

**BALANCING AUTHORITY AREA SERVICES AGREEMENT**

**BETWEEN**

**LOS ANGELES DEPARTMENT OF WATER AND POWER**

**AND**

**BURBANK WATER AND POWER**

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LOS ANGELES DEPARTMENT OF WATER AND POWER  
AND  
BURBANK WATER AND POWER**

This Balancing Authority Area Services Agreement ("Agreement"), dated as of \_\_\_\_\_, 2015, is entered into by and between the City of Los Angeles on behalf of its Department of Water and Power ("LADWP") in its capacity as the operator of the LADWP Balancing Authority Area and City of Burbank, on behalf of its Water and Power Department ("BWP"). LADWP and BWP are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

**RECITALS**

**WHEREAS**, BWP owns and operates a combination of transmission, generation and distribution components (collectively BWP's "System"), and serves its own retail customers using its System and BWP's transmission rights under its existing transmission contracts ("ETCs");

**WHEREAS**, BWP's System is currently located within the LADWP Balancing Authority Area;

**WHEREAS**, LADWP has an OATT under which it provides transmission service through its Balancing Authority Area;

**WHEREAS**, the Parties are also parties to certain transmission agreements which provide for points of interconnection, points of receipt, points of delivery and provide for coordinated operations between the Parties' Systems;

**WHEREAS**, pursuant to this Agreement, LADWP as the Balancing Authority will provide certain Balancing Authority Area Services to BWP under the terms and conditions set forth herein, as of the Implementation Date;

**WHEREAS**, BWP and LADWP hereby agree to enter into this Agreement to set forth the terms and conditions for the provision by LADWP of certain Balancing Authority Area Services to BWP, to establish the rates for such services, and the payment for such services as of the Effective Date;

**WHEREAS**, the Parties wish to establish in this Agreement measures to coordinate certain operation and maintenance of the Interconnection Facilities (as defined herein) and their respective Systems to effectuate the operation of the Balancing Authority Area and meet their respective obligations under the Applicable Reliability Standards as promulgated and enforced by the Federal Energy Regulatory Commission ("FERC" or the "Commission"), the North American Electric Reliability Corporation ("NERC") and the Western Electricity Coordinating Council ("WECC");

**WHEREAS**, the Parties will continue to operate the Interconnection Facilities and their respective Systems related to the operation of the Balancing Authority Area in accordance with Good Utility Practice; and

**NOW THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

## **ARTICLE I DEFINITIONS**

- 1.0 **Definitions.** As used in this Agreement, the following terms shall have the meanings stated below. Terms defined in other sections of this Agreement shall have the meanings stated in those sections. Any other initially capitalized term in this Agreement shall have the definition of that term as set forth in the NERC Glossary of Terms Used in Reliability Standards ("NERC Glossary") as may be amended from time to time, unless otherwise defined in this Agreement, and the NERC Glossary is hereby incorporated by reference into this Agreement.
- 1.1 **"Applicable Reliability Standard"** shall mean with respect to a Party, refers to those Reliability Standards that apply to that Party based upon its registered entity status or as otherwise may be determined by FERC, NERC or WECC, as they may be amended from time to time. Reliability Standards are as set forth in Section 215(a)(3) of the Federal Power Act, 16 U.S.C. §824o(a)(3), or any successor legislation imposing mandatory requirements to provide for the reliable operation of the Bulk Power System, as defined in 16 U.S.C. §824o(a)(1), and any regulations validly promulgated thereunder. Reliability Standards include national standards and regional reliability standards promulgated by FERC, NERC and WECC
- 1.2 **"Authorized Representative"** shall mean the representative of a Party designated in accordance with Article IV of this Agreement.
- 1.3 **"Balancing Authority"** ("BA") As this term is defined in the NERC Glossary of Terms to refer to the LADWP BA, unless another BA is specifically referenced herein.
- 1.4 **"Balancing Authority Area"** ("BAA") As this term is defined in the NERC Glossary of Terms to refer to the LADWP BAA, unless another BAA is specifically referenced herein.
- 1.5 **"Balancing Authority Area Services"** shall mean the services provided in Schedules 1 through 6 of this Agreement that are necessary to support BWP's delivery of its capacity and energy.
- 1.6 **"Commission"** or **"FERC"** shall mean the Federal Energy Regulatory Commission or its successor.
- 1.7 **"Confidential Information"** shall mean information that is furnished by one Party to the other Party after the date of execution of this Agreement, whether written or recorded/electronic, and regardless of the manner in which furnished, and which is marked "Confidential" or "Official Use Only - Subject to Non-Disclosure Agreement" or with a similar designation indicating limitations on disclosure. Confidential Information is subject to the requirements of Section 8.10 of this Agreement.
- 1.8 **"Contingency Recovery Period"** shall mean a period beginning at the time that BWP begins taking contingency reserve energy from any source, and extending to the time when BWP's CE returns to zero.

- 1.9 "Control Error" ("CE") shall have the meaning as set forth in Schedule 4 of this Agreement.
- 1.10 "Deviation Bank" shall mean the continuously accumulating account of inadvertent interchange energy (on-peak and off-peak) between the Parties that is zeroed out at the end of each calendar month, as described in Schedules 4 through 6 of this Agreement.
- 1.11 "Effective Date" shall be the effective date set forth in the Settlement Agreement and Release of Claims between the Parties (DWP Agreement No. BP 15-019).
- 1.12 "Emergency" shall mean any System condition that requires immediate automatic or manual action to prevent or limit the failure of the transmission facilities or generation supply that could adversely affect the reliability of (a) with respect to the Balancing Authority, the Bulk Electric System and/or the Balancing Authority Area's electric system, or (b) with respect to BWP, the BWP's System.
- 1.13 "Energy Imbalance" shall mean the Net Actual Interchange minus the Net Interchange Scheduled over the applicable period, as set forth in Schedule 4.
- 1.14 "Energy Imbalance Service" shall mean the services defined in Schedule 4 of this Agreement.
- 1.15 "FERC" see "Commission", as defined in Section 1.6.
- 1.16 "Good Utility Practice" shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.
- 1.17 "Implementation Date" shall mean the date this Agreement shall first be implemented, which shall be the date commencing at 12:01 AM Pacific Prevailing Time on the first day of the first month after (1) the Effective Date and (2) the conditions set forth in Sections 2.5, 2.6, and 8.16.1 and Appendix F of this Agreement have been fulfilled.
- 1.18 "Interconnection Facilities" shall mean the transmission equipment listed in Appendix C that connects LADWP and BWP, and for purposes of calculating CE, Net Actual Interchange, Net Scheduled Interchange, and Energy Imbalance, and shall include the Western Substation.
- 1.19 "LADWP Energy Rate" shall be defined as the Intercontinental Exchange (ICE) Daily Price Indices at Palo Verde (PV) (On-peak or Off-peak) published in the ICE Day Ahead Power Price Report, or its successor.
- 1.20 "LADWP Transmission System" shall mean the transmission system of Balancing Authority.

- 1.21 **"NERC"** shall mean the North American Electric Reliability Corporation, the entity designated as the electric reliability organization certified by the Commission to establish and enforce the reliability standards of the Bulk Electric System, or its successor organization.
- 1.22 **"Net Actual Interchange"** shall mean the algebraic sum of all metered interchange across the Interconnection Facilities for a given period or instant in time.
- 1.23 **"Net Scheduled Interchange"** shall mean the algebraic sum of all interchange schedules across the Interconnection Facilities for a given period or instant in time.
- 1.24 **"Net Tie Deviation"** shall have the meaning set forth in Schedule 4 of this Agreement.
- 1.25 **"OASIS"** shall mean the Open Access Same Time Information System of LADWP.
- 1.26 **"OATT"** shall mean LADWP's Open Access Transmission Tariff, as it may be amended by LADWP from time to time.
- 1.27 **"Operating Reserve - Spinning Reserve Service"** shall mean the services defined in Schedule 5 of this Agreement.
- 1.28 **"Operating Reserve - Supplemental Reserve Service"** shall mean the services defined in Schedule 6 of this Agreement.
- 1.29 **"Outage"** shall mean a disconnection or separation, whether planned or forced, of one or more elements of an electric system.
- 1.30 **"Period Deviation"** shall have the meaning set forth in Schedule 4 of this Agreement.
- 1.31 **"Planned Outage"** shall mean outages that may affect the reliability of the respective Systems of the Parties that are coordinated with notice provided in accordance Section 3.7 of this Agreement.
- 1.32 **"Point of Interconnection"** shall mean Toluca Receiving Station E (RS-E).
- 1.33 **"Reactive Supply and Voltage Control from Generation or Other Sources Service"** shall mean the services defined in Schedule 2 of this Agreement.
- 1.34 **"Regulation and Frequency Response Service"** shall mean the services defined in Schedule 3 of this Agreement.
- 1.35 **"Scheduling, System Control and Dispatch Service"** shall mean the services defined in Schedule 1 of this Agreement.
- 1.36 **"Shut-down Energy"** shall have the meaning set forth in Appendix E.
- 1.37 **"Start-up Energy"** shall have the meaning set forth in Appendix E.
- 1.38 **"Tie Line Bias"** shall have the meaning set forth in Schedule 4 of this Agreement.

- 1.39 **"Uncontrollable Forces"** shall mean any act of God, act of the public enemy, terrorism, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities or any other event beyond the reasonable control of the Balancing Authority or BWP, and which by exercise of Good Utility Practice, the Party could not avoid. The unavailability of funds or financing, economic or market forces, or the economic hardship of either Party shall not be considered an Uncontrollable Force.
- 1.40 **"WECC"** shall mean the Western Electricity Coordinating Council, or its successor organization.

## **ARTICLE II SCOPE OF SERVICES**

- 2.0 **Scope of Services.** LADWP shall offer to provide BWP the services listed in Schedules 1 through 6 of this Agreement, as requested by BWP. LADWP shall offer to provide full contingency reserve service to BWP, as set forth in Schedules 5 and 6 of this Agreement. BWP shall request the services listed in Schedules 1 through 6 pursuant to this Agreement and the provisions of relevant LADWP Business Practices.
- 2.1 **Term.** Services under this Agreement shall commence on the Implementation Date, and continue until: (i) this Agreement is terminated in accordance with Article VI, or (ii) the Parties otherwise mutually agree.
- 2.2 **No Implied Effect on Other Rights or Agreements:**
- 2.2.1 Except as specifically and explicitly set forth in this Agreement, nothing in this Agreement is intended to modify or otherwise affect any rights or obligations of either Party under any agreement existing as of the Effective Date (the "Existing Agreements"), including but not limited to the City-Burbank Interconnection Agreement, DWP No. 10132 ("Interconnection Agreement"), the City-Burbank Pacific Intertie D-C Transmission Facilities Agreement, DWP No. 10129 ("PDCI Agreement"), and the City-Burbank 1968 Interchange Agreement, DWP No. 10137 ("Interchange Agreement").
- 2.2.2 For the term of this Agreement, this Agreement shall satisfy BWP's obligations under the Existing Agreements to provide spinning reserves, supplemental reserves (sometimes referred to as "non-spinning reserves") or any other contingency reserves.
- 2.3 **BWP's Load and Schedules.** LADWP shall offer Balancing Authority Services under this Agreement to support BWP's retail obligations. BWP shall be responsible for timely submission of any necessary schedules and NERC e-Tags in accordance with Applicable Reliability Standards, and in accordance with the requirements set forth in Schedules 1 through 6 of this Agreement.
- 2.4 **Rates.** If BWP takes service under this Agreement, BWP shall pay the rates for Balancing Authority Area Services provided by LADWP in Schedules 1 through 6 hereto as set forth in the formula and examples in Appendices B, D and H. BWP shall pay for the services provided under this Agreement in accordance with the provisions of Article V. The formulas set forth in Appendices B, D and H shall only be adjusted with the

mutual consent of both Parties. The inputs to the formulas are variables that may change from time-to-time, as defined in the Appendices and Schedules to this Agreement.

2.4.1 **One-time Revisions to Rates.** After the Implementation Date of this Agreement, upon the first revision of LADWP's August 14, 2014 OATT, if any of the rates specified in Schedules 1 through 6 of the OATT are reduced, LADWP shall provide a one-time credit as an offset to BWP's next months' bills that reflects the difference in rates for service taken under this Agreement, with interest calculated as set forth in Section 5.3, from the Implementation Date to the effective date of the new rates in Schedules 1 through 6 of the OATT.

2.5. **Development of Protocols, Business Practices or Procedures to Allow BWP to Self-Provide or Purchase Balancing Authority Area Services from Third-Parties.** Prior to the Implementation Date, LADWP shall develop and adopt protocols, business practices or procedures that specify the technical requirements necessary for BWP to purchase from third-parties or self-provide the Balancing Authority Area Services set forth in Schedules 1, 2, 3, 4, 5 and 6 of this Agreement. Such protocols, practices or procedures shall be consistent with industry standards and Good Utility Practice.

2.6. **Exchange of Emergency and Restoration Plans and Procedures.** BWP and LADWP will exchange emergency procedures, system restoration plans, voltage and MVAR plans, and capacity and energy emergency plans prior to the Implementation Date.

### **ARTICLE III** **TECHNICAL REQUIREMENTS**

3.0. **Metering.** BWP's interchange shall be measured at the Interconnection Facilities defined in Section 1.18 pursuant to the metering configuration identified in Appendix C. Metering equipment may be owned and maintained by the Parties and/or Glendale Water and Power ("GWP"). The Parties will exchange real-time data from their meters in accordance with LADWP's generally-applicable metering and communications requirements. All metering, communications, and data exchanges required to implement this Agreement shall be automated to the greatest extent reasonably practicable. The standards and specifications for metering and communications equipment as well as any related hardware and software required to implement this Agreement shall meet all Applicable Reliability Standards, and be consistent with industry standards and Good Utility Practice, if reasonably practicable, be compatible with the Parties' existing and planned facilities or software,

3.0.1 **Modifications to Meters.** In the event either Party intends to modify or replace meters at the Interconnection Facilities, that Party shall notify the other in writing not less than thirty (30) days prior to making any such modifications or replacements, except in the case of an Emergency, in which case the Party making the modification or replacement shall provide the other Party as much notice as reasonably practicable. The Parties shall have the right to monitor in-person any meter modifications or replacements or any meter testing conducted by any other Party at the Interconnection Facilities. Unless otherwise agreed to by the Parties, commencing on the Implementation Date, the Parties shall jointly test each of the interchange meters identified in Appendix C in the second and fourth calendar quarter (i.e., Q2 and Q4) of each year after the Implementation

Date and each Party shall bear their own costs for such testing. The Parties shall have the right to request periodic meter testing of the other Party's meters upon thirty (30) days prior notice and the requesting Party shall bear the cost of such tests. If any tests show any meter to be inaccurate by more than one percent, or if any meter fails to register, a billing adjustment shall be made correcting all measurements made by such meter to the past meter check or up to three (3) months, whichever is shorter. The adjustment shall be equal to the amount of error as determined for the actual period of such erroneous meter registration.

3.0.2 **Interconnection Substations.** There are two "Interconnection Substations" that are relevant to this Agreement: (1) Receiving Station E ("RS-E" or "Toluca") and (2) Western Substation ("Western"). To the extent a Party is responsible for operating one or more of the aforementioned Interconnection Substations, the Party shall be responsible for meeting the metering requirements: as set forth in Sections 3.0, 3.0.1 and 3.0.2 of this Agreement for that Interconnection Substation; and that are consistent with their individual operations and maintenance requirements.

3.1 **Modifications to Either Party's System.** In the event either Party intends to modify its System in a manner which in the exercise of Good Utility Practice would materially impact the obligations of the other Party under this Agreement (e.g., Balancing Authority's BAA obligations), the Party making the modifications shall provide notice, in accordance with Good Utility Practice, of its intended modification(s) as soon as reasonably practicable, but in no event later than sixty (60) days prior to making such modification(s) to its System. Within thirty (30) days of receiving such notice, the Party that is not modifying its System shall determine if the modification requires any amendments to the obligations set forth in this Agreement and shall notify the other Party of its proposed amendments. To the extent the Parties disagree on the proposed amendments the Parties will attempt to resolve the dispute using the dispute resolution provisions in Article VII of this Agreement.

3.2 [RESERVED].

3.3 [RESERVED].

3.4 **Reliability Standards.**

3.4.1 Each Party agrees to notify the other Party as far in advance as reasonably practicable of any FERC, NERC or WECC audit, investigation or spot-check of compliance with Applicable Reliability Standards pertaining to services under this Agreement. Each Party agrees to timely cooperate with the other Party in the event that a Party is subject to such an audit, investigation or spot-check by timely providing any supporting evidence in its possession that may be requested by the other Party to demonstrate compliance to a reviewing authority. During an on-site audit or investigation, each Party shall provide the other Party with such supporting evidence to assist with responses to data requests no later than one (1) business day after it is requested, unless the Parties mutually agree to an alternative deadline.

3.4.2 Each Party shall use Good Utility Practice to cooperate with the other Party,



through notifications, the exchange of data, coordination of plans, studies and schedules, and other actions that may be required to comply with Applicable Reliability Standards and related requirements.

3.4.3 It is the intent of the Parties for each Party to be responsible for compliance with Applicable Reliability Standards. If any new, revised or eliminated Reliability Standard changes the obligations of any Party during the term of this Agreement, the Parties shall cooperate using Good Utility Practice to ensure that each Party shall operate under the Applicable Reliability Standards as of the implementation date of such new or revised Reliability Standards.

3.4.4 Upon approval by FERC, the Parties agree to promptly meet to review any new, revised or eliminated Reliability Standard that changes the obligations of any Party during the term of this Agreement and to discuss any necessary modifications to this Agreement, including but not limited to adjustments to the calculation of charges and payment obligations as a result of changes in reserve obligations under this Agreement (e.g., a change in the Spinning Reserve obligations under Schedule 5). Parties may mutually agree that a meeting is not necessary.

3.4.4.1 Nothing in this Agreement shall require either Party to take any action under this Agreement contravening or violating any new or revised Applicable Reliability Standard.

3.4.5 If the BA's Applicable Reliability Standards are modified such that the BA's obligation to provide reserves of any type are modified or eliminated, BWP's obligation under this Agreement to pay for said reserves shall be deemed proportionately modified or eliminated as of the effective date of such modification and LADWP shall credit back or invoice to BWP any payments for said reserves after the modification's effective date.

### **3.5 Operation and Maintenance**

3.5.1 Each Party shall, to the fullest extent practicable, cause all its transmission and generating equipment to be designed, constructed, maintained, and operated in accordance with Good Utility Practice.

3.5.2 Each Party shall operate its System in parallel with other Systems with which it shares interconnections and shall maintain and operate its System so as to minimize the likelihood and effect of disturbances or Outages on its System which might impair service to the customers of any other Party. Each Party shall be the sole judge of whether service to its own customers is being or would be impaired by operating conditions on the System of any other Party, and may request such other Party to take, or may itself take, appropriate corrective action.

3.5.3 Except as may be specifically provided for in arrangements between the Parties involved, or as may be arranged by mutual agreement in specific cases by both Parties at the request of a Party, no Party shall be entitled to or obligated to furnish or to receive unscheduled megawatts (MW) or megavars (MVAR) to or from another Party, unless in a System Emergency. During a System

Emergency, all Parties shall meet all requirements of Applicable Reliability Standards and any other applicable standard to mitigate any capacity and energy Emergency and return to scheduled MW and MVA<sub>r</sub> flow between or among the Parties.

- 3.5.4 Each Party shall, at its own expense or as otherwise provided by separate written agreement between or among the Parties sharing the interconnection, maintain in good operating condition its portion of each interconnection; provided, however, that an interconnection may be removed from service or reduced in capacity in accordance with Section 3.7, and shall be restored to service as soon as practicable following any Outage.

### **3.6 Emergency Operations**

- 3.6.1 In the event of an Emergency, each Party shall render all available Emergency assistance to the other Party as requested, if the requesting entity has implemented similar Emergency procedures, and if such assistance would not violate safety, equipment, or regulatory or statutory requirements. This Agreement does not address obligations for payment or other compensation that may or may not exist under other agreements that may exist or may be entered into by the Parties in connection with, or as a result of Emergency assistance.
- 3.6.2 No Party shall perform switching under Emergency conditions at Toluca Receiving Station E (RS-E) Section M without coordinating with the other Party at such location, unless such Emergency conditions require switching to avoid or mitigate unsafe conditions.
- 3.6.3 BWP shall immediately comply with Reliability Directives from LADWP in its functional role as the Transmission Operator and Balancing Authority, unless such actions would violate safety, equipment, regulatory or statutory requirements. BWP shall comply as follows:
  - 3.6.3.1 Adjust generation output if conditions in the Balancing Authority Area require such adjustment for reliability purposes. The adjustment will be for the minimum quantity and duration necessary to resolve the reliability condition. Balancing Authority shall take or be taking the same or substantially similar actions when directing BWP to adjust their generation.
  - 3.6.3.2 Take all necessary actions, up to and including, shedding of firm load, to alleviate a reliability issue in the Balancing Authority Area. LADWP shall take or be taking the same or substantially similar action to mitigate a reliability condition.
  - 3.6.3.3 Immediately advise LADWP of the inability to perform the directive due to the above mentioned reasons so that LADWP can implement alternate remedial actions.
- 3.6.4 LADWP shall not charge BWP for complying with Reliability Directives.
- 3.6.5 Each Party will implement and maintain an automatic underfrequency load

shedding program that meets the requirements of the WECC Off-Nominal Frequency Load Shedding Program.

### **3.7 Planned Outages and Coordination**

- 3.7.1 The Parties shall plan and coordinate, with at least three (3) business days advance notice whenever possible, all Planned Outages on circuits or equipment and other maintenance activities affecting the reliability of the interconnection or delivery of energy affecting the Parties' electric Systems. Parties shall attempt to minimize the impact to the Parties of said Outages.
- 3.7.2 The Parties shall plan and coordinate with one another, at least three (3) business days in advance, any Planned Outages of System voltage regulating equipment, including but not limited to automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, and reactors.
- 3.7.3 The Parties shall plan and coordinate Planned Outages of telemetering and control equipment and associated communication channels between and among the affected areas at least three (3) business days in advance.
- 3.7.4 The Parties shall plan and coordinate Planned Outages of generation resources at least seven (7) business days in advance whenever possible. When time does not permit such notifications and coordination, or in the event of a Forced Outage of generation resources, the Parties shall notify each other at the earliest possible time.

### **3.8 Voltage and MVAR Control**

- 3.8.1 Each Party shall operate its generators with the Automatic Voltage Regulator (AVR) in service and on voltage control. BWP will notify Balancing Authority as soon as practical but within 30 minutes whenever a generator is operating with the AVR off.
- 3.8.2 Each Party shall maintain its System voltage within the range specified by its internal voltage guidelines. Parties will coordinate and exchange operating voltage information to ensure voltage control and MVAR control equipment remains within operating limits.
- 3.8.3 BWP shall maintain the net total MVAR flow at RS-E and Western within +/- 10-MVAR.
- 3.8.4 The individual voltage schedule shall have priority over MVAR flow limits set forth in Section 3.8.3.
- 3.8.5 Each Party shall immediately advise the other Party if it is unable to maintain voltage and/or reactive power within the prescribed limits set forth in Sections 3.8.2 and 3.8.3. Parties will assist each other to the maximum extent possible when notified of a voltage problem on the other System.
- 3.8.6 Each Party will take all necessary action up to and including shedding firm load if

the Party cannot maintain its voltage or MVAR exchange within the limits set forth in Sections 3.8.2 and 3.8.3 after receiving all available assistance and it is burdening the other Party's System.

3.9 [RESERVED].

