying both Peak Reliability and CAISO for some services for a portion of 2019. SFPUC staff report that waiting to engage CAISO until Peak Reliability has completed their term will result in the department being out of compliance with legally required NERC electric reliability requirements and subject to substantial fines.

RECOMMENDATION

Approve the proposed ordinance.



San Francisco Water Power Sewer

Services of the San Francisco Public Utilities Commission

525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102
T 415.554.3155
F 415.554.3161
TTY 415.554.3488

TO: Angela Calvillo, Clerk of the Board

FROM: Christopher Whitmore, Policy and Government Affairs

DATE: April 23, 2019

SUBJECT: Authorizing Agreements – Retroactive Approval with the California Independent System Operator for Reliability Coordinator

Please see the attached ordinance retroactively authorizing the San Francisco Public Utilities Commission to enter into an agreement with the California Independent System Operator for Reliability Coordinator Services for a term in excess of 10 years and at an estimated cost not-to-exceed \$3,000,000.

The following is a list of accompanying documents (2 sets):

1. Board of Supervisors Ordinance
2. CS-1084 NCA and signed contract agreement
3. CAISO RCS Agreement
4. SFPUC Reso 19-0048
5. Form 126

Please contact Christopher Whitmore at (415) 934-3906 if you need any additional information on these items.

London N. Breed
Mayor

Ann Moller Caen
Vice President

Francesca Vietor
Commissioner

Anson Moran
Commissioner

Ike Kwon
Commissioner

Harlan L. Kelly, Jr.
General Manager

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.



FORM SFEC-126:
NOTIFICATION OF CONTRACT APPROVAL
(S.F. Campaign and Governmental Conduct Code § 1.126)

City Elective Officer Information <i>(Please print clearly.)</i>	
Name of City elective officer(s): Members, Board of Supervisors	City elective office(s) held: Members, Board of Supervisors

Contractor Information <i>(Please print clearly.)</i>	
Name of contractor: California Independent System Operator Corporation (CAISO)	
<i>Please list the names of (1) members of the contractor's board of directors; (2) the contractor's chief executive officer, chief financial officer and chief operating officer; (3) any person who has an ownership of 20 percent or more in the contractor; (4) any subcontractor listed in the bid or contract; and (5) any political committee sponsored or controlled by the contractor. Use additional pages as necessary.</i>	
1) Ashutosh Bhagwat, Severin Borenstein, Angelina Galiteva, Mary Leslie; and David Olsen	
2) Steve Berberich, Ryan Seghesio and N/A	
3) N/A	
4) N/A	
5) N/A	
Contractor address: 250 Outcropping Way, Folsom, CA 95630	
Date that contract was approved:	Amount of contract: Not to exceed \$3,000,000
Describe the nature of the contract that was approved: Provide reliability coordinator service to Hetch Hetchy Water and Power consistent with the North American Electric Reliability Corporation (NERC) reliability standards that apply to all electric utilities.	
Comments: The CAISO is the only entity that can provide the real-time assessment service and the agreement is non-negotiable.	

This contract was approved by (check applicable):

☐ the City elective officer(s) identified on this form

☒ a board on which the City elective officer(s) serves San Francisco Board of Supervisors
Print Name of Board

☐ the board of a state agency (Health Authority, Housing Authority Commission, Industrial Development Authority Board, Parking Authority, Relocation Appeals Board, and Local Workforce Investment Board) on which an appointee of the City elective officer(s) identified on this form sits

Print Name of Board

Filer Information <i>(Please print clearly.)</i>	
Name of filer: Angela Calvillo, Clerk of the Board	Contact telephone number: (415) 554-5184
Address: City Hall, Room 244, 1 Dr. Carlton B. Goodlett Pl., San Francisco, CA 94102	E-mail: Board.of.Supervisors@sfgov.org

Signature of City Elective Officer (if submitted by City elective officer)

Date Signed

Signature of Board Secretary or Clerk (if submitted by Board Secretary or Clerk)

Date Signed

S:\ALL FORMS\Campaign Finance\SFEC - 126\ Form SFEC-126 Notification of Contract Approval 9.14.doc