**3.10 Operational Reliability Information.**

3.10.1 The Parties shall provide one another with such information as may be necessary (where confidentiality agreements allow) in order to coordinate their current-day, next-day, and seasonal operations.

3.10.2 Each Party shall provide information as requested by the other Party to conduct operational reliability assessments and coordinate reliable operations.

3.10.3 In accordance with Good Utility Practice, BWP shall timely notify LADWP, within 30 minutes if reasonably practicable, of changes in generation capabilities and characteristics including but not limited to changes in real generation output capabilities.

3.10.4 BWP shall notify Balancing Authority as soon as practical, but within 30 minutes of a status or capability change on any generator, including the status of each power system stabilizer and the expected duration of the change in status or capability.

3.10.5 Each Party shall use uniform line identifiers when referring to transmission facilities of an interconnected network.

**3.11 Monitoring System Conditions**

3.11.1 If BWP is supplying any reserves to LADWP, BWP shall: (i) inform LADWP of all generating resources available for use by LADWP as the BA; (ii) calculate all available operating reserves, and (iii) Telemeter this capability to LADWP in real time.

3.11.2 The Parties shall exchange real time operating data as required by any Party to meet its reliability obligations under the Applicable Reliability Standards.

3.11.3 To the extent the Parties are unable to meet the requirements of Sections 3.11.1-2, the Parties will work diligently to achieve this ability to exchange the aforementioned data.

**3.12 Communication**

3.12.1 The Parties' System Operators and load dispatchers shall communicate with each other using the applicable Operating Personnel Communications Protocols and procedures, including three-part communications, as set forth in the Applicable Reliability Standard when Reliability Directives or Operating Instructions are issued.

- 3.12.2 Reliability Directives from LADWP to BWP shall be clearly stated as a directive and will include what action is being requested, what quantity of change or action is required, and when that action is to be taken.
- 3.12.3 Following unusual events and Forced Outages the Parties shall exchange operating information.
- 3.12.4 Before beginning switching at the Point of Interconnection, the Parties shall communicate and agree as to what switching will take place and what the final condition will be.
- 3.12.5 The Parties shall provide each other, on a timely basis, all information necessary for the Parties to fulfill their obligations set forth in the Schedules.
- 3.13 **Payment for Start-up and Shutdown.** Energy transferred from BWP to LADWP during generator Start-up or Shutdown, as described in Appendix E, shall be purchased by LADWP at a price equal to 70 percent of the LADWP Energy Rate. LADWP agrees to purchase the Start-up and Shutdown energy during the Start-up and Shutdown periods for specified units having a Start-up or Shutdown period greater than 15 minutes per provisions of Appendix E.

#### **ARTICLE IV** **NOTICES**

- 4.0 All notices under this Agreement shall be provided in accordance with Appendix F.
- 4.1 **Authorized Representatives.** Each Party shall designate an authorized representative who shall be authorized to act on its behalf with respect to those matters contained herein (each an "Authorized Representative"), which shall be the functions and responsibilities of such Authorized Representatives. Each Party may also designate an alternate who may act for the Authorized Representative. The identity of each Party's Authorized Representative, and alternate if designated, shall be listed in Appendix F. Each Party shall promptly notify the other Party of any subsequent changes in such designations in accordance with this Article IV. The Authorized Representatives shall have no authority to alter, modify, or delete any of the provisions of this Agreement.
- 4.2 **Modification of Contacts.** Modifications to Appendix F of this Agreement, including the designation of a new Authorized Representative under this Agreement, shall be accomplished by timely written notice to all Parties' then-current Authorized Representatives routed via U.S. Mail. Such notice shall, where applicable, include any changes in mailing address, telephone number, facsimile number, and electronic mail address.
- 4.3 **Informal Communications.** Informal communications of a routine nature are not required to meet the written notice requirement set forth in Appendix F; provided, however, that the Parties engaging in such informal communications are not authorized to use those informal communications to take formal actions under this Agreement, including but not limited to entering into amendments to the Agreement or its attachments.

**ARTICLE V**  
**BILLING**

- 5.1 **Invoice.** Within a reasonable time after the first day of each month after the month that either Party provides service under this Agreement, the Party providing service shall submit an invoice for the prior month to the other Party for service under this Agreement.
- 5.2 **Payment.** The invoice shall be paid by the Party receiving it on the twentieth (20th) day of the invoicing month or the tenth (10th) day after receipt of the invoice, whichever occurs later ("Payment Due Date"). All payments shall be made in immediately available funds in U.S. dollars payable to the invoicing Party. In the event the Party receiving the invoice fails, for any reason other than a billing dispute described in Section 5.4, to make a payment to the invoicing Party by the Payment Due Date, and such failure of payment is not corrected within thirty (30) calendar days after the invoicing Party notifies the Party receiving the invoice to cure such failure, a default by the Party receiving the invoice shall be deemed to exist.
- 5.3 **Interest.** Interest on invoices under Section 5.1 of this Agreement unpaid after the Payment Due Date shall be payable with interest calculated daily, at a rate equal to 200 basis points above the per annum Prime Rate reported daily in the Wall Street Journal for the period beginning on the day after the due date and ending on the day of payment; provided that, such interest shall not exceed the amount permitted by law. Interest on delinquent amounts shall be calculated from the due date of the invoice to the date of payment. When payments are made by mail, invoices shall be considered as having been paid on the date postmarked.
- 5.4 **Billing Disputes.** In order to dispute an invoice in whole or in part, the Party receiving the invoice must provide written notice of the dispute to the invoicing Party. Such written notices shall specify the amount in dispute and state the basis for the dispute. In case any portion of any invoice is in dispute, the entire invoice shall be paid when due, unless the basis for the dispute is a clearly erroneous billing amount in which case the parties will make a good faith effort to promptly correct the error. Any excess amount of invoices which, through inadvertent errors or as a result of a dispute, may have been overpaid shall be returned by the invoicing Party upon determination of the correct amount, with interest calculated in the manner set forth in Section 5.3. Either Party shall only have the right to dispute the accuracy of any invoice or payment for a period of two (2) years from the date on which the invoice was initially delivered. If the invoicing Party's records reveal that a bill was not delivered, then the invoicing Party may deliver to the Party receiving the invoice an invoice within two (2) years from the date on which the invoice would have been delivered under this Agreement. The right to payment is waived with respect to any amounts not invoiced within such two (2) year period.
- 5.5 **Record-Keeping and Financial Audits.** Each Party, or any third party representative of a Party, shall keep complete and accurate records, and shall maintain such data as may be necessary for the purpose of ascertaining the accuracy of all relevant data, estimates, or statements of charges submitted hereunder for a period of two (2) years from the date the invoice was delivered under this Agreement. Within a two (2) year period from the date on which the invoice was initially delivered, any Party to the applicable transaction may request in writing copies of the records of the other Party for that transaction to the extent reasonably necessary to verify the accuracy of any statement or charge. The Party from which documents or data has been requested shall

provide all reasonably requested documents and data within a reasonable time period. Any Party shall have the right at all times, and at its own expense, to audit and to examine any costs or payments resulting from any item set forth in this Agreement. Any Party may designate its own employee representative(s) or its contracted representatives with a certified accounting firm to conduct the audit. Any audits shall occur during normal business hours, and the Party being audited agrees to cooperate in such audit.

## **ARTICLE VI** **DEFAULT AND TERMINATION**

- 6.0 **Termination For Convenience by Party(ies)**. Either Party may seek to terminate this Agreement at any time with at least eighteen (18) months prior written notice to the non-terminating Party. Such written notice shall specify a Termination Date. Upon request, the Parties shall make reasonable efforts to extend the Termination Date for up to an additional eighteen (18) month period, or a longer period with the mutual agreement of the Parties, if necessary to implement the provisions of Section 6.4.
- 6.1 **Payment Default**. In the event the Party receiving the invoice fails, for any reason other than a billing dispute as described in Section 6.1.1, to make payment to the invoicing Party on or before the due date as described above, and such failure of payment is not corrected within thirty (30) calendar days after the invoicing Party notifies the Party receiving the invoice to cure such failure, a default by the Party receiving the invoice shall be deemed to exist.
- 6.1.1 In the event of a billing dispute between the invoicing Party and the Party receiving the invoice, the invoicing Party will continue to provide service under this Agreement as long as the Party receiving the invoice complies with Section 5.4.
- 6.2 **Termination for Payment Default**. Upon the occurrence of a default in accordance with Section 6.1, the invoicing Party may provide written notice to the Party receiving the invoice of the invoicing Party's intent to terminate this Agreement at least sixty (60) calendar days from the date of such notice. The Party receiving the invoice shall have seven (7) calendar days following the receipt of LADWP's notice of termination to submit a written request to the invoicing Party to commence the dispute resolution procedures of Section 7.0 of this Agreement. If the Party receiving the invoice does not provide such notice within seven (7) calendar days of receipt of the notice of termination, then the invoicing Party may terminate this Agreement to the Party receiving the invoice on the date specified in the notice of termination. If the Party receiving the invoice does submit a timely written request to commence dispute resolution procedures, then Article VII of this Agreement shall apply.
- 6.3 **Termination for Performance Default**. Either Party (the "Non-Defaulting Party") may terminate this Agreement if the other Party (the "Defaulting Party") materially breaches its obligations hereunder. Such termination shall be effected by written notice to the Defaulting Party that specifies a termination date at least ninety (90) days following receipt of the notice by the receiving Party, unless agreed otherwise by the Parties. The Defaulting Party shall have ninety (90) calendar days following the receipt of the Non-Defaulting Party's notice of termination to cure, or take reasonable steps to cure, its material breach of its obligations, and seven (7) calendar days following the receipt of

the notice of termination to submit a written request to commence the dispute resolution procedures of Article VII of this Agreement. If the Defaulting Party does not cure, or take reasonable steps to cure, the material breach of its obligations within ninety (90) calendar days or provide notice within seven (7) calendar days to commence the dispute resolution procedures following its receipt of the notice of receipt of the notice of termination, the Non-Defaulting Party may terminate this Agreement on the date specified in the notice of termination. The remedy of termination shall not be exclusive of any other rights or remedies, at law or in equity, which may be available to the Non-Defaulting Party.

- 6.4 **Good Faith Efforts Following Notice of Termination.** The Parties will work in good faith, using reasonable efforts to effectuate any necessary subsequent agreements for balancing authority area services. Notwithstanding the foregoing, if there is a dispute over a Party's request to terminate this Agreement that dispute will be resolved pursuant to Article VII of this Agreement.

#### **ARTICLE VII** **DISPUTES**

- 7.0 **Dispute Resolution.** If a dispute arises between the Parties under this Agreement the Parties shall meet within ten (10) days after either Party provides notice of the dispute, and the Parties shall endeavor in good faith to resolve it. If the dispute is not resolved, the Parties to such dispute may, but are not required to, submit the dispute to mediation or non-binding arbitration by mutual consent. If the Parties do not agree on resolving a dispute in mediation or non-binding arbitration, or, if the Parties' attempts to mediate or arbitrate the dispute do not resolve it, either Party may bring an action in a court of law or such other appropriate forum.
- 7.1. **Governing Law and Costs.** This Agreement was made and entered into by LADWP pursuant to the laws of the State of California and the City of Los Angeles. This Agreement shall be governed by, interpreted and enforced in accordance with the laws of the State of California without regard to conflict of law principles. Both Parties hereto agree that in any action to enforce the terms of this Agreement, each Party shall be responsible for its own attorneys' fees and costs.

#### **ARTICLE VIII** **MISCELLANEOUS**

- 8.1 **Relationship of Parties.** The obligations and liabilities of the Parties under this Agreement are several and not joint or collective, and nothing herein contained shall be construed to create an association, joint venture, trust, or partnership, or to impose a trust or partnership obligation or liability on or with regard to the other Party. Each Party shall be individually liable for its own obligations and liabilities provided herein. Neither Party shall be under the control of the other Party or be deemed to be under the control of the other Party, and neither Party shall be the agent of or have the right or power to bind the other Party, without such other Party's express written consent.
- 8.2 **Non-Dedication of Facilities.** An undertaking by either Party to the other Party under this Agreement shall not constitute the dedication of the System, or any portion thereof, of that Party to the public or to the other Party, or affect the status of that Party as an independent System.



- 8.3 **Captions and Headings.** All captions and headings appearing in this Agreement are inserted to facilitate reference and shall not govern the interpretations of the provisions hereof, except where logically necessary.
- 8.4 **Entire Agreement.** This Agreement constitutes the entire agreement between the Parties pertaining to the subject matter hereof, and shall fully supersede any and all prior understandings, contemporaneous oral or written negotiations, representations, warranties, and agreements between the Parties, or any of one them, and may be modified only by written agreement signed by both Parties. All attachments and appendices to this Agreement, including Schedules 1 through 6, are incorporated into and made part of this Agreement. If there is a conflict between this Agreement and LADWP's business practices or protocols regarding the obligations set forth in this Agreement, this Agreement shall control.
- 8.5 **Execution in Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.
- 8.6 **Signature Clause.** The signatories hereto represent that they have been appropriately authorized to enter into this Agreement on behalf of the Party for which they sign.
- 8.7 **No Third-Party Beneficiary.** The provisions of this Agreement are for the benefit of the Parties and not for any other person or third-party beneficiary. The provisions of this Agreement shall not impart rights enforceable by any person, firm or organization other than a Party or a successor a Party to this Agreement.
- 8.8 **Assignment.** This Agreement may be assigned by either Party only with the prior written consent of the other Party. Any attempted assignment that violates this article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations pursuant to this Agreement.
- 8.9 **Modifications.** This Agreement may not be amended or otherwise modified except by written agreement subscribed by all of the Parties to be charged with such modifications.
- 8.10 **Confidentiality.** Confidential Information shall be held as confidential by the receiving Party. Notwithstanding the foregoing, Confidential Information shall not include information which (i) is disclosed with the prior written consent of the originating Party, (ii) at the time of disclosure is within the public domain through no breach of this Agreement by either Party, (iii) has been known or independently developed by and is currently in the possession of either Party prior to disclosure hereunder, (iv) was or is acquired by either from a third-party who did not to the receiving Party's knowledge breach an obligation of confidentiality by disclosing it to either Party, (v) is disclosed to credit rating agencies or in official statements or other disclosure statements relating to the issuance of bonds, notes, commercial paper or other evidences of indebtedness under customary financial practices, or (vi) is required to be disclosed to comply with any applicable law, order, regulation or ruling or other legal requirement, including but not limited to, oral questions, discovery requests, subpoenas, civil investigations or similar processes. For disclosures made pursuant to subsection (vi) of this paragraph, if the originating Party fails to obtain a protective order or other legal remedy preventing or limiting disclosure, the receiving Party may disclose the Confidential Information without

liability to the originating Party.

8.10.1 The Parties recognize and agree that for the purposes of complying with the Reliability Standards and responding to requests from the FERC, NERC or WECC, they will receive information from each other that has been marked as Confidential Information. Except as set forth herein, the Parties agree to keep in confidence and not to copy, disclose, or distribute any Confidential Information or any part thereof, without the prior written permission of the other Party.

8.10.2 Confidential Information that the Parties have given to each other, whether in electronic or hard copy form, which is intended for disclosure to the Compliance Monitor during the course of a compliance audit will be kept in a secure and restricted location.

8.10.3 If a Party is requested or required, pursuant to any applicable law, regulation, order, rule, ruling or other requirement of law, discovery request, subpoena, civil investigation or similar process to disclose any of the Confidential Information, such Party shall provide prompt written notice to the other Party of such request or requirement so that at such other Party's expense, such other Party can seek a protective order or other appropriate remedy concerning such disclosure.

8.10.4 The provisions of this Section 8.10 shall survive the termination of this Agreement for a period of 10 years provided, that the confidentiality obligations imposed by this Agreement as to any Confidential Information of a Party which may be deemed to be information classified as "critical infrastructure information" or "protected critical infrastructure information" or "protected system" shall survive until such Party has advised the other Party in writing that such information may be released.

8.11 **Consistency with State and Federal Laws and Regulations.** Nothing in this Agreement shall compel any Party to violate state and/or federal statutes, regulations or orders lawfully promulgated thereunder. If any provision in this Agreement is inconsistent with any obligation imposed on any Party by statute, regulation or order, it shall be inapplicable to that Party. No Party shall incur any liability by failing to comply with a provision of this Agreement, if the reason for doing so is such provision is inapplicable to that Party by reason of being inconsistent with state or federal statute, regulation or orders lawfully promulgated thereunder; provided, however, such Party shall comply with the provisions of this Agreement to the extent that applicable state or federal laws, regulation and orders promulgated thereunder permit it to do so.

8.12 **LADWP Disclaimer of FERC Jurisdiction.** No provision of this Agreement shall be construed as an acknowledgement or admission on the part of LADWP that: (i) FERC has jurisdiction over any of transactions involving LADWP and BWP that are addressed in this Agreement; (ii) FERC has jurisdiction over the consideration provided under this Agreement; (iii) any of the consideration provided under this Agreement constitutes a refund under the Federal Power Act; or (iv) either Party owes any refund or is subject to any other remedy under the Federal Power Act.

8.13 **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 Party, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise against public

interest by any court or government agency of competent jurisdiction, then all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect to the maximum extent permitted by law. The Parties shall comply with their obligations under this Agreement to the maximum extent possible, unless a court or government agency of competent jurisdiction holds that such obligations are separable from all other provisions of this Agreement.

8.14 **Uncontrollable Forces.**

8.14.1 Neither the LADWP nor BWP will be considered in default of any obligation under this Agreement if prevented from fulfilling that obligation due to the occurrence of an Uncontrollable Force; provided, however, that such Party is in compliance with Section 8.14.2.

8.14.2 In the event of the occurrence of an Uncontrollable Force, which prevents LADWP or BWP from performing any of its obligations under this Agreement, the affected entity shall (i) continue to comply with obligations under this Agreement to the extent possible, including responding to the applicable Reliability Directives; (ii) promptly notify the other Party, telephonically and followed up in writing as soon as possible, of the occurrence of such Uncontrollable Force, describe the extent of the impact from the event, and indicate the expected duration the event will cause the affected Party to be unable to perform its obligations; (iii) not be entitled to suspend performance of its obligations under this Agreement in any greater scope or for any longer duration than is required by the Uncontrollable Force, (iv) use its best efforts to mitigate, circumvent or otherwise overcome the effects of such Uncontrollable Force, remedy its inability to perform and resume full performance of its obligations hereunder, (v) keep the other Party apprised of such efforts on a continual basis and; (vi) describe the steps the affected Party will take to recover from the Force Majeure event; (vii) provide written notice of the resumption of its performance of its obligations hereunder.

8.15 **Third-Party Claims and Limitation on Liability.**

8.15.1 **Third-Party Claims.** The Parties will be subject to California Government Code Section 895.4 in resolution of any liabilities arising from third-party claims under this Agreement. Each Party shall only be liable for their proportionate share of damages based on their individual fault as determined by a court of competent jurisdiction.

8.15.2 **Limitation on Liability.** Neither Party shall be liable to the other Party under any provision of this Agreement for any losses, damages, penalties, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, claims of customers, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability.

8.16 **Municipal Tax Exempt Bonds.** Notwithstanding any other provision of this Agreement, LADWP shall not be required to provide BWP service under this Agreement if the

provision of such service would result in "private business use" as defined in Section 141(b)(6) of the Internal Revenue Code and the Treasury Regulations promulgated thereunder, as such laws and regulations may be amended, updated, modified or replaced.

- 8.16.1 BWP has provided, and LADWP acknowledges the receipt of a Governmental Person Use Certificate attached hereto as Appendix A.
- 8.16.2 **Supplemental Procedures for Resale of Service.** BWP may only sell, lay-off, or otherwise transfer in any manner, any service in accordance with and pursuant to this Agreement, if the total term of such transaction including all renewal options, does not exceed three (3) years, unless in the exclusive determination of LADWP the entity to which such scheduling service is sold, laid-off or otherwise transferred has also satisfied the requirements in the form of the Governmental Person Use Certificate attached hereto as Appendix I. Any resale, assignment or transfer of service by BWP that fails to conform to the provisions of this Agreement, including Section 8.16 and all Appendices, by intent or otherwise, shall be void and unenforceable.
- 8.17 **Waivers.** No waiver of any provision of this Agreement shall be effective unless such waiver is in writing and signed by the waiving Party and any such waiver shall not be deemed a waiver of any other provision of this Agreement.
- 8.18 **Electronic Delivery Signatures.** Notwithstanding any other provision of this Agreement, this Agreement may be delivered electronically (e.g., by facsimile or PDF attached to email), in which case the Parties shall promptly exchange hard copies of the signature pages, but the electronically delivered signed copies shall be valid, binding and admissible as if originals in accordance with the California Evidence Code.
- 8.19 **Authorship/Contra Proferentem.** This Agreement shall not be interpreted against the interest of a Party merely because that Party proposed this Agreement or some provision in it or because that Party relies on a provision of this Agreement to protect itself.
- 8.20 **Representative Examples.** The representative examples set forth in the Appendices to this Agreement shall constitute specific instances in which the Parties have agreed to operationalize the respective provision in this Agreement; provided, however, that interpretation and operation of such provisions are not intended to be limited to such examples.

For LADWP

DEPARTMENT OF WATER AND POWER OF  
THE CITY OF LOS ANGELES BY BOARD OF  
WATER AND POWER COMMISSIONERS OF  
THE CITY OF LOS ANELES

By:

\_\_\_\_\_  
MARCIE L. EDWARDS  
General Manager

Date:

\_\_\_\_\_

And:

\_\_\_\_\_  
BARBARA E. MOSCHOS  
Board Secretary


For BWP

CITY OF BURBANK

By: \_\_\_\_\_

Printed: Ronald E. Davis  
General Manager  
Burbank Water and Power

APPROVED AS TO FORM AND LEGALITY  
MICHAEL N. FEUER, CITY ATTORNEY

OCT 02 2015  
BY   
SYNDI DRISCOLL  
DEPUTY CITY ATTORNEY

**SCHEDULE 1**  
**SCHEDULING, SYSTEM CONTROL AND DISPATCH SERVICE**

This service is required to schedule the movement of power through, out of, within, or into a Balancing Authority Area. This service can be provided only by the operator of the Balancing Authority Area in which the transmission and generation facilities used for ancillary service are located. Scheduling, System Control and Dispatch Service is to be provided directly by the Transmission Provider (if the Transmission Provider is the Balancing Authority Area operator) or indirectly by the Transmission Provider making arrangements with the Balancing Authority Area operator that performs this service for the Transmission Provider's Transmission System.

The rates and charges for Scheduling, System Control and Dispatch Service are set forth in Appendix B. The Parties agree that Schedule 1 fees shall not apply except as required to supply services under Schedules 5 and 6 of this Agreement.

**SCHEDULE 2  
REACTIVE SUPPLY AND VOLTAGE CONTROL FROM  
GENERATION OR OTHER SOURCES SERVICE**

In order to maintain transmission voltages in the Balancing Authority Area within acceptable limits, generation facilities and non-generation resources capable of providing this service that are under the control of the Balancing Authority are operated to produce (or absorb) reactive power. Thus, Reactive Supply and Voltage Control from Generation or Other Sources Service must be provided for each transaction in the Balancing Authority Area. The amount of Reactive Supply and Voltage Control from Generation or Other Sources Service that must be supplied with respect to BWP's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by the Balancing Authority.

The Parties agree to operate their Systems collaboratively based on the operating parameters agreed upon by the Parties to maintain appropriate reactive power at the Interconnection Facilities reflected in Appendix C to this Agreement. Unless mutually agreed to by the Parties, the Balancing Authority shall not charge BWP for Reactive Supply and Voltage Control.

If either Party fails to consistently operate its System in accordance with the parameters set forth in Section 3.8 of this Agreement, the Authorized Representative for the other Party may request a meeting in accordance with Article VII to discuss amending this schedule to address the cost implications arising from such failure.

The rates and charges for Reactive Supply and Voltage Control from Generation or Other Sources Service are set forth in Appendix B. The Parties agree that Schedule 2 fees shall not apply except as required to supply services under Schedules 5 and 6 of this Agreement.

### SCHEDULE 3 REGULATION AND FREQUENCY RESPONSE SERVICE

Regulation and Frequency Response ("RFR") Service is necessary to provide for the continuous balancing of resources (generation and interchange) with load and for maintaining scheduled interconnection frequency at sixty cycles per second (60 Hz). RFR Service is accomplished by committing on-line generation whose output is raised or lowered (predominantly through the use of Automatic Generating Control equipment) and by other non-generation resources capable of providing this service as necessary to follow the moment-by-moment changes in load. The obligation to maintain this balance between resources and load lies with the Balancing Authority Area. The Balancing Authority will offer this service to BWP when the load being served by BWP is within its Balancing Authority Area. BWP must either purchase this service from the Balancing Authority or make alternative comparable arrangements to satisfy its RFR Service obligation.

The formula to determine the amount of and charges for RFR Service are set forth below. RFR Service as provided under this Agreement is only applicable to those point(s) of delivery located within the Balancing Authority Area. The rates and charges for RFR Service, applying the formula set forth below, are provided in Appendices B and H.

1. **Annual RFR Rate** = 
$$\frac{ARR_t \times PR_t}{(NEL_{LADWP} + NEL_{BWP} + NEL_{GWP})_t}$$

Where:

Annual RFR Rate = Cost of RFR Service expressed in \$/MWh of load.

ARR = Annual Revenue Requirement for RFR Service

PR = Purchase Requirement stated as the "percent of the Transmission Customer's Reserved Capacity for Point-to-Point Transmission Service" (e.g., 1.1 percent) in Schedule 3 of the LADWP OATT.

$NEL_{LADWP}$  = LADWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

$NEL_{BWP}$  = BWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

$NEL_{GWP}$  = GWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

t = LADWP Cost of Service Study Test Year used in the calculation of the LADWP OATT rates in effect for the year in which service is elected.

2. **Billing Demand for Annual Service:**

If BWP elects to purchase annual RFR Service from the Balancing Authority, LADWP shall supply and BWP shall purchase a base amount of regulation equal to +/- 8 MW, and the billing determinants for such Service charges shall be based on  $NEL_{BWP}$  as defined in Section 1 of this Schedule 3. LADWP shall invoice BWP on a monthly basis for one-twelfth of the annual cost of providing this service to BWP, which is annual RFR Rate times  $NEL_{BWP}$ .

If BWP elects not to purchase annual RFR Service from the Balancing Authority, BWP shall not be charged for services under this Schedule and the deviation bands in Schedule 4 will be adjusted to reflect the non-purchase of RFR Service.

3. **Illustrative Example Applying Annual RFR Rate and Billing Demand for Annual RFR Service:**



For the 8-MW purchased by BWP in the First Deviation Band reflected in Schedule 4, the following charges will result:

$$\text{ARRt} = \$547,775,766$$

$$\text{PR} = 1.1\%$$

$$\text{NEL}_{\text{LADWP}} = 27,160,120 \text{ MWh.}$$

$$\text{NEL}_{\text{BWP}} = 1,185,006 \text{ MWh}$$

$$\text{NEL}_{\text{GWP}} = 1,182,736 \text{ MWh}$$

$$\text{Annual RFR rate} = \$0.204/\text{MWh}$$

$$\text{Annual Cost of RFR Service} = 1,185,006 \text{ MWh} \times \$0.204/\text{MWh} = \$241,278$$

$$\text{Monthly Cost of RFR Service} = \$241,278 / 12 = \$20,107$$

**4. RFR Service Allowance and Rate for Incremental Deviation Bandwidth:**

BWP may elect to purchase additional RFR Service from LADWP on a monthly or annual basis. Such purchase will increase the Deviation Bands, as described in Section C of Schedule 4 for the period of time such RFR Service is purchased.

$$\text{IRFRy} = (\text{Annual Cost of RFR Service} / 8) \times \text{MW}$$

$$\text{IRFRm} = ((\text{Monthly Cost of RFR Service} / 8) \times \text{MW})$$

Where:

IRFRy = The rate per MWh for incremental MW of bandwidth for a year.

IRFRm = The rate per MWh for incremental MW of bandwidth for a month.

MW = The number of additional MW requested and provided for a year or month.

**5. Illustrative Example Applying Rate for Incremental Deviation Bandwidth:**

A. BWP requests 5 MW of additional deviation bandwidth for one year:

$$\text{IRFRy} = \$241,278 / 8 = \$30,159.75 \times 5 \text{ MW} = \$150,798.75$$

B. BWP requests 5 MW of additional deviation bandwidth for one month:

$$\text{IRFRm} = \$20,107 / 8 = \$2,513.38 \times 5 \text{ MW} = \$12,566.88$$

**SCHEDULE 4**  
**ENERGY IMBALANCE SERVICE AND PERIOD DEVIATION CHARGES**

Energy Imbalance Service is provided when the Energy Imbalance does not equal zero. The Balancing Authority will offer this service to BWP. BWP may either purchase this service from the Balancing Authority or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Energy Imbalance Service obligation. Imbalance energy from the Deviation Bank shall be returned in-kind at the points of delivery set forth in Appendix C to this Agreement.

**A. Calculation of Control Error and In-kind Return of Energy Imbalances**

1. **Control Error** shall mean a value in instantaneous MW calculated by utilizing either Tie Line Bias or Net Tie Deviation and calculated as follows:

- a. **Tie Line Bias ("TLB")**: When operating in this mode, the CE shall be equal to:

$$\text{Net Actual Interchange minus Net Scheduled Interchange} \\ \text{minus } 10(\text{Frequency Bias}_{\text{BWP}})(\text{Frequency Deviation})$$

Where:

Frequency Bias<sub>BWP</sub> = a value usually expressed in megawatts per 0.1 Hertz (MW/0.1 Hz), associated with BWP's metered subsystem that approximates BWP's metered subsystem's response to the Western Interconnection frequency error.

If BWP elects to use TLB, Parties will agree on the proper Frequency Bias value to be used based on analysis of the WECC designated events and said value may change.

- b. **Net Tie Deviation ("NTD")**: When operating in this mode, the CE shall be equal to:

$$\text{Net Actual Interchange minus Net Scheduled Interchange}$$

- c. **Notice**: BWP shall deliver notice to the Balancing Authority of its election to use Tie Line Bias or Net Tie Deviation at least 30 days prior to the month that such designation begins.

- d. **Period Deviation ("PD")** is the calculated average deviation for each performance period. There will be four clock 15-minute performance periods in each hour (minutes 1-15, 16-30, 31-45 and 46-60). PD is calculated by (i) sampling CE every one minute (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute), and (ii) taking the average of the algebraic sum of sample MW values to determine PD. The PD value will be the average of the available, valid data points and will be truncated to an integer value with no carryover to the next period.

2. **Deviation Bands** – PD performance will fall into three bands. **First Deviation Band** will be based on the Schedule 3 Regulation Service purchased, nominally zero to +/- 8 MW. **Second Deviation Band** will start above the upper limit of the First Deviation Band and extend 8 MW in the plus and minus direction, nominally +/- 9 to 16 MW. **Third Deviation Band** starts above the upper limit of Second Deviation Band and has no cap, nominally +/- 17 MW with no limit. The First, Second and Third Deviation Band magnitudes may be modified pursuant to Section C of this Schedule.
3. **Returning energy in-kind (on or off-peak as appropriate).** Energy Imbalance is calculated hourly in MWh and added to the applicable on-peak or off-peak Deviation Bank. All Energy Imbalance shall be added to the appropriate Deviation Bank, separate and apart from the Deviation Band calculated for the 15-minute period. At the conclusion of each calendar month, these Deviation Bank values are agreed upon and the running balances set to zero. The verified end of month values will be scheduled for return in either on-peak or off-peak periods between the Parties at a mutually agreeable time and rate (MW/hr). To the extent possible, the return will be scheduled by taking the verified amounts and dividing by the number of on-peak and off-peak (respectively) hours in the return period. The whole number value is scheduled for each hour, and the fractional portion is scheduled by scheduling one extra MW for a proportional number of the hours evenly spaced, unless otherwise mutually agreed by the Parties' schedulers.
4. Within each month, BWP will attempt to reduce to zero the balance in the applicable on-peak and off-peak Deviation Banks.

#### **B. Period Deviation Charges**

1. Charges are calculated for either positive or negative deviations in each 15 minute averaging period as set forth in Section B of this Schedule. The charge for each 15 minute period stands alone and does not vary regardless of the end-of-hour net MWh deviation. Certain 15 minute periods shall be exempted from charges as specified in Section D of this Schedule.
2. **The First Deviation Band:** If the value of PD falls within First Deviation Band, there is no monetary charge for that period.
3. **The Second Deviation Band:** If the value of PD falls within the Second Deviation Band, BWP will pay 10% of the LADWP Energy Rate times the number of MW outside the First Deviation Band.
4. **The Third Deviation Band:** If the value of PD falls within the Third Deviation Band, in addition to paying the charges under the Second Deviation Band, BWP will pay 25% of the LADWP Energy Rate for each MW falling within the Third Band.

#### **C. BWP Option to Purchase Incremental First Deviation Band**

1. BWP may in its sole discretion, request to expand its First Deviation Band beyond +/- 8 MW by purchasing additional RFR Service as described in

Schedule 3. If BWP makes such a purchase, each Deviation Band limit will then be recalculated as described in Section C.3 of this Schedule 4. Such purchase(s) shall not be reduced by either Party for the term of such purchase, unless mutually agreed otherwise.

2. In accordance with the notification provisions in Appendix F, the request to purchase such incremental MW of bandwidth shall be for a defined term, with a minimum of one (1) month duration and up to twelve (12) months duration, with notice of such request to be delivered no later than three (3) business days prior to the beginning of such period. Upon receipt of such request, Balancing Authority shall provide such incremental MW of bandwidth in monthly increments for a defined term, if available. Balancing Authority shall not unreasonably deny a request, withhold a response or condition the purchase.
3. If BWP purchases additional RFR Service as described in Schedule 3, the limits of the First Deviation Band will be expanded in the plus and minus directions 1-MW for each additional MW of RFR Service purchased. In such case, the upper and lower limits of the Second Deviation Band and lower limit of the Third Deviation Band will be expanded by 1 MW for each additional MW of RFR Service purchased. Such purchase(s) of additional bandwidth shall not be rescinded, reduced or recalled by either Party for the term of such purchase, unless mutually agreed otherwise.
4. If BWP elects not to purchase annual RFR Service from the Balancing Authority, BWP shall not be charged for services under this Schedule and there will be no First Deviation Band. The Second Deviation Band will be zero to +/- 8 MW. The Third Deviation Band will start above the upper limit of the Second Deviation Band and has no cap, nominally +/- 9 MW with no limit.

#### **D. Deviations from Schedule That Are Excluded from Period Deviation Charges**

The conditions, events or periods set forth below in subsections 1-9 shall be excluded from charges for deviations under this Schedule. When any of the events listed below in subsections 1-6 and 8-9 occur, BWP will, to the extent possible, provide documentation to LADWP Manager of Grid Operations of the event that initiates the exclusion period, within 7 business days of the event's occurrence.

1. **Reserve Recovery period:** The "Excluded 15-Minute Periods" begin with the 15-minute period during which the event occurs and reserves are activated and extending through and including the 15-minute period when BWP CE crosses zero. The Period Deviation Charges in this Schedule would resume during the first 15-minute period following the zero CE crossing.
2. **Directed Emergency Action (Reliability Directives):** The "Excluded 15-Minute Periods" begin with the period during which the directed Emergency action is initiated and extending through and including the period when the directed Emergency action is terminated. The Period Deviation Charges in this Schedule shall resume during the first 15-minute period following the termination of directed Emergency action.

3. **LADWP error causing BWP to operate off schedule:** The "Excluded 15-Minute Periods" include any 15-Minute period(s) in which BWP operated off schedule due to an error on the part of LADWP.
  4. **BWP Loss of Load:** The "Excluded 15-Minute Periods" begins with the 15-Minute period in which a loss of load greater than 8 MW occurs and extending through and including one additional 15-minute period.
  5. **BWP Emergency Action:** The "Excluded 15-Minute Periods" are the periods containing an Emergency action plus one additional 15-minute period.
  6. **Uncontrollable Force:** The "Excluded 15-Minute Periods" include the 15-minute period in which an event caused by an Uncontrollable Force occurs and extending through and including the 15-minute period when the BWP CE crosses zero. The Period Deviation Charges in this Schedule shall resume during the first 15-minute period following the zero CE crossing.
  7. **Invalid or Missing Data:** The "Excluded 15-Minute Periods" are any 15-minute period(s) where 25% or more of the data samples are missing or contain invalid data.
  8. **Frequency Response:** To the extent that excessive deviation is a result of BWP frequency response, applicable Second and Third Deviation Band charges or credits shall be waived for the period of the frequency excursion. The excluded deviation charges or credits will be calculated at 5 MW per 0.1 Hz, provided that the initial frequency disturbance is greater than +/- 0.06 Hz. If BWP chooses TLB, this Section 8 shall not apply, but this Section 8 will apply if BWP elects NTD.
  9. **Generator Start-Ups and Shut-Downs:** For generators with a start-up or shut-down period of 15 minutes or less that have been identified by BWP, "Excluded 15-Minute Periods" shall begin with the 15-minute period in which the start-up or shut-down action occurs and extend through and including a maximum of one (1) additional 15-Minute Period; provided that BWP has given prior notice to LADWP or if started or shut down in an Emergency BWP has given notice as soon as possible. Units with start-up time or shut-down times greater than 15 minutes will be handled under Appendix E.
    - a. If the unit start-up is initiated by a call for reserves under this Agreement, "Excluded 15-Minute Periods" shall begin with the 15-minute period in which the start-up or shut-down action occurs and extend through and including a maximum of three (3) additional 15-Minute Periods.
- E. Nothing in this Schedule relieves BWP from responding to Reliability Directives from LADWP in its role as BA or Transmission Operator if an event(s) on the BWP System is burdening LADWP or the interconnection.

**SCHEDULE 5**  
**OPERATING RESERVE - SPINNING RESERVE SERVICE**

1. Spinning Reserve service may be provided by generators that are on-line and loaded at less than maximum output and by non-generation resources capable of providing this service.
2. The BA shall be responsible for determining and providing information in real-time to BWP regarding the BAA's Most Severe Single Contingency, as defined in the WECC Reliability Criteria ("MSSC").
3. The BA assumes full obligation for BAA Spinning Reserves, which include Spinning Reserves owned, contracted for, or procured by the Balancing Authority and any Spinning Reserves made available to the BAA by BWP under this or similar agreements.
4. BWP will receive the full Spinning Reserve portion of the full contingency reserve service described in Section 2.0 of this Agreement if BWP purchases this service from the BA on an annual basis.
  - a. The price BWP will pay for full Spinning Reserves service shall be calculated based on 40 MW as is reflected in Appendix D of this Agreement.
    1. Pursuant to Section 3.4.4 of this Agreement, the Parties agree to promptly meet to review any new, revised or eliminated Applicable Reliability Standard that changes the obligations of any Party during the term of this Agreement, including but not limited to adjustments to the calculation of charges and payment obligations as a result of the changes in reserve obligations under this Agreement (e.g., a change in the Spinning Reserve obligations under this Schedule 5).
    2. If the BA's Applicable Reliability Standards are modified such that the BA's obligation to provide reserves of any type are modified or eliminated, BWP's obligation under this Agreement to pay for said reserves shall be deemed proportionately modified or eliminated as of the effective date of such modification and LADWP shall credit back or invoice to BWP any payments for said reserves after the modification's effective date.
  - b. To reduce all or a portion of its payment for full Spinning Reserves, BWP may, at its option, self-supply and/or purchase from a third-party Spinning Reserves. Such Spinning Reserves may be comprised of any combination of reserves owned, contracted for, or purchased from a third-party and must be available to the BA in advance of the operating period for which the reserves are to be provided. Reserves purchased from a third-party must be deliverable using BWP's or a third-party's firm transmission rights, and e-Tagged with "LASYSTEM" as the point of delivery (POD) and sink.
  - c. If BWP schedules more than 86 MW (at Nevada Oregon Border ("NOB")) on the PDCI sinking in the BAA, BWP shall self-supply or purchase additional Spinning Reserves from a third-party to support the schedules greater than 86 MW. For such schedules, BWP must notify LADWP no less than one hour prior to

scheduling more than 86 MW on the Pacific HVDC Intertie.

- d. No later than six months prior to each calendar year, the Parties will agree on the amount of Spinning Reserves that BWP will self-provide or purchase from third-parties as described below. Upon mutual written agreement, this six month notice period may be reduced.
  - e. No later than six months prior to each calendar year ("Planning Horizon"), the Balancing Authority may request that BWP provide Spinning Reserves during the calendar year. BWP, at its sole discretion, may provide the requested reserves, in which case LADWP's charges for these reserves will be proportionately reduced.
5. LADWP will be responsible for fully responding to all BAA contingencies utilizing any Spinning and Supplemental Reserves available to LADWP as the BAA operator. LADWP shall be authorized to call on any Spinning Reserves made available by BWP and such reserves must respond within 10 minutes of the request for activation from LADWP.
6. If Spinning Reserves made available by BWP fail to respond within 10 minutes of the time the reserves are requested by LADWP, BWP will pay to LADWP a fee equal to 3 x [Monthly OATT Rate] x [MW Short] per reserve activation. This charge will not apply if BWP is in a Contingency Recovery Period, however other Emergency provisions may apply as set forth in Section 12 of this Schedule 5.
7. BWP may sell Spinning Reserve service outside of the BAA subject to the following conditions:
- a. If BWP makes such sales of Spinning Reserves it shall provide said Spinning Reserves from its resources or resources that it contracts for that are separate and distinct from the purchase of reserves from LADWP under this Agreement. Notwithstanding the foregoing, upon mutual agreement of the Parties, BWP may purchase and resell additional Spinning Reserves from LADWP over and above the reserves provided for under this Agreement.
  - b. Any BWP sale, transfer or conveyance of Spinning Reserves purchased from LADWP shall be subject to the terms and conditions of Section 8.16 of this Agreement.
  - c. BWP must provide firm transmission needed to support the Spinning Reserve sale.
  - d. LADWP must be advised of the details of a Spinning Reserve sale under this Section, no less than one hour prior to scheduling the Spinning Reserve sale.
  - e. BWP must ensure an appropriate capacity e-Tag is generated.
  - f. If BWP fails to have the Spinning Reserves available during the period of the Spinning Reserve sale, it will pay LADWP for each MW of shortage 3 x [Monthly

OATT Rate] x [MW Short] per calendar day until such Spinning Reserves are restored.

- g. If the Spinning Reserves supporting the sale fail to respond when called upon, BWP will pay a capacity charge to LADWP of  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  for each occurrence plus an energy charge of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy delivered by LADWP on BWP's behalf from the time of the event until reserve energy service is terminated or for 60 minutes whichever occurs first. If the reserve energy draw continues past 60 minutes, they will pay to LADWP  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy provided from 60 minutes after the time of the event until the reserve energy service is terminated
- 8. BWP may draw energy from the BAA following a contingency event causing a resource reduction for BWP up to 60 minutes from the time of the event.
- 9. BWP must be able to deliver energy associated with the Spinning Reserves it makes available to the BAA for a minimum of 60 minutes following receipt of notice of a contingency event.
- 10. Energy delivered in conjunction with Spinning Reserve capacity activation following a contingency event will (1) be added to the Deviation Bank and will be returned in kind (same provisions as other deviation return), and (2) will be paid for as follows :

  - a. If energy flows to BWP from LADWP, BWP will pay an additional charge to LADWP of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from the time of the event until either BWP's CE returns to zero or for 60 minutes whichever occurs first. If BWP fails to return CE to zero within 60 minutes, it will pay an additional charge to LADWP of  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from 60 minutes after the time of the event until BWP's CE returns to zero. The energy subject to this charge will be calculated in MW/minutes converted to MWh by LADWP summing the one minute CE reads (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute) times the MW deviation at each minute divided by 60.
  - b. If energy flows from BWP to LADWP, BWP will receive an additional payment from LADWP of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy delivered from the time of the reserve activation until the request for energy associated with the reserves is terminated. The energy subject to this charge will be calculated in MW/minutes converted to MWh by LADWP summing the one minute CE reads (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute) times the MW deviation at each minute (not to exceed the amount of reserves requested) divided by 60. Any energy delivered to LADWP beyond the conclusion of the Spinning Reserve activation period will be excluded from any Schedule 4 Period Deviation Charges unless LADWP expressly terminates the Spinning Reserve activation but BWP continues to supply the energy. If LADWP does not expressly terminate the reserve activation and BWP continues to supply energy after the 60 minute period, LADWP shall pay BWP  $3 \times [\text{LADWP Energy Rate}] \times$



MWh for the energy received from 60 minutes after the time of the event until their CE returns to zero.

- c. Following 10-minutes notice to terminate energy associated with Spinning Reserves to ramp to return CE to zero, LADWP shall cease payment for energy associated with Spinning Reserves.

- 11. BWP will annually provide a list of its current individual generator and transmission single largest contingencies (SLC) to the BA. At least six months prior to BWP acquiring a new generation or transmission resource that could be an individual SLC of BWP, or increase the BA MSSC, the Parties will meet and confer.

## 12. Emergency Conditions

- a. If BWP is unable to provide the Spinning Reserves it has committed to the BAA in real time and BWP is not in a Contingency Recovery Period but the BAA has sufficient Spinning Reserves, BWP will pay to LADWP  $3x$  [Daily OATT Rate]  $x$  [MW Short] per calendar day until such Spinning Reserves are restored.
- b. If BWP is unable to provide the Spinning Reserves it has committed to the BAA in real time and BWP is not in a Contingency Recovery Period and the BAA has insufficient reserves the Parties will implement their Emergency plans. In the event that such Emergency plans require load shedding, BWP will shed load up to the quantity of BWP's real time deficiency. LADWP will shed any additional load required to meet the Applicable Reliability Standards for BAA reserves. Any load shed by any Party will only be for the quantity and duration necessary.
- c. If the BAA is deficient in Spinning Reserves, and BWP is providing its committed Spinning Reserves, LADWP will shed load for the quantity and duration necessary to meet the Applicable Reliability Standards for BAA reserves.
- d. Should any Party be energy deficient, the Emergency assistance provisions documented elsewhere will apply. The deficient Party may need to request an Energy Emergency Alert declaration from the Reliability Coordinator and shed load in order to maintain load/resource balance.

## 13. Other Conditions

- a. If the BA (1) determines that the BAA is deficient of Spinning Reserves in a reserve recovery period or projects the BAA will be deficient of Spinning Reserves, and (2) the BA is unable to acquire additional Spinning Reserves or determines it would be beneficial to have BWP supply additional reserves, BWP may, at BWP's sole discretion, and upon the BA's request, either:
  - i. Make an energy sale to LADWP if such energy is available. This generation will be used to back down LADWP generation resources thereby increasing the BAA Spinning Reserves. LADWP will pay BWP  $1.1 x$  [the BWP costs] for each MWh LADWP purchases, or

- ii. Provide Spinning Reserves to the BA from resources available to the BWP System as BWP determines such reserves to be available. The BA will request that such Spinning Reserves be made available to the BAA on an hourly, daily, weekly or monthly basis and LADWP shall pay the applicable Hourly, Daily, Weekly, or Monthly LADWP OATT Rate in Schedule 5 x MW provided by BWP.
- iii. BWP shall not unreasonably deny a request by the BA to purchase Spinning Reserve service under Section 13, provided however, that BWP has no obligation to sell reserves if to do so would (1) inhibit BWP's ability to meet its own Spinning Reserve commitments, or (2) subject BWP to any charges set forth in this Schedule.

**SCHEDULE 6**  
**OPERATING RESERVE - SUPPLEMENTAL RESERVE SERVICE**

1. Supplemental Reserve Service is needed to serve load in the event of a System contingency; however, it is not available immediately to serve load but rather within a short period of time. Supplemental Reserve Service may be provided by generating units that are on-line but unloaded, by quick-start generation or by interruptible load or other non-generation resources capable of providing this service.
2. The BA shall be responsible for determining and providing information in real-time to BWP regarding the BAA's MSSC.
3. The BA assumes full obligation for BAA Supplemental Reserves, which include Supplemental Reserves owned, contracted for, or procured by the Balancing Authority and any Supplemental Reserves made available to the BAA by BWP under this or similar agreements.
4. BWP will receive the full Supplemental Reserve portion of the full contingency reserve service described in Section 2.0 of this Agreement if BWP purchases this service from the BA on an annual basis.
  - a. The price BWP will pay for full Supplemental Reserves service shall be calculated based on 40 MW as is reflected in Appendix D of this Agreement.
    1. Pursuant to Section 3.4.4 of this Agreement, the Parties agree to promptly meet to review any new, revised or eliminated Applicable Reliability Standard that changes the obligations of any Party during the term of this Agreement, including but not limited to adjustments to the calculation of charges and payment obligations as a result of the changes in reserve obligations under this Agreement (e.g., a change in the Supplemental Reserve obligations under this Schedule 6).
    2. If the BA's Applicable Reliability Standards are modified such that the BA's obligation to provide reserves of any type are modified or eliminated, BWP's obligation under this Agreement to pay for said reserves shall be deemed proportionately modified or eliminated as of the effective date of such modification and LADWP shall credit back or invoice to BWP any payments for said reserves after the modification's effective date.
  - b. To reduce all or a portion of its payment for full Supplemental Reserves, BWP may, at its option, self-supply and/or purchase from a third-party Supplemental Reserves. Such Supplemental Reserves may be comprised of any combination of reserves owned, contracted for, or purchased from a third-party and must be available to the BA in advance of the operating period for which the reserves are to be provided. Reserves purchased from a third-party must be deliverable using BWP's or the third-party's firm transmission rights, and e-Tagged with LASYSTEM as the point of delivery (POD) and sink.

- c. If BWP schedules more than 86 MW (at Nevada Oregon Border ("NOB")) on the PDCI sinking in the BAA, BWP shall self-supply or purchase additional Supplemental Reserves from a third-party to support the greater than 86 MW. For such schedules, BWP must notify LADWP no less than one hour prior to scheduling more than 86 MW on the Pacific HVDC Intertie.
  - d. No later than six months prior to each calendar year, the Parties will agree on the amount of Supplemental Reserves that BWP will self-provide or purchase from third-parties as described below. Upon mutual written agreement, this six month notice period may be reduced.
  - e. No later than six months prior to each calendar year ("Planning Horizon"), the Balancing Authority may request that BWP provide Supplemental Reserves during the calendar year. BWP, at its sole discretion, may provide the requested reserves, in which case LADWP's charges for these reserves will be proportionately reduced.
5. LADWP will be responsible for fully responding to all BAA contingencies utilizing any Spinning and Supplemental Reserves available to LADWP as the BAA operator. LADWP shall be authorized to call on any Supplemental Reserves made available by BWP and such reserves must respond within 10 minutes of the request for activation from LADWP.
  6. If Supplemental Reserves made available by BWP fail to respond within 10 minutes of the time the reserves are requested by LADWP, BWP will pay to LADWP a fee equal to  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  per reserve activation. This charge will not apply if BWP is in a Contingency Recovery Period, however other Emergency provisions may apply as set forth in Section 12.b of this Schedule 6.
  7. BWP may sell Supplemental Reserve service outside of the BAA subject to the following conditions:
    - a. If BWP sells Supplemental Reserves it shall provide said Supplemental Reserves from its resources or resources that it contracts for that are separate and distinct from the purchase of reserves from LADWP under this Agreement. Notwithstanding the foregoing, upon mutual agreement of the Parties, BWP may purchase and resell additional Supplemental Reserves from LADWP over and above the reserves provided for under this Agreement.
    - b. Any BWP sale, transfer or conveyance of Supplemental Reserves purchased from LADWP shall be subject to the terms and conditions of Section 8.16 of this Agreement.
    - c. BWP must provide firm transmission needed to support the Supplemental Reserve sale.
    - d. LADWP must be advised of the details of a Supplemental Reserve sale under this Section, no less than one hour prior to scheduling the Supplemental Reserve sale.

- e. BWP must ensure an appropriate capacity e-Tag is generated.
  - f. If BWP fails to have the Supplemental Reserves available during the period of the Supplemental Reserve sale, it will pay LADWP for each MW of shortage  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  per calendar day until such Supplemental Reserves are restored.
  - g. If the Supplemental Reserves supporting the sale fail to respond when called upon, BWP will pay a capacity charge to LADWP of  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  for each occurrence plus an energy charge of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy delivered by LADWP on BWP's behalf from the time of the event until reserve energy service is terminated or for 60 minutes whichever occurs first. If the reserve energy draw continues past 60 minutes, they will pay to LADWP  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy provided from 60 minutes after the time of the event until the reserve energy service is terminated.
8. BWP may draw energy from the BAA following a contingency event causing a resource reduction for BWP up to 60 minutes from the time of the event.
  9. BWP must be able to deliver energy associated with the Supplemental Reserves it makes available to the BAA for a minimum of 60 minutes following receipt of notice of a contingency event.
  10. Energy delivered in conjunction with Supplemental Reserve capacity activation following a contingency event will (1) be added to the Deviation Bank and will be returned in kind (same provisions as other deviation return), and (2) will be paid for as follows :
    - a. If energy flows to BWP from LADWP, BWP will pay an additional charge to LADWP of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from the time of the event until either BWP's CE returns to zero or for 60 minutes whichever occurs first. If BWP fails to return CE to zero within 60 minutes, it will pay an additional charge to LADWP of  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from 60 minutes after the time of the event until BWP's CE returns to zero. The energy subject to this charge will be calculated in MW/minutes converted to MWh by LADWP summing the one minute CE reads (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute) times the MW deviation at each minute divided by 60.
    - b. If energy flows from BWP to LADWP, BWP will receive an additional payment from LADWP of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy delivered from the time of the reserve activation until the request for energy associated with the reserves is terminated. The energy subject to this charge will be calculated in MW/minutes converted to MWh by LADWP summing the one minute CE reads (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute) times the MW deviation at each minute (not to exceed the amount of reserves requested) divided by 60. Any energy delivered to LADWP beyond the conclusion of the Supplemental Reserve activation period will be excluded from any Schedule 4

Period Deviation Charges unless LADWP expressly terminates the Supplemental Reserve activation but BWP continues to supply the energy. If LADWP does not expressly terminate the reserve activation and BWP continues to supply energy after the 60 minute period, LADWP shall pay BWP  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from 60 minutes after the time of the event until their CE returns to zero.

- c. Following 10-minutes notice to terminate energy associated with Supplemental Reserves to ramp to return CE to zero, LADWP shall cease payment for energy associated with Supplemental Reserves.

11. BWP will annually provide a list of its current individual generator and transmission single largest contingencies (SLC) to the BA. At least six months prior to BWP acquiring a new generation or transmission resource that could be an individual SLC of BWP, or increase the BA MSSC, the Parties will meet and confer.

## 12. Emergency Conditions

- a. If BWP is unable to provide the Supplemental Reserves it has committed to the BAA in real time and BWP is not in a Contingency Recovery Period but the BAA has sufficient Supplemental Reserves, BWP will pay to LADWP  $3 \times [\text{Daily OATT Rate}] \times [\text{MW Short}]$  per calendar day until such Supplemental Reserves are restored.
- b. If BWP is unable to provide the Supplemental Reserves it has committed to the BAA in real time and BWP is not in a Contingency Recovery Period and the BAA has insufficient reserves the Parties will implement their Emergency plans. In accordance with its Emergency plan, BWP shall request from the Reliability Coordinator an Energy Emergency Alert, in accordance with Applicable Reliability Standards, and designate an amount of load to be shed equal to its real-time deficiency. LADWP will designate sufficient additional load required to meet the Applicable Reliability Standards for BAA reserves. Any load designated by any Party will only be for the quantity and duration necessary.
- c. If the BAA is deficient in Supplemental Reserves, and BWP is providing its committed Supplemental Reserves, LADWP will follow its Emergency plan and designate load for the quantity and duration necessary to meet the Applicable Reliability Standards for BAA reserves.
- d. Should any Party be energy deficient, the Emergency assistance provisions in Section 3.6.1 of this Agreement shall apply. The deficient Party may need to request an Energy Emergency Alert declaration from the Reliability Coordinator and shed load in order to maintain load/resource balance.

## 13. Other Conditions

- a. If the BA (1) determines that the BAA is deficient of Supplemental Reserves in a reserve recovery period or projects the BA will be deficient of Supplemental Reserves, and (2) the BA is unable to acquire additional Supplemental Reserves

or determines it would be beneficial to have BWP supply additional reserves, BWP may, at BWP's sole discretion, and upon the BA's request, either:

- i. Make an energy sale to LADWP if such energy is available. This generation will be used to back down LADWP generation resources thereby increasing the BAA Supplemental Reserves. LADWP will pay BWP 1.1 x [the BWP costs] for each MWh LADWP purchases, or
- ii. Provide Supplemental Reserves to the BAA from resources available to the BWP System as BWP determines such reserves to be available. The BA will request that such Supplemental Reserves be made available to the BAA on an hourly, daily, weekly or monthly basis and LADWP shall pay the applicable Hourly, Daily, Weekly, or Monthly LADWP OATT Rate in Schedule 5 x MW provided by BWP.
- iii. BWP shall not unreasonably deny a request by the BA to purchase Supplemental Reserve service under Section 13, provided however, that BWP has no obligation to sell reserves if to do so would (1) inhibit BWP's ability to meet its own Supplemental Reserve commitments, or (2) subject BWP to any charges set forth in this Schedule.

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**APPENDIX A**

**[PLACEHOLDER FOR EXECUTED BWP  
GOVERNMENTAL PERSON USE CERTIFICATE]**

## **APPENDIX B**

### **LADWP TRANSMISSION AND ANCILLARY SERVICE RATES DATED 9-1-14**

LADWP's OATT Transmission and Ancillary Service Rates are provided at  
[http://www.oasis.oati.com/LDWP/LDWPdocs/OATT\\_Rates.pdf](http://www.oasis.oati.com/LDWP/LDWPdocs/OATT_Rates.pdf)

Or OATT Cost of Service Study Summary as posted on OASIS.

LADWP's OATT rates listed below are the rates put into effect on 9-1-14. For the calculations in Schedule 3, below, data for "Net Energy for Load" (NEL) will be taken from the FERC Form 714 filed by LADWP for the same test year used to calculate LADWP's OATT rates used herein.

#### **SCHEDULE 1**

##### **SCHEDULING, SYSTEM CONTROL AND DISPATCH SERVICE**

The charge for Scheduling, System Control Service is set forth below.

Annual Scheduling, System Control Service = \$1,310/MW.

#### **SCHEDULE 2**

##### **Reactive Supply and Voltage Control from Generation or Other Sources Service**

The charge for Reactive Supply Service is set forth below.

Annual Reactive Supply = \$4,990/MW.

#### **SCHEDULE 3**

##### **Regulation and Frequency Response Service**

Components of the formula to determine the amount of and charges for RFR Service are set forth below.

RFR Annual Revenue Requirement = \$547,775,766

RFR Purchase Obligation = 1.1%

$NEL_{LADWP} = 27,160,120$  MWh.

$NEL_{BWP} = 1,185,006$  MWh

$NEL_{GWP} = 1,182,736$  MWh

Annual RFR rate = \$0.204/MWh

**Schedule 5- OPERATING RESERVE:  
Spinning Reserve Service**

The charge for Spinning Reserve Service is set forth below.

Annual Spinning Reserve Service = \$47,040/MW.

**Schedule 6- OPERATING RESERVE:  
Supplemental Reserve Service**

The charge for Supplemental Reserve Service is set forth below.

Annual Supplemental Reserve Service = \$5,190/MW.

**Schedule 7  
Firm Point to Point Transmission Service**

The charge for Firm Point to Point Transmission Service is set forth below.

Annual Firm Point to Point Transmission Service, as rate divisor has been adjusted for inclusion of BWP/GWP load = \$39,257/MW.

**REVISION OF THIS APPENDIX**

The costs in this Appendix B may be changed from time-to-time to reflect LADWP's then current OATT rates.

**Definitions of Annual Reserve Rate Variables Used in Formula**

- S<sub>5</sub>: Spinning Reserve Rate associated with the 50% Purchase Requirement Yearly Rate under the OATT in \$/MW-Yr.
- S<sub>6</sub>: Supplemental Reserve Rate associated with the 50% Purchase Requirement Yearly Rate under the OATT in \$/MW-Yr.
- D: Delivery of Reserve based on Transmission Rate under the OATT in \$/MW-Yr.
- R: Reactive Power Rate under the OATT in \$/MW-Yr.
- S: Scheduling, System Control and Dispatch Rate under the OATT in \$/MW-Yr.
- SS<sub>5</sub>: Amount of BWP self-supply Spinning Reserve in MW.
- SS<sub>6</sub>: Amount of BWP self-supply Supplemental Reserve in MW.

**Formula**

$$\text{Annual Reserve Cost} = ((S_5 \times (40 \text{ MW} - SS_5)) + (S_6 \times (40 \text{ MW} - SS_6)) + (D + R + S) \times$$

$$((40 \text{ MW} + 40 \text{ MW}) - (SS_5 + SS_6)) \times ((100 - 43.32) / 100)^*$$

$$\text{Monthly Reserve Cost} = \text{Annual Reserve Cost} / 12$$

**Illustrative Example Applying Formula**

- S<sub>5</sub>: \$47,040 [\$/MW-Yr.]
- S<sub>6</sub>: \$5,190 [\$/MW-Yr.]
- D: \$39,257 [\$/MW-Yr.]
- R: \$1,310 [\$/MW-Yr.]
- S: \$4,990 [\$/MW-Yr.]
- SS<sub>5</sub>: Amount of BWP self-supply Spinning Reserve in MW.
- SS<sub>6</sub>: Amount of BWP self-supply Supplemental Reserve in MW.

**Full Operating Reserve Service Example:**

SS<sub>5</sub>: 0 MW  
 SS<sub>6</sub>: 0 MW

$$\text{Annual Reserve Cost} = ((\$47,040 \times (40 \text{ MW} - 0 \text{ MW})) + (\$5,190 \times (40 \text{ MW} - 0 \text{ MW})) + (\$39,257 + \$1,310 + \$4,990) \times ((40 \text{ MW} + 40 \text{ MW}) - (0 \text{ MW} + 0 \text{ MW}))) \times ((100 - 43.32) / 100)^* = \$3,249,895.17$$

$$\text{Monthly Reserve Cost} = \$3,249,895.17 / 12 = \$270,824.60$$

**Partial Operating Reserve Service Example:**

SS<sub>5</sub>: 10 MW  
 SS<sub>6</sub>: 15 MW

$$\text{Annual Reserve Cost} = ((\$47,040 \times (40 \text{ MW} - 10)) + (\$5,190 \times (40 \text{ MW} - 15)) + (\$39,257 + \$1,310 + \$4,990) \times ((40 \text{ MW} + 40 \text{ MW}) - (10 + 15))) \times ((100 - 43.32) / 100)^* = \$2,293,604.38$$

$$\text{Monthly Reserve Cost} = \$2,293,604.38 / 12 = \$191,133.70$$

\* This discount shall not be changed.

**APPENDIX C**  
**INTERCONNECTION FACILITIES**

Energy Imbalance may be returned in-kind at the following points of delivery: RS-E , and any other facilities mutually agreed to by the Parties.

The Interconnection Facilities include the interconnection between BWP and LADWP at RSE and the interconnection between BWP and GWP at Western substation.

**LADWP-Burbank**

The interconnection facilities between LADWP and Burbank shall include the following equipment at Toluca Receiving Station E (RS-E):

230-kV Bus 1 and Bus 2  
Transformer Banks E and F  
69-kV Bus 1 and Bus 2  
69-kV Toluca-Capon Lines 1, 2 & 3  
69-kV Burbank Toluca-Valley 1, 2 & 3  
Switchgear associated with the above listed

The interconnection is metered at the high side bushings of Banks E & F.

LADWP operates and maintains all Interconnection Facilities at RS-E except for operation of the load tap changers on Banks E & F which are jointly controlled with primary responsibility resting with Burbank.

Burbank operates and maintains all 69-kV equipment outside the RS-E fence line.

In case of any conflict or inconsistency between this Appendix C and the City-Burbank Interconnection Agreement, the City-Burbank Interconnection Agreement shall control.

**LADWP-Glendale**

The interconnection facilities between LADWP and Glendale shall include the following equipment at Air Way Receiving Station (AWY-RS):

230-kV Bus 1 and Bus 2  
230-kV Rinaldi-Air Way Lines 1 & 2  
230-kV Atwater-Air Way Lines 1 & 2  
Transformer Banks 1, 2 & 3  
69-kV Air Way-Kellogg 1, 2 and 3  
Switchgear associated with the above listed

The interconnection is metered at the high side bushings of Banks 1, 2 and 3.

LADWP operates and maintains all Interconnection Facilities at AWY-RS up to and including the 69-kV disconnects on the Air Way-Kellogg 1, 2 and 3 except for operation of the load tap changers on Banks 1, 2 and 3, which are jointly controlled with primary responsibility resting

with Glendale.

Glendale operates and maintains all 69-kV equipment from the potheads on the 69-kV Air Way-Kellogg 1, 2 and 3 to the Glendale system.

In case of any conflict or inconsistency between this Appendix C and the Air Way Interconnection Agreement, the Air Way Interconnection Agreement shall control.

### **Burbank-Glendale**

The interconnection facilities between Burbank and Glendale at Western shall include the following equipment:

69-kV East Bus  
69-kV West Bus  
Olive-Capon-Western Lines 1 and 2  
Switchgear associated with the above listed

The interconnection is metered as follows: Meter No. 1 is located at the terminus of the Olive-Capon-Western No. 1 Line at the 69 KV East Bus of the Western Substation. Meter No. 2 is located at the terminus of the Olive-Capon-Western No. 2 Line at the 69 KV West Bus of the Western Substation.

## APPENDIX D

### FORMULA FOR CALCULATING THE RATE FOR BWP'S PURCHASE OF FULL OR PARTIAL CONTINGENCY RESERVES FROM LADWP

#### OPERATING RESERVES

##### (Schedule 5- Spinning Reserve Service and Schedule 6- Supplemental Reserve Service)

The formula to determine the amount of and charges for Operating Reserve Service are set forth below. Operating Reserve Service as provided under this Agreement is only applicable to those point(s) of delivery located within the Balancing Authority Area. The rates and charges for Operating Reserve Service, applying the formula set forth below.

##### Definitions of Annual Reserve Rate Variables Used in Formula

- S<sub>5</sub>: Spinning Reserve Rate associated with the 50% Purchase Requirement Yearly Rate under the OATT in \$/MW-Yr.
- S<sub>6</sub>: Supplemental Reserve Rate associated with the 50% Purchase Requirement Yearly Rate under the OATT in \$/MW-Yr.
- D: Delivery of Reserve Service based on Transmission Rate under the OATT in \$/MW-Yr.
- R: Reactive Power Rate under the OATT in \$/MW-Yr.
- S: Scheduling, System Control and Dispatch Rate under the OATT in \$/MW-Yr.
- SS<sub>5</sub>: Amount of BWP self-supply of Spinning Reserve Service in MW.
- SS<sub>6</sub>: Amount of BWP self-supply of Supplemental Reserve Service in MW.

##### Formula

$$\text{Annual Reserve Cost} = ((S_5 \times (40 \text{ MW}^{**} - SS_5)) + (S_6 \times (40 \text{ MW}^{**} - SS_6)) + (D + R + S) \times ((40 \text{ MW}^{**} + 40 \text{ MW}) - (SS_5 + SS_6))) \times ((100 - 43.32) / 100)^*$$

$$\text{Monthly Reserve Cost} = \text{Annual Reserve Cost} / 12$$

##### Illustrative Example Applying Formula

- S<sub>5</sub>: \$47,040 [\$/MW-Yr.]
- S<sub>6</sub>: \$5,190 [\$/MW-Yr.]
- D: \$39,257 [\$/MW-Yr.]
- R: \$1,310 [\$/MW-Yr.]
- S: \$4,990 [\$/MW-Yr.]
- SS<sub>5</sub>: Amount of BWP self-supply of Spinning Reserve Service in MW.
- SS<sub>6</sub>: Amount of BWP self-supply of Supplemental Reserve Service in MW.

##### Full Operating Reserve Service Example:

SS<sub>5</sub>: 0 MW  
SS<sub>6</sub>: 0 MW

$$\text{Annual Reserve Cost} = ((\$47,040 \times (40 \text{ MW}^{**} - 0 \text{ MW})) + (\$5,190 \times (40 \text{ MW}^{**} - 0 \text{ MW})) + (\$39,257 + \$1,310 + \$4,990) \times ((40 \text{ MW}^{**} + 40 \text{ MW}^{**}) - (0 \text{ MW} + 0 \text{ MW}))) \times ((100 - 43.32) / 100)^* = \$3,249,895.17$$

$$\text{Monthly Reserve Cost} = \$3,249,895.17 / 12 = \$270,824.60$$

**Partial Operating Reserve Service Example:**

SS<sub>5</sub>: 10 MW  
SS<sub>6</sub>: 15 MW

$$\text{Annual Reserve Cost} = ((\$47,040 \times (40 \text{ MW}^{**} - 10)) + (\$5,190 \times (40 \text{ MW}^{**} - 15)) + (\$39,257 + \$1,310 + \$4,990) \times ((40 \text{ MW}^{**} + 40 \text{ MW}^{**}) - (10 + 15))) \times ((100 - 43.32) / 100)^* = \$2,293,604.38$$

$$\text{Monthly Reserve Cost} = \$2,293,604.38 / 12 = \$191,133.70.$$

**REVISION OF THIS APPENDIX**

The costs in this Appendix D may be changed from time-to-time to reflect LADWP's then current OATT rates.

\* This discount shall not be changed.

\*\* The references to the 40 MWs shall only be adjusted in accordance with the provisions of Section 3.4 of this Agreement.



## APPENDIX E

### START-UP AND SHUTDOWN ENERGY

In order to minimize CE and Energy Imbalance, Parties agree that LADWP will purchase the Start-up and Shutdown energy for units and unit combinations (combined cycle) with a Start-up time greater than 15 minutes per the terms of this Appendix E. Since Start-up/Shutdown energy is scheduled and delivered dynamically and therefore not a contributor to CE, the Out-of-Band Motivators will apply to all PD, subject to any exclusions, per Schedule 4.

- A. **“Start-Up”** for the purposes of this Agreement shall be defined as the period starting when the generator synchronizes and concluding when both (i) the generator output is fully scheduled to the unit participant(s) and (ii) the energy being delivered to LADWP returns to zero. The Start-Up period shall not normally exceed six hours.
- B. **“Shutdown”** for the purposes of this Agreement shall be defined as the period starting when the generator operator commences the (i) reduction of the unit participant(s) energy schedule to zero and (ii) transfer the corresponding energy schedule to LADWP, and concluding when the generator is off line and the energy schedule to LADWP returns to zero. The Shutdown period shall not normally exceed three hours.
- C. **Start-up and Shut-down Comparable to “Test”.** Parties recognize that energy provided during the periods defined above may vary and deviate from the Start-Up or Shutdown schedule provided by the generator operator.
- D. **Units with a Dynamic Schedule to LADWP:** Units, while operating with a dynamic schedule to LADWP, will have self-correcting schedules that will not impact BWP's CE calculations.
- E. **Coordination of Start-ups and Shutdowns**
  - 1. Generator operator will supply a typical Start-up and Shutdown schedule showing time vs. MW for each generator subject to this Appendix.
  - 2. Generator operator will notify LADWP of the schedule of planned Start-ups and Shutdowns with a minimum of two (2) business day notice (preferably three (3) days) for all planned unit Start-ups and Shutdowns. Parties will coordinate the timing of the proposed Start-ups and Shutdowns.
  - 3. Generator operator will provide notice of unplanned Start-ups and Shutdowns to LADWP's generation dispatcher as soon as the need and timing is known. This includes restarts after a trip.
  - 4. Generator operator and LADWP will work cooperatively to determine an optimal time for a Start-up or Shutdown to occur. Generator operator will provide outage plans to LADWP on a quarterly basis to ensure that LADWP can sufficiently integrate these events into their forward System planning. LADWP shall accept Start-up/Shutdown energy unless doing so would cause a reliability condition on the LADWP System (*i.e.* inability to control ACE need to curtail interchange

schedules, line flow problems, and/or voltage control problems). LADWP Balancing Authority (BA) will assess the System conditions and provide a "go, no-go" to the generator operator on a day-ahead basis. The LADWP on duty dispatchers will make the final determination based on prevailing system conditions.

#### **F. Start-up Event**

1. Generator operator will advise LADWP of when the Start-up will occur.
2. Prior to Start-up, Generator operator and LADWP will initiate a dynamic signal with an initial value of zero.
3. Generator operator will generate a dynamic e-Tag for the Start-up energy.
4. During the Start-up period, start-up energy will flow to and be purchased by LADWP until the energy is scheduled to the generator participant(s).
5. When the generator(s) reaches stable operating conditions and the generator operator is ready to schedule to the generator participant(s), the generator operator will advise the LADWP generation dispatcher and:
  - a. For dynamically scheduled unit(s), the generator operator will commence ramping out the start-up dynamic schedule and the ramping in the participant dynamic schedules in equal and opposite directions until the LADWP dynamic reaches zero.
  - b. For statically scheduled unit(s), the generator operator will identify a ramp time and duration for initiating schedules to the generator participants and ramp out the dynamic schedule to LADWP across the started ramp period. Generator operator will strive to commence scheduling to the unit participants at the lowest load level practical.
6. For each hour of the Start-up period, LADWP and the generator operator will agree to an integrated MWh value. The generator operator will input the after-the-fact value in the dynamic e-Tag per scheduling practice.

#### **G. Shutdown Event**

1. Generator operator will advise LADWP when the Shutdown will occur.
2. Generator operator will notify LADWP at least 30-minutes prior to the time they are ready to ramp out the energy schedules for the unit participants and ramping in the schedule to LADWP.
3. Prior to ramping out the schedules to the participants and ramping in the schedule to LADWP, the generator operator and LADWP will initiate a dynamic schedule to LADWP with an initial value of zero.
4. Generator operator will generate a dynamic e-Tag for the Shutdown energy.

5. Generator operator will strive to reduce the participant schedules to the lowest value practical prior to initiating dynamic energy delivery to LADWP.
  6. During the Shutdown period, all energy will flow to and be purchased by LADWP.
  7. When the generator(s) reaches minimum loading and the generator operator is ready to zero the schedules to the generator participant(s), the generator operator will advise the LADWP generation dispatcher and:
    - a. For dynamically scheduled unit(s), the generator operator will commence ramping in the dynamic schedule to LADWP and ramping out the participant dynamic schedules in equal and opposite directions until the participant dynamic reaches zero.
    - b. For statically scheduled unit(s), the generator operator will identify a ramp time and duration for ramping out the generator participant schedules and will ramp in the dynamic schedule to LADWP across the started ramp period.
  8. The generator operator will reduce the unit(s) output to the most practical minimum load prior to shutting down the unit. For each hour of the Shutdown period, LADWP and generator operator will agree to an integrated MWh value. The generator operator will input the after-the-fact value in the e-Tag per scheduling practices.
- H. **Net Output of BWP's Generators.** The net output (MW and MWh) for the Start-ups and Shutdowns of dynamically scheduled and non-dynamically schedule generators covered under this Agreement will be provided to LADWP by the generator operator per the communication protocol set forth in this Appendix.
- I. **Communication Protocol:** Proposed communication protocol and acceptance procedure will be comprised of the following:
1. All meter and status data will be supplied via an ICCP link.
  2. A single status binary (0/1) point will be provided to LADWP "system" from the generator operator requesting acceptance of the energy for either period. A single status (0/1) point will be provided from LADWP "system" to the generator operator indicating acceptance of said energy. A single analog point providing generator(s) Net MW output will be provided to LADWP "System" exclusion from the generator operator's deviation calculations. The generator operator will create a dynamic e-Tag to be effective during the Start-up or Shutdown period. The e-Tag will contain the estimated MWh for each hour and will be adjusted after the hour to reflect the MWh output.
- J. **Alternate Scheduling Method.** If dynamic scheduling is not available, a unit Start-up/Shutdown will be accomplished using one of the following options at LADWP's discretion:
- a) If LADWP is receiving an output value from generator(s), LADWP will calculate a clock 15-minute average of the generator(s) output and an integrated hourly MWh.

- i. Each clock 15-minute average will be subtracted from the corresponding Period Deviation. This adjusted Period Deviation shall be deemed to be the value for billing under Schedule 4.
  - ii. The calculated integrated MWH value will be used to adjust the Start-up/Shutdown e-Tag unless the generator operator provides an appropriate value.
- b) If LADWP is not receiving an output value from generator(s), the calculated Schedule 4 Period Deviation will be exempted from Schedule 4 billing. The generator operator must be able to provide an integrated MWH value for each hour. Said value will be used to adjust the Start-up/Shutdown e-Tag.

Parties will make reasonable efforts to (re)establish systems and communications necessary to implement the dynamic schedule to LADWP prior to commencing a Start-up or Shutdown. However, lack of dynamic scheduling capability shall not be sufficient reason for LADWP to deny a Start-up or Shutdown.

## **APPENDIX F**

### **NOTICES AND SYSTEM OPERATIONS PERSONNEL**

All notices under this Agreement shall be provided in writing to the Authorized Representatives listed below. For convenience, notices may be routed via electronic mail or facsimile, provided, however, that such notice is also routed contemporaneously in written form via U.S. Mail to the Authorized Representative's address indicated below. The Authorized Representatives are permitted to delegate such Authorized Representative's responsibilities under this Agreement to another employee of the Party. Any Authorized Representative making such delegation will provide notice pursuant to Section 4.1 of this Agreement.

**Notices to LADWP.** Notices to LADWP under this Agreement shall be provided in writing to the following Authorized Representatives:

Los Angeles Department of Water and Power  
Attn: Mark Lieberman, Manager of Long Term Transmission Mgmt  
Address: 111 N Hope St, JFB Room: 1246, Los Angeles  
Phone: (213) 367-2454  
Email: [Mark.Lieberman@ladwp.com](mailto:Mark.Lieberman@ladwp.com)

With Copy to:

Los Angeles Department of Water and Power  
Attn: John R. Dennis, Director of Power System Planning &  
Development  
Address: 111 N Hope St, JFB Room: 921, Los Angeles  
Phone: (213) 367-0881  
Email: [John.Dennis@ladwp.com](mailto:John.Dennis@ladwp.com)

**Notices to BWP.** Notices to BWP under this Agreement shall be provided in writing to the following Authorized Representatives:

Burbank Water and Power  
General Manager, Burbank Water and Power  
164 W. Magnolia Blvd., Burbank, CA 91502  
Email: [rdavis@burbankca.gov](mailto:rdavis@burbankca.gov)  
Telephone: (818) 238-3550

With Copy to:

Burbank City Attorney's Office  
BWP Counsel  
275 East Olive Avenue - P.O. Box 6459  
Burbank, California 91510  
Telephone: (818) 238-5702  
Facsimile: (818) 238-5724

**2. NOTICES OF AN OPERATING NATURE**

Prior to the Implementation Date, the Parties shall exchange the names, titles, address, voice phone number and Fax number for routine operational activities associated with operation activities delineated under this Agreement. Such operational activities shall include, but are not limited to outage coordination, generation dispatch and system dispatch. Any notice, request or demand of an operating nature between the BA and BWP shall be made orally, via electronic communication, or in writing, by facsimile, by First Class mail or overnight delivery service.

**\*\*\*\*\*NON-PUBLIC INFORMATION BELOW\*\*\*\*\***

**\*\*\*\*\*NOT FOR INCLUSION IN PUBLIC DOCUMENT\*\*\*\*\***

**[EACH PARTY TO CREATE ITS OWN PAGE FOR EXCHANGE WITH OTHER PARTY.]**

	LADWP	BWP
Dispatcher Shift Supervisor	-	-
Generation Dispatcher	-	-
Transmission Dispatcher	-	-
Scheduler	-	-
Grid Prescheduler	-	-
Outage Coordination	-	-
Manager of Grid Operations	-	-
Real-Time Marketer	-	-
Forward Marketer	-	-
Marketing Manager	-	-

LADWP		GWP	
Dispatcher Shift Supervisor	-	Dispatcher Shift Senior	-
Generation Dispatcher	-	Real-Time Trader	-
Transmission Dispatcher	-	Dispatcher Shift Senior	-
Scheduler	-	DA Tagger/Scheduler	-
Grid Prescheduler	-		
Outage Coordination	-	Dispatcher Bid Desk	-
Grid Operations Manager	-	Dispatch Supervisor	-
		Cash Trader	-
Real-Time Marketer	-	Real-Time Trader	-
Forward Marketer	-		
Marketing Manager	-	Trading Manager	-

PRO-FORMA SAMPLE INVOICE

**Department of Water and Power**

Of the City of Los Angeles  
 Cost and Project Accounting, Room 450  
 P.O. Box 51212  
 Los Angeles, California 90051-5512

**PRO FORMA INVOICE**

Date	9/23/2015
Due Date	10/5/2015
Invoice #	GAXXXXXX
Customer ID	City of Burbank
Service Month	Aug-2015

**BILLED TO**  
 Burbank Water and Power  
 Financial Planning and Risk Management  
 164 W Magnolia Blvd  
 Burbank, CA 91503  
 (818) 238-3739

**INVOICE COLLECTIBLE NO. GAXXXXXX**  
 Please Pay **AMOUNT DUE** \$ 290,969.70

**REPAYMENT TO:**  
 DEPARTMENT OF WATER & POWER  
 COST AND PROJECT ACCOUNTING, ROOM 450  
 P.O. BOX 51212, LOS ANGELES, CA 90051-5512

AGREEMENT NO. BAASA

UNIT OF MEASURE	DESCRIPTION	QTY	UNIT PRICE	TOTAL AMOUNT
MW	Schedule 3 - Regulation and Frequency Response Services	1	20,145.10	20,145.10
MW	Annual RFR Service Contracted - 2015 +/- 8 MW	0	2,513.31	
	Incremental Deviation Bandwidth Contracted for August 2015 +/- 1 MW			
Instances * MW	Schedule 4 - Period Deviation Charges (Net Tie Deviation)	0	varies	
	Second Deviation Band (10% of energy rate)			
Instances * MW	Third Deviation Band (25% of energy rate)	0	varies	
MW	Schedule 5 - Spinning Reserve Service			
MW	Reserves Purchased-- Deliv, Reactive Power, Sched/Syst Cntrl/Disp Rate	0	3,796.42	
MW	Amount of Self-Supply Spinning Reserve		3,920.00	
	Monthly Reserve Cost - Net After Self-Supply			174,946.60
MW	Schedule 6 - Supplemental Reserve Service			
MW	Reserves Purchased-- Deliv, Reactive Power, Sched/Syst Cntrl/Disp Rate	0	3,796.42	
MW	Amount of Self-Supply Supplemental Reserve		432.50	
	Monthly Reserve Cost - Net After Self-Supply			95,878.00
MW	Motivators for Schedules 5 & 6			
MW	Failure for Capacity Perform $\{3 \times \{Monthly OATT Rate\} \times \{MW Short\} \text{ per occurrence}\}$			
MW	Energy Associated w/ Activation of Reserves $\{1.5 \times \{Energy Price\} + \text{Return In Kind}\}$			
MW	Failure to Terminate Energy Draw after 60 min $\{3 \times \{Energy Price\} + \text{Return In Kind}\}$			
MW	RT Failure to Supply Reserves $\{3 \times \{Monthly OATT Rate\} \times \{MW Short\} \text{ per occurrence}\}$			
MW	Energy Delivered to LADWP to Create Reserves $\{1.1 \times \{BWP/GWP Cost\}\}$			
MW	Reserve Purchase (short-term) from BWP or GWP by LADWP $\{\{Applicable OATT Rate\} \times \{MW\}\}$			
<b>Total</b>				<b>\$ 290,969.70</b>

TO ENSURE PROPER CREDIT TO YOUR ACCOUNT, PLEASE RETURN BOTTOM PORTION WITH PAYMENT;

APPROVED: **MANAGER OF PROJECTS AND BILLINGS**

Please do not combine payment of this invoice with utility bills.

REFERENCE NO. **TEAR OFF HERE AND RETURN WITH PAYMENT - KEEP TOP FOR YOUR RECORDS**

<table border="1"> <tr> <th>Credit Account</th> <th>Work Order No.</th> <th>Symbol Code</th> <th>Amount</th> </tr> <tr> <td></td> <td></td> <td></td> <td>\$ 290,969.70</td> </tr> </table>	Credit Account	Work Order No.	Symbol Code	Amount				\$ 290,969.70	<table border="1"> <tr> <td>I.C. No.</td> <td>1111111</td> </tr> <tr> <td>I.C. Date</td> <td>9/23/2015</td> </tr> <tr> <td>Fund</td> <td>Power RBs</td> </tr> <tr> <td>Amount Enclosed</td> <td>\$</td> </tr> </table>	I.C. No.	1111111	I.C. Date	9/23/2015	Fund	Power RBs	Amount Enclosed	\$
Credit Account	Work Order No.	Symbol Code	Amount														
			\$ 290,969.70														
I.C. No.	1111111																
I.C. Date	9/23/2015																
Fund	Power RBs																
Amount Enclosed	\$																

Burbank Water and Power  
 Financial Planning and Risk Management  
 164 W Magnolia Blvd  
 Burbank, CA 91503

## APPENDIX H

### FORMULA FOR CALCULATING THE RATE FOR BWP'S PURCHASE OF REGULATION AND FREQUENCY RESPONSE SERVICE FROM LADWP

#### **SCHEDULE 3 Regulation and Frequency Response Service**

The formula to determine the amount of and charges for RFR Service are set forth below. RFR Service as provided under this Agreement is only applicable to those point(s) of delivery located within the Balancing Authority Area. The rates and charges for RFR Service, applying the formula set forth below.

1. **Annual RFR Rate** = 
$$\frac{ARR_t \times PR_t}{(NEL_{LADWP} + NEL_{BWP} + NEL_{GWP})_t}$$

Where:

Annual RFR Rate = Cost of RFR Service expressed in \$/MWh of load.

ARR = Annual Revenue Requirement for RFR Service

PR = Purchase Requirement stated as the "percent of the Transmission Customer's Reserved Capacity for Point-to-Point Transmission Service" (e.g., 1.1 percent) in Schedule 3 of the LADWP OATT.

NEL<sub>LADWP</sub> = LADWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

NEL<sub>BWP</sub> = BWP Annual-Net Energy for Load as filed by LADWP in FERC Form 714

NEL<sub>GWP</sub> = GWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

t = LADWP Cost of Service Study Test Year used in the calculation of the LADWP OATT rates in effect for the year in which service is elected.

2. **Billing Demand for Annual Service:**

If BWP elects to purchase annual RFR Service from the Balancing Authority, LADWP shall supply and BWP shall purchase a base amount of regulation equal to +/- 8 MW, and the billing determinants for such Service charges shall be based on NEL<sub>BWP</sub> as defined in Section 1 of this Schedule 3. LADWP shall invoice BWP on a monthly basis for one-twelfth of the annual cost of providing this service to BWP, which is annual RFR Rate times NEL<sub>BWP</sub>.

If BWP elects not to purchase annual RFR Service from the Balancing Authority, the Deviation Bands will be adjusted as indicated in Schedule 4.

3. **Illustrative Example Applying Annual RFR Rate and Billing Demand for Annual RFR Service:**

For the 8-MW purchased by BWP in the First Deviation Band reflected in Schedule 4, the following charges will result:

ARR<sub>t</sub> = \$547,775,766

PR = 1.1%



$NEL_{LADWP} = 27,160,120 \text{ MWh}$ .

$NEL_{BWP} = 1,185,006 \text{ MWh}$

$NEL_{GWP} = 1,182,736 \text{ MWh}$

Annual RFR rate = \$0.204/MWh

Annual Cost of RFR Service =  $1,185,006 \text{ MWh} \times \$0.204/\text{MWh} = \$241,278$

Monthly Cost of RFR Service =  $\$241,278 / 12 = \$20,107$

**4. Rate for Incremental Deviation Bandwidth:**

BWP may elect to purchase additional RFR Service from LADWP on a monthly or annual basis. Such purchase will increase the Deviation Bands, as described in Section C of Schedule 4 for the period of time such RFR Service is purchased..

$IRFR_y = (\text{Annual Cost of RFR Service} / 8) \times \text{MW}$

$IRFR_m = ((\text{Monthly Cost of RFR Service} / 8) \times \text{MW})$

Where:

$IRFR_y$  = The rate per MWh for incremental MW of bandwidth for a year.

$IRFR_m$  = The rate per MWh for incremental MW of bandwidth for a month.

MW = The number of additional MW requested and provided for a year or month.

**5. Illustrative Example Applying Rate for Incremental Deviation Bandwidth:**

A. BWP requests 5 MW of additional deviation bandwidth for one year:

$IRFR_y = \$241,278 / 8 = \$30,159.75 \times 5 \text{ MW} = \$150,798.75$

B. BWP/GWP request 5 MW of additional deviation bandwidth for one month:

$IRFR_m = \$20,107 / 8 = \$2,513.38 \times 5 \text{ MW} = \$12,566.88$

**REVISION OF THIS APPENDIX**

The costs in this Appendix H may be changed from time-to-time to reflect LADWP's then current OATT rates.

**APPENDIX I**  
**FORM OF**  
**GOVERNMENTAL PERSON USE CERTIFICATE**

In connection with the execution of the Balancing Authority Area Services Agreement ("Agreement"), dated as of September \_\_\_\_\_, 2015, is entered into by and between the City of Los Angeles on behalf of its Department of Water and Power ("LADWP") in its capacity as the operator of the LADWP Balancing Authority Area ("Balancing Authority") and City of Burbank, on behalf of its Water and Power Department ("BWP"), DWP No. \_\_\_\_ (Agreement), [NAME OF GOVERNMENTAL ENTITY OR COUNTER PARTY] ("Certifying Entity") relating to balancing area services as described therein, Eligible Customer certifies, represents and agrees as follows::

- (a) **Officer Signing.** I am the duly [elected/appointed] [Title] of Certifying Entity, authorized to sign this Certificate.
- (b) **Tax-Exempt Bonds.** Certifying Entity understands that this Certificate relates to LADWP facilities that were financed with tax-exempt bonds, Build America Bonds and/or Qualified Energy Conservation Bonds, issued by or on behalf of LADWP ("Facilitites").
- (c) **Governmental Status.** The Certifying Entity is a municipal utility that is owned by a state or local governmental unit or a political subdivision or instrumentality thereof, or is itself a state or local governmental unit or a political subdivision or instrumentality thereof (a "Governmental Person").
- (d) **Qualifying Use.** Except as provided in (e) and (f) below, for the term of any services set forth in the Agreement, including any renewal periods, the Certifying Entity will use the service for the Facilities only in connection with its retail electric system in providing electricity to its retail electric customers.
- (e) **Short-term Uses.** Any sale, assignment, transfer or lay-off in any manner of any service provided to the Certifying Entity under this Agreement shall comply with the Agreement's procedures for resale, assignment or transfer of service and this Certificate.
- (f) **Governmental Person Uses Permitted.** In the event there is to be a sale, lay-off, or other transfer in any manner, of any scheduling service pursuant to the Agreement, by the Certifying Entity, to another Governmental Person for a period of longer than 3 years, such may only be permitted if such other Governmental Person will not, in LADWP's exclusive determination, jeopardize the tax-exempt status of any municipal bond(s) used to finance the Facilities and executes a form of this Certificate.
- (g) **Reimbursement of Reasonable Costs and Expenses for LADWP Review.** Certifying Entity agrees to pay or reimburse LADWP for reasonable costs and expenses (including fees and expenses of counsel) that may be incurred by LADWP for review of the individual Certifying Entity's Governmental Person Use Certificate.
- (h) **Additional Information.** Certifying Entity agrees to immediately inform, in writing, LADWP of any change regarding the foregoing certifications, representations and agreements and agrees that, if such change is reasonably likely, in the discretion of LADWP, to

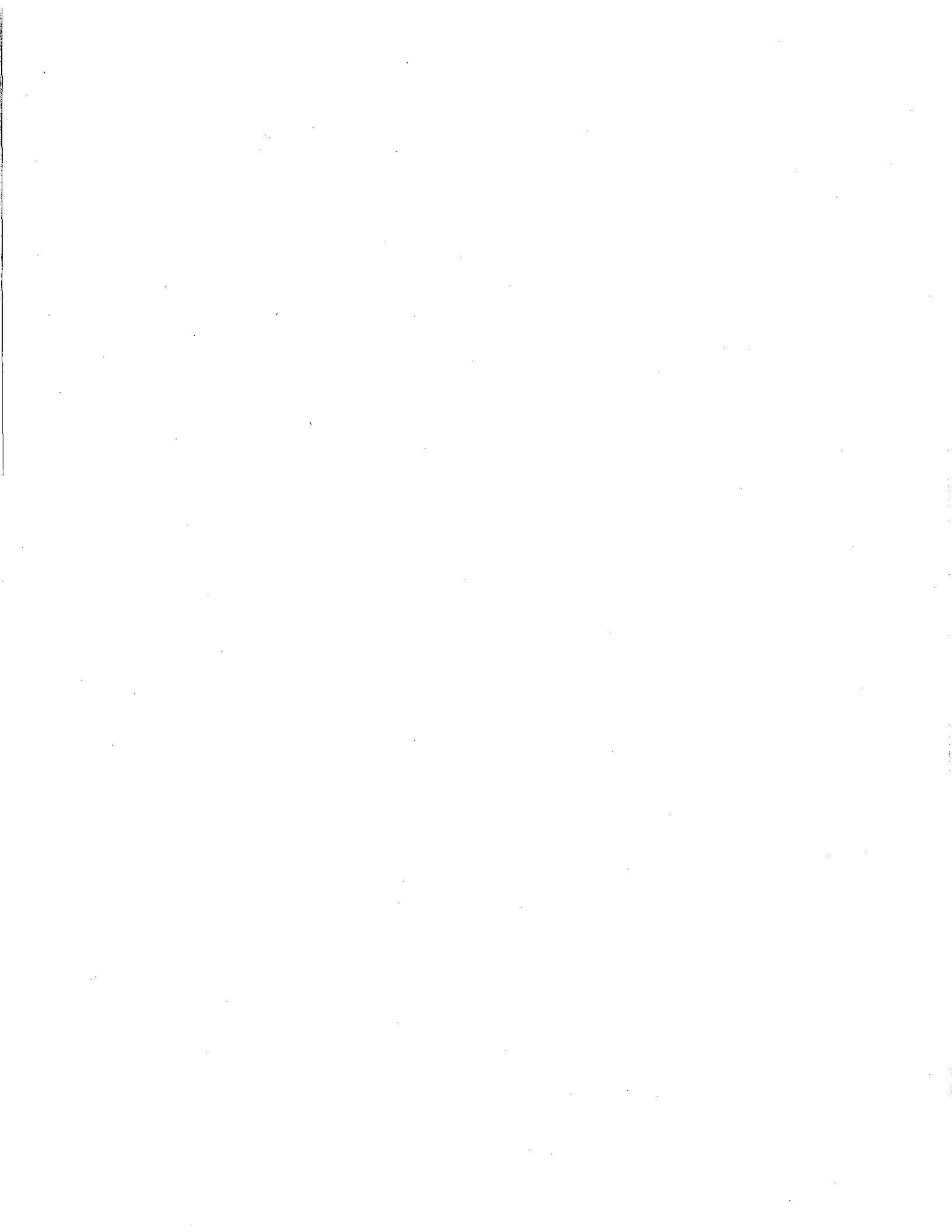
adversely affect the tax exempt status of the LADWP's bonds, LADWP may immediately terminate all scheduling services affected by such change under the Agreement.

SUBSCRIBED AND SWORN BEFORE A NOTARY PUBLIC

Dated:

by \_\_\_\_\_

[Name and title of senior management representative duly authorized to represent Certifying Entity]



**BALANCING AUTHORITY AREA SERVICES AGREEMENT**

**BETWEEN**

**LOS ANGELES DEPARTMENT OF WATER AND POWER**

**AND**

**GLENDALE WATER AND POWER**

**BALANCING AUTHORITY AREA SERVICES AGREEMENT  
BETWEEN  
LOS ANGELES DEPARTMENT OF WATER AND POWER  
AND  
GLENDALE WATER AND POWER**

This Balancing Authority Area Services Agreement ("Agreement"), dated as of \_\_\_\_\_, 2015, is entered into by and between the City of Los Angeles on behalf of its Department of Water and Power ("LADWP") in its capacity as the operator of the LADWP Balancing Authority Area and City of Glendale, on behalf of its Water and Power Department ("GWP"). LADWP and GWP are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

**RECITALS**

**WHEREAS**, GWP owns and operates a combination of transmission, generation and distribution components (collectively GWP's "System"), and serves its own retail customers using its System and GWP's transmission rights under its existing transmission contracts ("ETCs");

**WHEREAS**, GWP's System is currently located within the LADWP Balancing Authority Area;

**WHEREAS**, LADWP has an OATT under which it provides transmission service through its Balancing Authority Area;

**WHEREAS**, the Parties are also parties to certain transmission agreements which provide for points of interconnection, points of receipt, points of delivery and provide for coordinated operations between the Parties' Systems;

**WHEREAS**, pursuant to this Agreement, LADWP as the Balancing Authority will provide certain Balancing Authority Area Services to GWP under the terms and conditions set forth herein, as of the Implementation Date;

**WHEREAS**, GWP and LADWP hereby agree to enter into this Agreement to set forth the terms and conditions for the provision by LADWP of certain Balancing Authority Area Services to GWP, to establish the rates for such services, and the payment for such services as of the Effective Date;

**WHEREAS**, the Parties wish to establish in this Agreement measures to coordinate certain operation and maintenance of the Interconnection Facilities (as defined herein) and their respective Systems to effectuate the operation of the Balancing Authority Area and meet their respective obligations under the Applicable Reliability Standards as promulgated and enforced by the Federal Energy Regulatory Commission ("FERC" or the "Commission"), the North American Electric Reliability Corporation ("NERC") and the Western Electricity Coordinating Council ("WECC");

**WHEREAS**, the Parties will continue to operate the Interconnection Facilities and their respective Systems related to the operation of the Balancing Authority Area in accordance with Good Utility Practice; and

**NOW THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

## **ARTICLE I DEFINITIONS**

- 1.0 **Definitions.** As used in this Agreement, the following terms shall have the meanings stated below. Terms defined in other sections of this Agreement shall have the meanings stated in those sections. Any other initially capitalized term in this Agreement shall have the definition of that term as set forth in the NERC Glossary of Terms Used in Reliability Standards ("NERC Glossary") as may be amended from time to time, unless otherwise defined in this Agreement, and the NERC Glossary is hereby incorporated by reference into this Agreement.
- 1.1 **"Applicable Reliability Standard"** shall mean with respect to a Party, refers to those Reliability Standards that apply to that Party based upon its registered entity status or as otherwise may be determined by FERC, NERC or WECC, as they may be amended from time to time. Reliability Standards are as set forth in Section 215(a)(3) of the Federal Power Act, 16 U.S.C. §824o(a)(3), or any successor legislation imposing mandatory requirements to provide for the reliable operation of the Bulk Power System, as defined in 16 U.S.C. §824o(a)(1), and any regulations validly promulgated thereunder. Reliability Standards include national standards and regional reliability standards promulgated by FERC, NERC and WECC
- 1.2 **"Authorized Representative"** shall mean the representative of a Party designated in accordance with Article IV of this Agreement.
- 1.3 **"Balancing Authority"** ("BA") As this term is defined in the NERC Glossary of Terms to refer to the LADWP BA, unless another BA is specifically referenced herein.
- 1.4 **"Balancing Authority Area"** ("BAA") As this term is defined in the NERC Glossary of Terms to refer to the LADWP BAA, unless another BAA is specifically referenced herein.
- 1.5 **"Balancing Authority Area Services"** shall mean the services provided in Schedules 1 through 6 of this Agreement that are necessary to support GWP's delivery of its capacity and energy.
- 1.6 **"Commission"** or **"FERC"** shall mean the Federal Energy Regulatory Commission or its successor.
- 1.7 **"Confidential Information"** shall mean information that is furnished by one Party to the other Party after the date of execution of this Agreement, whether written or recorded/electronic, and regardless of the manner in which furnished, and which is marked "Confidential" or "Official Use Only - Subject to Non-Disclosure Agreement" or with a similar designation indicating limitations on disclosure. Confidential Information is subject to the requirements of Section 8.10 of this Agreement.
- 1.8 **"Contingency Recovery Period"** shall mean a period beginning at the time that GWP begins taking contingency reserve energy from any source, and extending to the time when GWP's CE returns to zero.

- 1.9 "Control Error" ("CE") shall have the meaning as set forth in Schedule 4 of this Agreement.
- 1.10 "Deviation Bank" shall mean the continuously accumulating account of inadvertent interchange energy (on-peak and off-peak) between the Parties that is zeroed out at the end of each calendar month, as described in Schedules 4 through 6 of this Agreement.
- 1.11 "Effective Date" shall be the effective date set forth in the Settlement Agreement and Release of Claims between the Parties (DWP Agreement No. BP 15-020).
- 1.12 "Emergency" shall mean any System condition that requires immediate automatic or manual action to prevent or limit the failure of the transmission facilities or generation supply that could adversely affect the reliability of (a) with respect to the Balancing Authority, the Bulk Electric System and/or the Balancing Authority Area's electric system, or (b) with respect to GWP, the GWP's System.
- 1.13 "Energy Imbalance" shall mean the Net Actual Interchange minus the Net Interchange Scheduled over the applicable period, as set forth in Schedule 4.
- 1.14 "Energy Imbalance Service" shall mean the services defined in Schedule 4 of this Agreement.
- 1.15 "FERC" see "Commission", as defined in Section 1.6.
- 1.16 "Good Utility Practice" shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.
- 1.17 "Implementation Date" shall mean the date this Agreement shall first be implemented, which shall be the date commencing at 12:01 AM Pacific Prevailing Time on the first day of the first month after (1) the Effective Date and (2) the conditions set forth in Sections 2.5, 2.6, and 8.16.1 and Appendix F of this Agreement have been fulfilled.
- 1.18 "Interconnection Facilities" shall mean the transmission equipment listed in Appendix C that connects LADWP and GWP, and for purposes of calculating CE, Net Actual Interchange, Net Scheduled Interchange, and Energy Imbalance, and shall include the Western Substation.
- 1.19 "LADWP Energy Rate" shall be defined as the Intercontinental Exchange (ICE) Daily Price Indices at Palo Verde (PV) (On-peak or Off-peak) published in the ICE Day Ahead Power Price Report, or its successor.
- 1.20 "LADWP Transmission System" shall mean the transmission system of Balancing Authority.



- 1.21 **"NERC"** shall mean the North American Electric Reliability Corporation, the entity designated as the electric reliability organization certified by the Commission to establish and enforce the reliability standards of the Bulk Electric System, or its successor organization.
- 1.22 **"Net Actual Interchange"** shall mean the algebraic sum of all metered interchange across the Interconnection Facilities for a given period or instant in time.
- 1.23 **"Net Scheduled Interchange"** shall mean the algebraic sum of all interchange schedules across the Interconnection Facilities for a given period or instant in time.
- 1.24 **"Net Tie Deviation"** shall have the meaning set forth in Schedule 4 of this Agreement.
- 1.25 **"OASIS"** shall mean the Open Access Same Time Information System of LADWP.
- 1.26 **"OATT"** shall mean LADWP's Open Access Transmission Tariff, as it may be amended by LADWP from time to time.
- 1.27 **"Operating Reserve - Spinning Reserve Service"** shall mean the services defined in Schedule 5 of this Agreement.
- 1.28 **"Operating Reserve - Supplemental Reserve Service"** shall mean the services defined in Schedule 6 of this Agreement.
- 1.29 **"Outage"** shall mean a disconnection or separation, whether planned or forced, of one or more elements of an electric system.
- 1.30 **"Period Deviation"** shall have the meaning set forth in Schedule 4 of this Agreement.
- 1.31 **"Planned Outage"** shall mean outages that may affect the reliability of the respective Systems of the Parties that are coordinated with notice provided in accordance Section 3.7 of this Agreement.
- 1.32 **"Point of Interconnection"** shall mean Air Way Receiving Station.
- 1.33 **"Reactive Supply and Voltage Control from Generation or Other Sources Service"** shall mean the services defined in Schedule 2 of this Agreement.
- 1.34 **"Regulation and Frequency Response Service"** shall mean the services defined in Schedule 3 of this Agreement.
- 1.35 **"Scheduling, System Control and Dispatch Service"** shall mean the services defined in Schedule 1 of this Agreement.
- 1.36 **"Shut-down Energy"** shall have the meaning set forth in Appendix E.
- 1.37 **"Start-up Energy"** shall have the meaning set forth in Appendix E.
- 1.38 **"Tie Line Bias"** shall have the meaning set forth in Schedule 4 of this Agreement.

- 1.39 **"Uncontrollable Forces"** shall mean any act of God, act of the public enemy, terrorism, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities or any other event beyond the reasonable control of the Balancing Authority or GWP, and which by exercise of Good Utility Practice, the Party could not avoid. The unavailability of funds or financing, economic or market forces, or the economic hardship of either Party shall not be considered an Uncontrollable Force.
- 1.40 **"WECC"** shall mean the Western Electricity Coordinating Council, or its successor organization.

## **ARTICLE II SCOPE OF SERVICES**

- 2.0 **Scope of Services.** LADWP shall offer to provide GWP the services listed in Schedules 1 through 6 of this Agreement, as requested by GWP. LADWP shall offer to provide full contingency reserve service to GWP, as set forth in Schedules 5 and 6 of this Agreement. GWP shall request the services listed in Schedules 1 through 6 pursuant to this Agreement and the provisions of relevant LADWP Business Practices.
- 2.1 **Term.** Services under this Agreement shall commence on the Implementation Date, and continue until: (i) this Agreement is terminated in accordance with Article VI, or (ii) the Parties otherwise mutually agree.
- 2.2 **No Implied Effect on Other Rights or Agreements:**
- 2.2.1 Except as specifically and explicitly set forth in this Agreement, nothing in this Agreement is intended to modify or otherwise affect any rights or obligations of either Party under any agreement existing as of the Effective Date (the "Existing Agreements"), including but not limited to the City-Glendale Interconnection Agreement, DWP No. 10131 ("Interconnection Agreement"), the City-Glendale Pacific Intertie D-C Transmission Facilities Agreement, DWP No. 10128 ("PDCI Agreement"), and the City-Glendale 1968 Interchange Agreement, DWP No. 10135 ("Interchange Agreement").
- 2.2.2 For the term of this Agreement, this Agreement shall satisfy GWP's obligations under the Existing Agreements to provide spinning reserves, supplemental reserves (sometimes referred to as "non-spinning reserves") or any other contingency reserves.
- 2.3 **GWP's Load and Schedules.** LADWP shall offer Balancing Authority Services under this Agreement to support GWP's retail obligations. GWP shall be responsible for timely submission of any necessary schedules and NERC e-Tags in accordance with Applicable Reliability Standards, and in accordance with the requirements set forth in Schedules 1 through 6 of this Agreement.
- 2.4 **Rates.** If GWP takes service under this Agreement, GWP shall pay the rates for Balancing Authority Area Services provided by LADWP in Schedules 1 through 6 hereto as set forth in the formula and examples in Appendices B, D and H. GWP shall pay for the services provided under this Agreement in accordance with the provisions of Article V. The formulas set forth in Appendices B, D and H shall only be adjusted with the

mutual consent of both Parties. The inputs to the formulas are variables that may change from time-to-time, as defined in the Appendices and Schedules to this Agreement.

2.4.1 **One-time Revisions to Rates.** After the Implementation Date of this Agreement, upon the first revision of LADWP's August 14, 2014 OATT, if any of the rates specified in Schedules 1 through 6 of the OATT are reduced, LADWP shall provide a one-time credit as an offset to GWP's next months' bills that reflects the difference in rates for service taken under this Agreement, with interest calculated as set forth in Section 5.3, from the Implementation Date to the effective date of the new rates in Schedules 1 through 6 of the OATT.

2.5. **Development of Protocols, Business Practices or Procedures to Allow GWP to Self-Provide or Purchase Balancing Authority Area Services from Third-Parties.** Prior to the Implementation Date, LADWP shall develop and adopt protocols, business practices or procedures that specify the technical requirements necessary for GWP to purchase from third-parties or self-provide the Balancing Authority Area Services set forth in Schedules 1, 2, 3, 4, 5 and 6 of this Agreement. Such protocols, practices or procedures shall be consistent with industry standards and Good Utility Practice.

2.6. **Exchange of Emergency and Restoration Plans and Procedures.** GWP and LADWP will exchange emergency procedures, system restoration plans, voltage and MVAR plans, and capacity and energy emergency plans prior to the Implementation Date.

### **ARTICLE III** **TECHNICAL REQUIREMENTS**

3.0 **Metering.** GWP's interchange shall be measured at the Interconnection Facilities defined in Section 1.18 pursuant to the metering configuration identified in Appendix C. Metering equipment may be owned and maintained by the Parties and/or Burbank Water and Power ("BWP"). The Parties will exchange real-time data from their meters in accordance with LADWP's generally-applicable metering and communications requirements. All metering, communications, and data exchanges required to implement this Agreement shall be automated to the greatest extent reasonably practicable. The standards and specifications for metering and communications equipment as well as any related hardware and software required to implement this Agreement shall meet all Applicable Reliability Standards, and be consistent with industry standards and Good Utility Practice, if reasonably practicable, be compatible with the Parties' existing and planned facilities or software,

3.0.1 **Modifications to Meters.** In the event either Party intends to modify or replace meters at the Interconnection Facilities, that Party shall notify the other in writing not less than thirty (30) days prior to making any such modifications or replacements, except in the case of an Emergency, in which case the Party making the modification or replacement shall provide the other Party as much notice as reasonably practicable. The Parties shall have the right to monitor in-person any meter modifications or replacements or any meter testing conducted by any other Party at the Interconnection Facilities. Unless otherwise agreed to by the Parties, commencing on the Implementation Date, the Parties shall jointly test each of the interchange meters identified in Appendix C in the second and

fourth calendar quarter (i.e., Q2 and Q4) of each year after the Implementation Date and each Party shall bear their own costs for such testing. The Parties shall have the right to request periodic meter testing of the other Party's meters upon thirty (30) days prior notice and the requesting Party shall bear the cost of such tests. If any tests show any meter to be inaccurate by more than one percent, or if any meter fails to register, a billing adjustment shall be made correcting all measurements made by such meter to the past meter check or up to three (3) months, whichever is shorter. The adjustment shall be equal to the amount of error as determined for the actual period of such erroneous meter registration.

3.0.2 **Interconnection Substations.** There are two "Interconnection Substations" that are relevant to this Agreement: (1) Air Way Receiving Station ("Air Way" or "Airway") and (2) Western Substation ("Western"). To the extent a Party is responsible for operating one or more of the aforementioned Interconnection Substations, the Party shall be responsible for meeting the metering requirements: as set forth in Sections 3.0, 3.0.1 and 3.0.2 of this Agreement for that Interconnection Substation; and that are consistent with their individual operations and maintenance requirements.

3.1 **Modifications to Either Party's System.** In the event either Party intends to modify its System in a manner which in the exercise of Good Utility Practice would materially impact the obligations of the other Party under this Agreement (e.g., Balancing Authority's BAA obligations), the Party making the modifications shall provide notice, in accordance with Good Utility Practice, of its intended modification(s) as soon as reasonably practicable, but in no event later than sixty (60) days prior to making such modification(s) to its System. Within thirty (30) days of receiving such notice, the Party that is not modifying its System shall determine if the modification requires any amendments to the obligations set forth in this Agreement and shall notify the other Party of its proposed amendments. To the extent the Parties disagree on the proposed amendments the Parties will attempt to resolve the dispute using the dispute resolution provisions in Article VII of this Agreement.

3.2 [RESERVED].

3.3 [RESERVED].

3.4 **Reliability Standards.**

3.4.1 Each Party agrees to notify the other Party as far in advance as reasonably practicable of any FERC, NERC or WECC audit, investigation or spot-check of compliance with Applicable Reliability Standards pertaining to services under this Agreement. Each Party agrees to timely cooperate with the other Party in the event that a Party is subject to such an audit, investigation or spot-check by timely providing any supporting evidence in its possession that may be requested by the other Party to demonstrate compliance to a reviewing authority. During an on-site audit or investigation, each Party shall provide the other Party with such supporting evidence to assist with responses to data requests no later than one (1) business day after it is requested, unless the Parties mutually agree to an alternative deadline.

- 3.4.2 Each Party shall use Good Utility Practice to cooperate with the other Party, through notifications, the exchange of data, coordination of plans, studies and schedules, and other actions that may be required to comply with Applicable Reliability Standards and related requirements.
- 3.4.3 It is the intent of the Parties for each Party to be responsible for compliance with Applicable Reliability Standards. If any new, revised or eliminated Reliability Standard changes the obligations of any Party during the term of this Agreement, the Parties shall cooperate using Good Utility Practice to ensure that each Party shall operate under the Applicable Reliability Standards as of the implementation date of such new or revised Reliability Standards.
- 3.4.4 Upon approval by FERC, the Parties agree to promptly meet to review any new, revised or eliminated Reliability Standard that changes the obligations of any Party during the term of this Agreement and to discuss any necessary modifications to this Agreement, including but not limited to adjustments to the calculation of charges and payment obligations as a result of changes in reserve obligations under this Agreement (e.g., a change in the Spinning Reserve obligations under Schedule 5). Parties may mutually agree that a meeting is not necessary.
  - 3.4.4.1 Nothing in this Agreement shall require either Party to take any action under this Agreement contravening or violating any new or revised Applicable Reliability Standard.
- 3.4.5 If the BA's Applicable Reliability Standards are modified such that the BA's obligation to provide reserves of any type are modified or eliminated, GWP's obligation under this Agreement to pay for said reserves shall be deemed proportionately modified or eliminated as of the effective date of such modification and LADWP shall credit back or invoice to GWP any payments for said reserves after the modification's effective date.

### **3.5 Operation and Maintenance**

- 3.5.1 Each Party shall, to the fullest extent practicable, cause all its transmission and generating equipment to be designed, constructed, maintained, and operated in accordance with Good Utility Practice.
- 3.5.2 Each Party shall operate its System in parallel with other Systems with which it shares interconnections and shall maintain and operate its System so as to minimize the likelihood and effect of disturbances or Outages on its System which might impair service to the customers of any other Party. Each Party shall be the sole judge of whether service to its own customers is being or would be impaired by operating conditions on the System of any other Party, and may request such other Party to take, or may itself take, appropriate corrective action.
- 3.5.3 Except as may be specifically provided for in arrangements between the Parties involved, or as may be arranged by mutual agreement in specific cases by both Parties at the request of a Party, no Party shall be entitled to or obligated to furnish or to receive unscheduled megawatts (MW) or megavars (MVAR) to or

from another Party, unless in a System Emergency. During a System Emergency, all Parties shall meet all requirements of Applicable Reliability Standards and any other applicable standard to mitigate any capacity and energy Emergency and return to scheduled MW and MVar flow between or among the Parties.

- 3.5.4 Each Party shall, at its own expense or as otherwise provided by separate written agreement between or among the Parties sharing the interconnection, maintain in good operating condition its portion of each interconnection; provided, however, that an interconnection may be removed from service or reduced in capacity in accordance with Section 3.7, and shall be restored to service as soon as practicable following any Outage.

### **3.6 Emergency Operations**

- 3.6.1 In the event of an Emergency, each Party shall render all available Emergency assistance to the other Party as requested, if the requesting entity has implemented similar Emergency procedures, and if such assistance would not violate safety, equipment, or regulatory or statutory requirements. This Agreement does not address obligations for payment or other compensation that may or may not exist under other agreements that may exist or may be entered into by the Parties in connection with, or as a result of Emergency assistance.
- 3.6.2 No Party shall perform switching under Emergency conditions at or at Air Way Receiving Station without coordinating with the other Party at such location, unless such Emergency conditions require switching to avoid or mitigate unsafe conditions.
- 3.6.3 GWP shall immediately comply with Reliability Directives from LADWP in its functional role as the Transmission Operator and Balancing Authority, unless such actions would violate safety, equipment, regulatory or statutory requirements. GWP shall comply as follows:
  - 3.6.3.1 Adjust generation output if conditions in the Balancing Authority Area require such adjustment for reliability purposes. The adjustment will be for the minimum quantity and duration necessary to resolve the reliability condition. Balancing Authority shall take or be taking the same or substantially similar actions when directing GWP to adjust their generation.
  - 3.6.3.2 Take all necessary actions, up to and including, shedding of firm load, to alleviate a reliability issue in the Balancing Authority Area. LADWP shall take or be taking the same or substantially similar action to mitigate a reliability condition.
  - 3.6.3.3 Immediately advise LADWP of the inability to perform the directive due to the above mentioned reasons so that LADWP can implement alternate remedial actions.
- 3.6.4 LADWP shall not charge GWP for complying with Reliability Directives.

- 3.6.5 Each Party will implement and maintain an automatic underfrequency load shedding program that meets the requirements of the WECC Off-Nominal Frequency Load Shedding Program.

### **3.7 Planned Outages and Coordination**

- 3.7.1 The Parties shall plan and coordinate, with at least three (3) business days advance notice whenever possible, all Planned Outages on circuits or equipment and other maintenance activities affecting the reliability of the interconnection or delivery of energy affecting the Parties' electric Systems. Parties shall attempt to minimize the impact to the Parties of said Outages.
- 3.7.2 The Parties shall plan and coordinate with one another, at least three (3) business days in advance, any Planned Outages of System voltage regulating equipment, including but not limited to automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, and reactors.
- 3.7.3 The Parties shall plan and coordinate Planned Outages of telemetering and control equipment and associated communication channels between and among the affected areas at least three (3) business days in advance.
- 3.7.4 The Parties shall plan and coordinate Planned Outages of generation resources at least seven (7) business days in advance whenever possible. When time does not permit such notifications and coordination, or in the event of a Forced Outage of generation resources, the Parties shall notify each other at the earliest possible time.

### **3.8 Voltage and MVar Control**

- 3.8.1 Each Party shall operate its generators with the Automatic Voltage Regulator (AVR) in service and on voltage control. GWP will notify Balancing Authority as soon as practical but within 30 minutes whenever a generator is operating with the AVR off.
- 3.8.2 Each Party shall maintain its System voltage within the range specified by its internal voltage guidelines. Parties will coordinate and exchange operating voltage information to ensure voltage control and MVar control equipment remains within operating limits.
- 3.8.3 GWP shall maintain the net total MVar flow at Airway and Western within +/- 10-MVar.
- 3.8.4 The individual voltage schedule shall have priority over MVar flow limits set forth in Section 3.8.3.
- 3.8.5 Each Party shall immediately advise the other Party if it is unable to maintain voltage and/or reactive power within the prescribed limits set forth in Sections 3.8.2 and 3.8.3. Parties will assist each other to the maximum extent possible when notified of a voltage problem on the other System.

3.8.6 Each Party will take all necessary action up to and including shedding firm load if the Party cannot maintain its voltage or MVAR exchange within the limits set forth in Sections 3.8.2 and 3.8.3 after receiving all available assistance and it is burdening the other Party's System.

3.9 [RESERVED].

**3.10 Operational Reliability Information.**

3.10.1 The Parties shall provide one another with such information as may be necessary (where confidentiality agreements allow) in order to coordinate their current-day, next-day, and seasonal operations.

3.10.2 Each Party shall provide information as requested by the other Party to conduct operational reliability assessments and coordinate reliable operations.

3.10.3 In accordance with Good Utility Practice, GWP shall timely notify LADWP, within 30 minutes if reasonably practicable, of changes in generation capabilities and characteristics including but not limited to changes in real generation output capabilities.

3.10.4 GWP shall notify Balancing Authority as soon as practical, but within 30 minutes of a status or capability change on any generator, including the status of each power system stabilizer and the expected duration of the change in status or capability.

3.10.5 Each Party shall use uniform line identifiers when referring to transmission facilities of an interconnected network.

**3.11 Monitoring System Conditions**

3.11.1 If GWP is supplying any reserves to LADWP, GWP shall: (i) inform LADWP of all generating resources available for use by LADWP as the BA; (ii) calculate all available operating reserves, and (iii) Telemeter this capability to LADWP in real time.

3.11.2 The Parties shall exchange real time operating data as required by any Party to meet its reliability obligations under the Applicable Reliability Standards.

3.11.3 To the extent the Parties are unable to meet the requirements of Sections 3.11.1-2, the Parties will work diligently to achieve this ability to exchange the aforementioned data.

**3.12 Communication**

3.12.1 The Parties' System Operators and load dispatchers shall communicate with each other using the applicable Operating Personnel Communications Protocols and procedures, including three-part communications, as set forth in the Applicable Reliability Standard when Reliability Directives or Operating Instructions are issued.



- 3.12.2 Reliability Directives from LADWP to GWP shall be clearly stated as a directive and will include what action is being requested, what quantity of change or action is required, and when that action is to be taken.
  - 3.12.3 Following unusual events and Forced Outages the Parties shall exchange operating information.
  - 3.12.4 Before beginning switching at the Point of Interconnection, the Parties shall communicate and agree as to what switching will take place and what the final condition will be.
  - 3.12.5 The Parties shall provide each other, on a timely basis, all information necessary for the Parties to fulfill their obligations set forth in the Schedules.
- 3.13 Payment for Start-up and Shutdown. Energy transferred from GWP to LADWP during generator Start-up or Shutdown, as described in Appendix E, shall be purchased by LADWP at a price equal to 70 percent of the LADWP Energy Rate. LADWP agrees to purchase the Start-up and Shutdown energy during the Start-up and Shutdown periods for specified units having a Start-up or Shutdown period greater than 15 minutes per provisions of Appendix E.

#### **ARTICLE IV** **NOTICES**

- 4.0 All notices under this Agreement shall be provided in accordance with Appendix F.
- 4.1 **Authorized Representatives.** Each Party shall designate an authorized representative who shall be authorized to act on its behalf with respect to those matters contained herein (each an "Authorized Representative"), which shall be the functions and responsibilities of such Authorized Representatives. Each Party may also designate an alternate who may act for the Authorized Representative. The identity of each Party's Authorized Representative, and alternate if designated, shall be listed in Appendix F. Each Party shall promptly notify the other Party of any subsequent changes in such designations in accordance with this Article IV. The Authorized Representatives shall have no authority to alter, modify, or delete any of the provisions of this Agreement.
- 4.2 **Modification of Contacts.** Modifications to Appendix F of this Agreement, including the designation of a new Authorized Representative under this Agreement, shall be accomplished by timely written notice to all Parties' then-current Authorized Representatives routed via U.S. Mail. Such notice shall, where applicable, include any changes in mailing address, telephone number, facsimile number, and electronic mail address.
- 4.3 **Informal Communications.** Informal communications of a routine nature are not required to meet the written notice requirement set forth in Appendix F; provided, however, that the Parties engaging in such informal communications are not authorized to use those informal communications to take formal actions under this Agreement, including but not limited to entering into amendments to the Agreement or its attachments.

**ARTICLE V**  
**BILLING**

- 5.1 **Invoice.** Within a reasonable time after the first day of each month after the month that either Party provides service under this Agreement, the Party providing service shall submit an invoice for the prior month to the other Party for service under this Agreement.
- 5.2 **Payment.** The invoice shall be paid by the Party receiving it on the twentieth (20th) day of the invoicing month or the tenth (10th) day after receipt of the invoice, whichever occurs later ("Payment Due Date"). All payments shall be made in immediately available funds in U.S. dollars payable to the invoicing Party. In the event the Party receiving the invoice fails, for any reason other than a billing dispute described in Section 5.4, to make a payment to the invoicing Party by the Payment Due Date, and such failure of payment is not corrected within thirty (30) calendar days after the invoicing Party notifies the Party receiving the invoice to cure such failure, a default by the Party receiving the invoice shall be deemed to exist.
- 5.3 **Interest.** Interest on invoices under Section 5.1 of this Agreement unpaid after the Payment Due Date shall be payable with interest calculated daily, at a rate equal to 200 basis points above the per annum Prime Rate reported daily in the Wall Street Journal for the period beginning on the day after the due date and ending on the day of payment; provided that, such interest shall not exceed the amount permitted by law. Interest on delinquent amounts shall be calculated from the due date of the invoice to the date of payment. When payments are made by mail, invoices shall be considered as having been paid on the date postmarked.
- 5.4 **Billing Disputes.** In order to dispute an invoice in whole or in part, the Party receiving the invoice must provide written notice of the dispute to the invoicing Party. Such written notices shall specify the amount in dispute and state the basis for the dispute. In case any portion of any invoice is in dispute, the entire invoice shall be paid when due, unless the basis for the dispute is a clearly erroneous billing amount in which case the parties will make a good faith effort to promptly correct the error. Any excess amount of invoices which, through inadvertent errors or as a result of a dispute, may have been overpaid shall be returned by the invoicing Party upon determination of the correct amount, with interest calculated in the manner set forth in Section 5.3. Either Party shall only have the right to dispute the accuracy of any invoice or payment for a period of two (2) years from the date on which the invoice was initially delivered. If the invoicing Party's records reveal that a bill was not delivered, then the invoicing Party may deliver to the Party receiving the invoice an invoice within two (2) years from the date on which the invoice would have been delivered under this Agreement. The right to payment is waived with respect to any amounts not invoiced within such two (2) year period.
- 5.5 **Record-Keeping and Financial Audits.** Each Party, or any third party representative of a Party, shall keep complete and accurate records, and shall maintain such data as may be necessary for the purpose of ascertaining the accuracy of all relevant data, estimates, or statements of charges submitted hereunder for a period of two (2) years from the date the invoice was delivered under this Agreement. Within a two (2) year period from the date on which the invoice was initially delivered, any Party to the applicable transaction may request in writing copies of the records of the other Party for that transaction to the extent reasonably necessary to verify the accuracy of any statement or charge. The Party from which documents or data has been requested shall

provide all reasonably requested documents and data within a reasonable time period. Any Party shall have the right at all times, and at its own expense, to audit and to examine any costs or payments resulting from any item set forth in this Agreement. Any Party may designate its own employee representative(s) or its contracted representatives with a certified accounting firm to conduct the audit. Any audits shall occur during normal business hours, and the Party being audited agrees to cooperate in such audit.

## **ARTICLE VI DEFAULT AND TERMINATION**

- 6.0 **Termination For Convenience by Party(ies)**. Either Party may seek to terminate this Agreement at any time with at least eighteen (18) months prior written notice to the non-terminating Party. Such written notice shall specify a Termination Date. Upon request, the Parties shall make reasonable efforts to extend the Termination Date for up to an additional eighteen (18) month period, or a longer period with the mutual agreement of the Parties, if necessary to implement the provisions of Section 6.4.
- 6.1 **Payment Default**. In the event the Party receiving the invoice fails, for any reason other than a billing dispute as described in Section 6.1.1, to make payment to the invoicing Party on or before the due date as described above, and such failure of payment is not corrected within thirty (30) calendar days after the invoicing Party notifies the Party receiving the invoice to cure such failure, a default by the Party receiving the invoice shall be deemed to exist.
- 6.1.1 In the event of a billing dispute between the invoicing Party and the Party receiving the invoice, the invoicing Party will continue to provide service under this Agreement as long as the Party receiving the invoice complies with Section 5.4.
- 6.2 **Termination for Payment Default**. Upon the occurrence of a default in accordance with Section 6.1, the invoicing Party may provide written notice to the Party receiving the invoice of the invoicing Party's intent to terminate this Agreement at least sixty (60) calendar days from the date of such notice. The Party receiving the invoice shall have seven (7) calendar days following the receipt of LADWP's notice of termination to submit a written request to the invoicing Party to commence the dispute resolution procedures of Section 7.0 of this Agreement. If the Party receiving the invoice does not provide such notice within seven (7) calendar days of receipt of the notice of termination, then the invoicing Party may terminate this Agreement to the Party receiving the invoice on the date specified in the notice of termination. If the Party receiving the invoice does submit a timely written request to commence dispute resolution procedures, then Article VII of this Agreement shall apply.
- 6.3 **Termination for Performance Default**. Either Party (the "Non-Defaulting Party") may terminate this Agreement if the other Party (the "Defaulting Party") materially breaches its obligations hereunder. Such termination shall be effected by written notice to the Defaulting Party that specifies a termination date at least ninety (90) days following receipt of the notice by the receiving Party, unless agreed otherwise by the Parties. The Defaulting Party shall have ninety (90) calendar days following the receipt of the Non-Defaulting Party's notice of termination to cure, or take reasonable steps to cure, its material breach of its obligations, and seven (7) calendar days following the receipt of

the notice of termination to submit a written request to commence the dispute resolution procedures of Article VII of this Agreement. If the Defaulting Party does not cure, or take reasonable steps to cure, the material breach of its obligations within ninety (90) calendar days or provide notice within seven (7) calendar days to commence the dispute resolution procedures following its receipt of the notice of receipt of the notice of termination, the Non-Defaulting Party may terminate this Agreement on the date specified in the notice of termination. The remedy of termination shall not be exclusive of any other rights or remedies, at law or in equity, which may be available to the Non-Defaulting Party.

- 6.4 **Good Faith Efforts Following Notice of Termination.** The Parties will work in good faith, using reasonable efforts to effectuate any necessary subsequent agreements for balancing authority area services. Notwithstanding the foregoing, if there is a dispute over a Party's request to terminate this Agreement that dispute will be resolved pursuant to Article VII of this Agreement.

## **ARTICLE VII** **DISPUTES**

- 7.0 **Dispute Resolution.** If a dispute arises between the Parties under this Agreement the Parties shall meet within ten (10) days after either Party provides notice of the dispute, and the Parties shall endeavor in good faith to resolve it. If the dispute is not resolved, the Parties to such dispute may, but are not required to, submit the dispute to mediation or non-binding arbitration by mutual consent. If the Parties do not agree on resolving a dispute in mediation or non-binding arbitration, or, if the Parties' attempts to mediate or arbitrate the dispute do not resolve it, either Party may bring an action in a court of law or such other appropriate forum.
- 7.1. **Governing Law and Costs.** This Agreement was made and entered into by LADWP pursuant to the laws of the State of California and the City of Los Angeles. This Agreement shall be governed by, interpreted and enforced in accordance with the laws of the State of California without regard to conflict of law principles. Both Parties hereto agree that in any action to enforce the terms of this Agreement, each Party shall be responsible for its own attorneys' fees and costs.

## **ARTICLE VIII** **MISCELLANEOUS**

- 8.1 **Relationship of Parties.** The obligations and liabilities of the Parties under this Agreement are several and not joint or collective, and nothing herein contained shall be construed to create an association, joint venture, trust, or partnership, or to impose a trust or partnership obligation or liability on or with regard to the other Party. Each Party shall be individually liable for its own obligations and liabilities provided herein. Neither Party shall be under the control of the other Party or be deemed to be under the control of the other Party, and neither Party shall be the agent of or have the right or power to bind the other Party, without such other Party's express written consent.
- 8.2 **Non-Dedication of Facilities.** An undertaking by either Party to the other Party under this Agreement shall not constitute the dedication of the System, or any portion thereof, of that Party to the public or to the other Party, or affect the status of that Party as an independent System.

- 8.3 **Captions and Headings.** All captions and headings appearing in this Agreement are inserted to facilitate reference and shall not govern the interpretations of the provisions hereof, except where logically necessary.
- 8.4 **Entire Agreement.** This Agreement constitutes the entire agreement between the Parties pertaining to the subject matter hereof, and shall fully supersede any and all prior understandings, contemporaneous oral or written negotiations, representations, warranties, and agreements between the Parties, or any of one them, and may be modified only by written agreement signed by both Parties. All attachments and appendices to this Agreement, including Schedules 1 through 6, are incorporated into and made part of this Agreement. If there is a conflict between this Agreement and LADWP's business practices or protocols regarding the obligations set forth in this Agreement, this Agreement shall control.
- 8.5 **Execution in Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.
- 8.6 **Signature Clause.** The signatories hereto represent that they have been appropriately authorized to enter into this Agreement on behalf of the Party for which they sign.
- 8.7 **No Third-Party Beneficiary.** The provisions of this Agreement are for the benefit of the Parties and not for any other person or third-party beneficiary. The provisions of this Agreement shall not impart rights enforceable by any person, firm or organization other than a Party or a successor a Party to this Agreement.
- 8.8 **Assignment.** This Agreement may be assigned by either Party only with the prior written consent of the other Party. Any attempted assignment that violates this article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations pursuant to this Agreement.
- 8.9 **Modifications.** This Agreement may not be amended or otherwise modified except by written agreement subscribed by all of the Parties to be charged with such modifications.
- 8.10 **Confidentiality.** Confidential Information shall be held as confidential by the receiving Party. Notwithstanding the foregoing, Confidential Information shall not include information which (i) is disclosed with the prior written consent of the originating Party, (ii) at the time of disclosure is within the public domain through no breach of this Agreement by either Party, (iii) has been known or independently developed by and is currently in the possession of either Party prior to disclosure hereunder, (iv) was or is acquired by either from a third-party who did not to the receiving Party's knowledge breach an obligation of confidentiality by disclosing it to either Party, (v) is disclosed to credit rating agencies or in official statements or other disclosure statements relating to the issuance of bonds, notes, commercial paper or other evidences of indebtedness under customary financial practices, or (vi) is required to be disclosed to comply with any applicable law, order, regulation or ruling or other legal requirement, including but not limited to, oral questions, discovery requests, subpoenas, civil investigations or similar processes. For disclosures made pursuant to subsection (vi) of this paragraph, if the originating Party fails to obtain a protective order or other legal remedy preventing or limiting disclosure, the receiving Party may disclose the Confidential Information without

liability to the originating Party.

- 8.10.1 The Parties recognize and agree that for the purposes of complying with the Reliability Standards and responding to requests from the FERC, NERC or WECC, they will receive information from each other that has been marked as Confidential Information. Except as set forth herein, the Parties agree to keep in confidence and not to copy, disclose, or distribute any Confidential Information or any part thereof, without the prior written permission of the other Party.
- 8.10.2 Confidential Information that the Parties have given to each other, whether in electronic or hard copy form, which is intended for disclosure to the Compliance Monitor during the course of a compliance audit will be kept in a secure and restricted location.
- 8.10.3 If a Party is requested or required, pursuant to any applicable law, regulation, order, rule, ruling or other requirement of law, discovery request, subpoena, civil investigation or similar process to disclose any of the Confidential Information, such Party shall provide prompt written notice to the other Party of such request or requirement so that at such other Party's expense, such other Party can seek a protective order or other appropriate remedy concerning such disclosure.
- 8.10.4 The provisions of this Section 8.10 shall survive the termination of this Agreement for a period of 10 years provided, that the confidentiality obligations imposed by this Agreement as to any Confidential Information of a Party which may be deemed to be information classified as "critical infrastructure information" or "protected critical infrastructure information" or "protected system" shall survive until such Party has advised the other Party in writing that such information may be released.
- 8.11 **Consistency with State and Federal Laws and Regulations.** Nothing in this Agreement shall compel any Party to violate state and/or federal statutes, regulations or orders lawfully promulgated thereunder. If any provision in this Agreement is inconsistent with any obligation imposed on any Party by statute, regulation or order, it shall be inapplicable to that Party. No Party shall incur any liability by failing to comply with a provision of this Agreement, if the reason for doing so is such provision is inapplicable to that Party by reason of being inconsistent with state or federal statute, regulation or orders lawfully promulgated thereunder; provided, however, such Party shall comply with the provisions of this Agreement to the extent that applicable state or federal laws, regulation and orders promulgated thereunder permit it to do so.
- 8.12 **LADWP Disclaimer of FERC Jurisdiction.** No provision of this Agreement shall be construed as an acknowledgement or admission on the part of LADWP that: (i) FERC has jurisdiction over any of transactions involving LADWP and GWP that are addressed in this Agreement; (ii) FERC has jurisdiction over the consideration provided under this Agreement; (iii) any of the consideration provided under this Agreement constitutes a refund under the Federal Power Act; or (iv) either Party owes any refund or is subject to any other remedy under the Federal Power Act.
- 8.13 **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 Party, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise against public

interest by any court or government agency of competent jurisdiction, then all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect to the maximum extent permitted by law. The Parties shall comply with their obligations under this Agreement to the maximum extent possible, unless a court or government agency of competent jurisdiction holds that such obligations are separable from all other provisions of this Agreement.

#### 8.14 **Uncontrollable Forces.**

8.14.1 Neither the LADWP nor GWP will be considered in default of any obligation under this Agreement if prevented from fulfilling that obligation due to the occurrence of an Uncontrollable Force; provided, however, that such Party is in compliance with Section 8.14.2.

8.14.2 In the event of the occurrence of an Uncontrollable Force, which prevents LADWP or GWP from performing any of its obligations under this Agreement, the affected entity shall (i) continue to comply with obligations under this Agreement to the extent possible, including responding to the applicable Reliability Directives; (ii) promptly notify the other Party, telephonically and followed up in writing as soon as possible, of the occurrence of such Uncontrollable Force, describe the extent of the impact from the event, and indicate the expected duration the event will cause the affected Party to be unable to perform its obligations; (iii) not be entitled to suspend performance of its obligations under this Agreement in any greater scope or for any longer duration than is required by the Uncontrollable Force, (iv) use its best efforts to mitigate, circumvent or otherwise overcome the effects of such Uncontrollable Force, remedy its inability to perform and resume full performance of its obligations hereunder, (v) keep the other Party apprised of such efforts on a continual basis and; (vi) describe the steps the affected Party will take to recover from the Force Majeure event; (vii) provide written notice of the resumption of its performance of its obligations hereunder.

#### 8.15 **Third-Party Claims and Limitation on Liability.**

8.15.1 **Third-Party Claims.** The Parties will be subject to California Government Code Section 895.4 in resolution of any liabilities arising from third-party claims under this Agreement. Each Party shall only be liable for their proportionate share of damages based on their individual fault as determined by a court of competent jurisdiction.

8.15.2 **Limitation on Liability.** Neither Party shall be liable to the other Party under any provision of this Agreement for any losses, damages, penalties, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, claims of customers, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability.

8.16 **Municipal Tax Exempt Bonds.** Notwithstanding any other provision of this Agreement, LADWP shall not be required to provide GWP service under this Agreement if the

provision of such service would result in "private business use" as defined in Section 141(b)(6) of the Internal Revenue Code and the Treasury Regulations promulgated thereunder, as such laws and regulations may be amended, updated, modified or replaced.

8.16.1 GWP has provided, and LADWP acknowledges the receipt of a Governmental Person Use Certificate attached hereto as Appendix A.

8.16.2 **Supplemental Procedures for Resale of Service.** GWP may only sell, lay-off, or otherwise transfer in any manner, any service in accordance with and pursuant to this Agreement, if the total term of such transaction including all renewal options, does not exceed three (3) years, unless in the exclusive determination of LADWP the entity to which such scheduling service is sold, laid-off or otherwise transferred has also satisfied the requirements in the form of the Governmental Person Use Certificate attached hereto as Appendix I. Any resale, assignment or transfer of service by GWP that fails to conform to the provisions of this Agreement, including Section 8.16 and all Appendices, by intent or otherwise, shall be void and unenforceable.

8.17 **Waivers.** No waiver of any provision of this Agreement shall be effective unless such waiver is in writing and signed by the waiving Party and any such waiver shall not be deemed a waiver of any other provision of this Agreement.

8.18 **Electronic Delivery Signatures.** Notwithstanding any other provision of this Agreement, this Agreement may be delivered electronically (e.g., by facsimile or PDF attached to email), in which case the Parties shall promptly exchange hard copies of the signature pages, but the electronically delivered signed copies shall be valid, binding and admissible as if originals in accordance with the California Evidence Code.

8.19 **Authorship/Contra Proferentem.** This Agreement shall not be interpreted against the interest of a Party merely because that Party proposed this Agreement or some provision in it or because that Party relies on a provision of this Agreement to protect itself.

8.20 **Representative Examples.** The representative examples set forth in the Appendices to this Agreement shall constitute specific instances in which the Parties have agreed to operationalize the respective provision in this Agreement; provided, however, that interpretation and operation of such provisions are not intended to be limited to such examples.



For LADWP

DEPARTMENT OF WATER AND POWER OF  
THE CITY OF LOS ANGELES BY BOARD OF  
WATER AND POWER COMMISSIONERS OF  
THE CITY OF LOS ANELES

By:

\_\_\_\_\_  
MARCIE L. EDWARDS  
General Manager

Date:

\_\_\_\_\_

And:

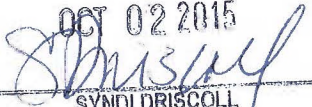
\_\_\_\_\_  
BARBARA E. MOSCHOS  
Board Secretary

For GWP

CITY OF GLENDALE

By: \_\_\_\_\_  
Printed: Scott Ochoa  
City Manager

APPROVED AS TO FORM AND LEGALITY  
MICHAEL N. FEUER, CITY ATTORNEY

OCT 02 2015  
BY   
SYNDI DRISCOLL  
DEPUTY CITY ATTORNEY

**SCHEDULE 1**  
**SCHEDULING, SYSTEM CONTROL AND DISPATCH SERVICE**

This service is required to schedule the movement of power through, out of, within, or into a Balancing Authority Area. This service can be provided only by the operator of the Balancing Authority Area in which the transmission and generation facilities used for ancillary service are located. Scheduling, System Control and Dispatch Service is to be provided directly by the Transmission Provider (if the Transmission Provider is the Balancing Authority Area operator) or indirectly by the Transmission Provider making arrangements with the Balancing Authority Area operator that performs this service for the Transmission Provider's Transmission System.

The rates and charges for Scheduling, System Control and Dispatch Service are set forth in Appendix B. The Parties agree that Schedule 1 fees shall not apply except as required to supply services under Schedules 5 and 6 of this Agreement.

**SCHEDULE 2  
REACTIVE SUPPLY AND VOLTAGE CONTROL FROM  
GENERATION OR OTHER SOURCES SERVICE**

In order to maintain transmission voltages in the Balancing Authority Area within acceptable limits, generation facilities and non-generation resources capable of providing this service that are under the control of the Balancing Authority are operated to produce (or absorb) reactive power. Thus, Reactive Supply and Voltage Control from Generation or Other Sources Service must be provided for each transaction in the Balancing Authority Area. The amount of Reactive Supply and Voltage Control from Generation or Other Sources Service that must be supplied with respect to GWP's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by the Balancing Authority.

The Parties agree to operate their Systems collaboratively based on the operating parameters agreed upon by the Parties to maintain appropriate reactive power at the Interconnection Facilities reflected in Appendix C to this Agreement. Unless mutually agreed to by the Parties, the Balancing Authority shall not charge GWP for Reactive Supply and Voltage Control.

If either Party fails to consistently operate its System in accordance with the parameters set forth in Section 3.8 of this Agreement, the Authorized Representative for the other Party may request a meeting in accordance with Article VII to discuss amending this schedule to address the cost implications arising from such failure.

The rates and charges for Reactive Supply and Voltage Control from Generation or Other Sources Service are set forth in Appendix B. The Parties agree that Schedule 2 fees shall not apply except as required to supply services under Schedules 5 and 6 of this Agreement.

**SCHEDULE 3  
REGULATION AND FREQUENCY RESPONSE SERVICE**

Regulation and Frequency Response (“RFR”) Service is necessary to provide for the continuous balancing of resources (generation and interchange) with load and for maintaining scheduled interconnection frequency at sixty cycles per second (60 Hz). RFR Service is accomplished by committing on-line generation whose output is raised or lowered (predominantly through the use of Automatic Generating Control equipment) and by other non-generation resources capable of providing this service as necessary to follow the moment-by-moment changes in load. The obligation to maintain this balance between resources and load lies with the Balancing Authority Area. The Balancing Authority will offer this service to GWP when the load being served by GWP is within its Balancing Authority Area. GWP must either purchase this service from the Balancing Authority or make alternative comparable arrangements to satisfy its RFR Service obligation.

The formula to determine the amount of and charges for RFR Service are set forth below. RFR Service as provided under this Agreement is only applicable to those point(s) of delivery located within the Balancing Authority Area. The rates and charges for RFR Service, applying the formula set forth below, are provided in Appendices B and H.

1. **Annual RFR Rate** = 
$$\frac{ARR_t \times PR_t}{(NEL_{LADWP} + NEL_{BWP} + NEL_{GWP})_t}$$

Where:

Annual RFR Rate = Cost of RFR Service expressed in \$/MWh of load.

ARR = Annual Revenue Requirement for RFR Service

PR = Purchase Requirement stated as the “percent of the Transmission Customer’s Reserved Capacity for Point-to-Point Transmission Service” (e.g., 1.1 percent) in Schedule 3 of the LADWP OATT.

$NEL_{LADWP}$  = LADWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

$NEL_{BWP}$  = BWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

$NEL_{GWP}$  = GWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

t = LADWP Cost of Service Study Test Year used in the calculation of the LADWP OATT rates in effect for the year in which service is elected.

**2. Billing Demand for Annual Service:**

If GWP elects to purchase annual RFR Service from the Balancing Authority, LADWP shall supply and GWP shall purchase a base amount of regulation equal to +/- 8 MW, and the billing determinants for such Service charges shall be based on  $NEL_{GWP}$  as defined in Section 1 of this Schedule 3. LADWP shall invoice GWP on a monthly basis for one-twelfth of the annual cost of providing this service to GWP, which is annual RFR Rate times  $NEL_{GWP}$ .

If GWP elects not to purchase annual RFR Service from the Balancing Authority, GWP shall not be charged for services under this Schedule and the deviation bands in Schedule 4 will be adjusted to reflect the non-purchase of RFR Service.

**3. Illustrative Example Applying Annual RFR Rate and Billing Demand for Annual RFR Service:**

For the 8-MW purchased by GWP in the First Deviation Band reflected in Schedule 4, the following charges will result:

$$ARR_t = \$547,775,766$$

$$PR = 1.1\%$$

$$NEL_{LADWP} = 27,160,120 \text{ MWh.}$$

$$NEL_{BWP} = 1,185,006 \text{ MWh}$$

$$NEL_{GWP} = 1,182,736 \text{ MWh}$$

$$\text{Annual RFR rate} = \$0.204/\text{MWh}$$

$$\text{Annual Cost of RFR Service} = 1,185,006 \text{ MWh} \times \$0.204/\text{MWh} = \$241,278$$

$$\text{Monthly Cost of RFR Service} = \$241,278 / 12 = \$20,107$$

**4. RFR Service Allowance and Rate for Incremental Deviation Bandwidth:**

GWP may elect to purchase additional RFR Service from LADWP on a monthly or annual basis. Such purchase will increase the Deviation Bands, as described in Section C of Schedule 4 for the period of time such RFR Service is purchased.

$$IRFR_y = (\text{Annual Cost of RFR Service} / 8) \times \text{MW}$$

$$IRFR_m = ((\text{Monthly Cost of RFR Service} / 8) \times \text{MW})$$

Where:

IRFR<sub>y</sub> = The rate per MWh for incremental MW of bandwidth for a year.

IRFR<sub>m</sub> = The rate per MWh for incremental MW of bandwidth for a month.

MW = The number of additional MW requested and provided for a year or month.

**5. Illustrative Example Applying Rate for Incremental Deviation Bandwidth:**

A. GWP requests 5 MW of additional deviation bandwidth for one year:

$$IRFR_y = \$241,278 / 8 = \$30,159.75 \times 5 \text{ MW} = \$150,798.75$$

B. GWP requests 5 MW of additional deviation bandwidth for one month:

$$IRFR_m = \$20,107 / 8 = \$2,513.38 \times 5 \text{ MW} = \$12,566.88$$

**SCHEDULE 4**  
**ENERGY IMBALANCE SERVICE AND PERIOD DEVIATION CHARGES**

Energy Imbalance Service is provided when the Energy Imbalance does not equal zero. The Balancing Authority will offer this service to GWP. GWP may either purchase this service from the Balancing Authority or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Energy Imbalance Service obligation. Imbalance energy from the Deviation Bank shall be returned in-kind at the points of delivery set forth in Appendix C to this Agreement.

**A. Calculation of Control Error and In-kind Return of Energy Imbalances**

1. **Control Error** shall mean a value in instantaneous MW calculated by utilizing either Tie Line Bias or Net Tie Deviation and calculated as follows:

- a. **Tie Line Bias ("TLB")**: When operating in this mode, the CE shall be equal to:

$$\text{Net Actual Interchange minus Net Scheduled Interchange} \\ \text{minus } 10(\text{Frequency Bias}_{\text{GWP}})(\text{Frequency Deviation})$$

Where:

Frequency Bias<sub>GWP</sub> = a value usually expressed in megawatts per 0.1 Hertz (MW/0.1 Hz), associated with GWP's metered subsystem that approximates GWP's metered subsystem's response to the Western Interconnection frequency error.

If GWP elects to use TLB, Parties will agree on the proper Frequency Bias value to be used based on analysis of the WECC designated events and said value may change.

- b. **Net Tie Deviation ("NTD")**: When operating in this mode, the CE shall be equal to:

$$\text{Net Actual Interchange minus Net Scheduled Interchange}$$

- c. **Notice**: GWP shall deliver notice to the Balancing Authority of its election to use Tie Line Bias or Net Tie Deviation at least 30 days prior to the month that such designation begins.

- d. **Period Deviation ("PD")** is the calculated average deviation for each performance period. There will be four clock 15-minute performance periods in each hour (minutes 1-15, 16-30, 31-45 and 46-60). PD is calculated by (i) sampling CE every one minute (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute), and (ii) taking the average of the algebraic sum of sample MW values to determine PD. The PD value will be the average of the available, valid data points and will be truncated to an integer value with no carryover to the next period.

2. **Deviation Bands** – PD performance will fall into three bands. **First Deviation Band** will be based on the Schedule 3 Regulation Service purchased, nominally zero to +/- 8 MW. **Second Deviation Band** will start above the upper limit of the First Deviation Band and extend 8 MW in the plus and minus direction, nominally +/- 9 to 16 MW. **Third Deviation Band** starts above the upper limit of Second Deviation Band and has no cap, nominally +/- 17 MW with no limit. The First, Second and Third Deviation Band magnitudes may be modified pursuant to Section C of this Schedule.
3. **Returning energy in-kind (on or off-peak as appropriate).** Energy Imbalance is calculated hourly in MWh and added to the applicable on-peak or off-peak Deviation Bank. All Energy Imbalance shall be added to the appropriate Deviation Bank, separate and apart from the Deviation Band calculated for the 15-minute period. At the conclusion of each calendar month, these Deviation Bank values are agreed upon and the running balances set to zero. The verified end of month values will be scheduled for return in either on-peak or off-peak periods between the Parties at a mutually agreeable time and rate (MW/hr). To the extent possible, the return will be scheduled by taking the verified amounts and dividing by the number of on-peak and off-peak (respectively) hours in the return period. The whole number value is scheduled for each hour, and the fractional portion is scheduled by scheduling one extra MW for a proportional number of the hours evenly spaced, unless otherwise mutually agreed by the Parties' schedulers.
4. Within each month, GWP will attempt to reduce to zero the balance in the applicable on-peak and off-peak Deviation Banks.

#### **B. Period Deviation Charges**

1. Charges are calculated for either positive or negative deviations in each 15 minute averaging period as set forth in Section B of this Schedule. The charge for each 15 minute period stands alone and does not vary regardless of the end-of-hour net MWh deviation. Certain 15 minute periods shall be exempted from charges as specified in Section D of this Schedule.
2. **The First Deviation Band:** If the value of PD falls within First Deviation Band, there is no monetary charge for that period.
3. **The Second Deviation Band:** If the value of PD falls within the Second Deviation Band, GWP will pay 10% of the LADWP Energy Rate times the number of MW outside the First Deviation Band.
4. **The Third Deviation Band:** If the value of PD falls within the Third Deviation Band, in addition to paying the charges under the Second Deviation Band, GWP will pay 25% of the LADWP Energy Rate for each MW falling within the Third Band.

#### **C. GWP Option to Purchase Incremental First Deviation Band**

1. GWP may in its sole discretion, request to expand its First Deviation Band beyond +/- 8 MW by purchasing additional RFR Service as described in

Schedule 3. If GWP makes such a purchase, each Deviation Band limit will then be recalculated as described in Section C.3 of this Schedule 4. Such purchase(s) shall not be reduced by either Party for the term of such purchase, unless mutually agreed otherwise.

2. In accordance with the notification provisions in Appendix F, the request to purchase such incremental MW of bandwidth shall be for a defined term, with a minimum of one (1) month duration and up to twelve (12) months duration, with notice of such request to be delivered no later than three (3) business days prior to the beginning of such period. Upon receipt of such request, Balancing Authority shall provide such incremental MW of bandwidth in monthly increments for a defined term, if available. Balancing Authority shall not unreasonably deny a request, withhold a response or condition the purchase.
3. If GWP purchases additional RFR Service as described in Schedule 3, the limits of the First Deviation Band will be expanded in the plus and minus directions 1-MW for each additional MW of RFR Service purchased. In such case, the upper and lower limits of the Second Deviation Band and lower limit of the Third Deviation Band will be expanded by 1 MW for each additional MW of RFR Service purchased. Such purchase(s) of additional bandwidth shall not be rescinded, reduced or recalled by either Party for the term of such purchase, unless mutually agreed otherwise.
4. If GWP elects not to purchase annual RFR Service from the Balancing Authority, GWP shall not be charged for services under this Schedule and there will be no First Deviation Band. The Second Deviation Band will be zero to +/- 8 MW. The Third Deviation Band will start above the upper limit of the Second Deviation Band and has no cap, nominally +/- 9 MW with no limit.

#### **D. Deviations from Schedule That Are Excluded from Period Deviation Charges**

The conditions, events or periods set forth below in subsections 1-9 shall be excluded from charges for deviations under this Schedule. When any of the events listed below in subsections 1-6 and 8-9 occur, GWP will, to the extent possible, provide documentation to LADWP Manager of Grid Operations of the event that initiates the exclusion period, within 7 business days of the event's occurrence.

1. **Reserve Recovery period:** The "Excluded 15-Minute Periods" begin with the 15-minute period during which the event occurs and reserves are activated and extending through and including the 15-minute period when GWP CE crosses zero. The Period Deviation Charges in this Schedule would resume during the first 15-minute period following the zero CE crossing.
2. **Directed Emergency Action (Reliability Directives):** The "Excluded 15-Minute Periods" begin with the period during which the directed Emergency action is initiated and extending through and including the period when the directed Emergency action is terminated. The Period Deviation Charges in this Schedule shall resume during the first 15-minute period following the termination of directed Emergency action.



3. **LADWP error causing GWP to operate off schedule:** The "Excluded 15-Minute Periods" include any 15-Minute period(s) in which GWP operated off schedule due to an error on the part of LADWP.
  4. **GWP Loss of Load:** The "Excluded 15-Minute Periods" begins with the 15-Minute period in which a loss of load greater than 8 MW occurs and extending through and including one additional 15-minute period.
  5. **GWP Emergency Action:** The "Excluded 15-Minute Periods" are the periods containing an Emergency action plus one additional 15-minute period.
  6. **Uncontrollable Force:** The "Excluded 15-Minute Periods" include the 15-minute period in which an event caused by an Uncontrollable Force occurs and extending through and including the 15-minute period when the GWP CE crosses zero. The Period Deviation Charges in this Schedule shall resume during the first 15-minute period following the zero CE crossing.
  7. **Invalid or Missing Data:** The "Excluded 15-Minute Periods" are any 15-minute period(s) where 25% or more of the data samples are missing or contain invalid data.
  8. **Frequency Response:** To the extent that excessive deviation is a result of GWP frequency response, applicable Second and Third Deviation Band charges or credits shall be waived for the period of the frequency excursion. The excluded deviation charges or credits will be calculated at 5 MW per 0.1 Hz, provided that the initial frequency disturbance is greater than +/- 0.06 Hz. If GWP chooses TLB, this Section 8 shall not apply, but this Section 8 will apply if GWP elects NTD.
  9. **Generator Start-Ups and Shut-Downs:** For generators with a start-up or shut-down period of 15 minutes or less that have been identified by GWP, "Excluded 15-Minute Periods" shall begin with the 15-minute period in which the start-up or shut-down action occurs and extend through and including a maximum of one (1) additional 15-Minute Period; provided that GWP has given prior notice to LADWP or if started or shut down in an Emergency GWP has given notice as soon as possible. Units with start-up time or shut-down times greater than 15 minutes will be handled under Appendix E.
    - a. If the unit start-up is initiated by a call for reserves under this Agreement, "Excluded 15-Minute Periods" shall begin with the 15-minute period in which the start-up or shut-down action occurs and extend through and including a maximum of three (3) additional 15-Minute Periods.
- E. Nothing in this Schedule relieves GWP from responding to Reliability Directives from LADWP in its role as BA or Transmission Operator if an event(s) on the GWP System is burdening LADWP or the interconnection.

**SCHEDULE 5**  
**OPERATING RESERVE - SPINNING RESERVE SERVICE**

1. Spinning Reserve service may be provided by generators that are on-line and loaded at less than maximum output and by non-generation resources capable of providing this service.
2. The BA shall be responsible for determining and providing information in real-time to GWP regarding the BAA's Most Severe Single Contingency, as defined in the WECC Reliability Criteria ("MSSC").
3. The BA assumes full obligation for BAA Spinning Reserves, which include Spinning Reserves owned, contracted for, or procured by the Balancing Authority and any Spinning Reserves made available to the BAA by GWP under this or similar agreements.
4. GWP will receive the full Spinning Reserve portion of the full contingency reserve service described in Section 2.0 of this Agreement if GWP purchases this service from the BA on an annual basis.
  - a. The price GWP will pay for full Spinning Reserves service shall be calculated based on 40 MW as is reflected in Appendix D of this Agreement.
    1. Pursuant to Section 3.4.4 of this Agreement, the Parties agree to promptly meet to review any new, revised or eliminated Applicable Reliability Standard that changes the obligations of any Party during the term of this Agreement, including but not limited to adjustments to the calculation of charges and payment obligations as a result of the changes in reserve obligations under this Agreement (e.g., a change in the Spinning Reserve obligations under this Schedule 5).
    2. If the BA's Applicable Reliability Standards are modified such that the BA's obligation to provide reserves of any type are modified or eliminated, GWP's obligation under this Agreement to pay for said reserves shall be deemed proportionately modified or eliminated as of the effective date of such modification and LADWP shall credit back or invoice to GWP any payments for said reserves after the modification's effective date.
  - b. To reduce all or a portion of its payment for full Spinning Reserves, GWP may, at its option, self-supply and/or purchase from a third-party Spinning Reserves. Such Spinning Reserves may be comprised of any combination of reserves owned, contracted for, or purchased from a third-party and must be available to the BA in advance of the operating period for which the reserves are to be provided. Reserves purchased from a third-party must be deliverable using GWP's or a third-party's firm transmission rights, and e-Tagged with "LASYSTEM" as the point of delivery (POD) and sink.
  - c. If GWP schedules more than 86 MW (at Nevada Oregon Border ("NOB")) on the PDCI sinking in the BAA, GWP shall self-supply or purchase additional Spinning Reserves from a third-party to support the schedules greater than 86 MW. For

such schedules, GWP must notify LADWP no less than one hour prior to scheduling more than 86 MW on the Pacific HVDC Intertie.

- d. No later than six months prior to each calendar year, the Parties will agree on the amount of Spinning Reserves that GWP will self-provide or purchase from third-parties as described below. Upon mutual written agreement, this six month notice period may be reduced.
  - e. No later than six months prior to each calendar year ("Planning Horizon"), the Balancing Authority may request that GWP provide Spinning Reserves during the calendar year. GWP, at its sole discretion, may provide the requested reserves, in which case LADWP's charges for these reserves will be proportionately reduced.
5. LADWP will be responsible for fully responding to all BAA contingencies utilizing any Spinning and Supplemental Reserves available to LADWP as the BAA operator. LADWP shall be authorized to call on any Spinning Reserves made available by GWP and such reserves must respond within 10 minutes of the request for activation from LADWP.
  6. If Spinning Reserves made available by GWP fail to respond within 10 minutes of the time the reserves are requested by LADWP, GWP will pay to LADWP a fee equal to  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  per reserve activation. This charge will not apply if GWP is in a Contingency Recovery Period, however other Emergency provisions may apply as set forth in Section 12 of this Schedule 5.
  7. GWP may sell Spinning Reserve service outside of the BAA subject to the following conditions:
    - a. If GWP makes such sales of Spinning Reserves it shall provide said Spinning Reserves from its resources or resources that it contracts for that are separate and distinct from the purchase of reserves from LADWP under this Agreement. Notwithstanding the foregoing, upon mutual agreement of the Parties, GWP may purchase and resell additional Spinning Reserves from LADWP over and above the reserves provided for under this Agreement.
    - b. Any GWP sale, transfer or conveyance of Spinning Reserves purchased from LADWP shall be subject to the terms and conditions of Section 8.16 of this Agreement.
    - c. GWP must provide firm transmission needed to support the Spinning Reserve sale.
    - d. LADWP must be advised of the details of a Spinning Reserve sale under this Section, no less than one hour prior to scheduling the Spinning Reserve sale.
    - e. GWP must ensure an appropriate capacity e-Tag is generated.
    - f. If GWP fails to have the Spinning Reserves available during the period of the Spinning Reserve sale, it will pay LADWP for each MW of shortage  $3 \times [\text{Monthly OATT Rate}]$ .

OATT Rate] x [MW Short] per calendar day until such Spinning Reserves are restored.

- g. If the Spinning Reserves supporting the sale fail to respond when called upon, GWP will pay a capacity charge to LADWP of  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  for each occurrence plus an energy charge of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy delivered by LADWP on GWP's behalf from the time of the event until reserve energy service is terminated or for 60 minutes whichever occurs first. If the reserve energy draw continues past 60 minutes, they will pay to LADWP  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy provided from 60 minutes after the time of the event until the reserve energy service is terminated
8. GWP may draw energy from the BAA following a contingency event causing a resource reduction for GWP up to 60 minutes from the time of the event.
9. GWP must be able to deliver energy associated with the Spinning Reserves it makes available to the BAA for a minimum of 60 minutes following receipt of notice of a contingency event.
10. Energy delivered in conjunction with Spinning Reserve capacity activation following a contingency event will (1) be added to the Deviation Bank and will be returned in kind (same provisions as other deviation return), and (2) will be paid for as follows :
  - a. If energy flows to GWP from LADWP, GWP will pay an additional charge to LADWP of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from the time of the event until either GWP's CE returns to zero or for 60 minutes whichever occurs first. If GWP fails to return CE to zero within 60 minutes, it will pay an additional charge to LADWP of  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from 60 minutes after the time of the event until GWP's CE returns to zero. The energy subject to this charge will be calculated in MW/minutes converted to MWh by LADWP summing the one minute CE reads (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute) times the MW deviation at each minute divided by 60.
  - b. If energy flows from GWP to LADWP, GWP will receive an additional payment from LADWP of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy delivered from the time of the reserve activation until the request for energy associated with the reserves is terminated. The energy subject to this charge will be calculated in MW/minutes converted to MWh by LADWP summing the one minute CE reads (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute) times the MW deviation at each minute (not to exceed the amount of reserves requested) divided by 60. Any energy delivered to LADWP beyond the conclusion of the Spinning Reserve activation period will be excluded from any Schedule 4 Period Deviation Charges unless LADWP expressly terminates the Spinning Reserve activation but GWP continues to supply the energy. If LADWP does not expressly terminate the reserve activation and GWP continues to supply energy after the 60 minute period, LADWP shall pay GWP  $3 \times [\text{LADWP Energy Rate}] \times$

MWh for the energy received from 60 minutes after the time of the event until their CE returns to zero.

- c. Following 10-minutes notice to terminate energy associated with Spinning Reserves to ramp to return CE to zero, LADWP shall cease payment for energy associated with Spinning Reserves.

- 11. GWP will annually provide a list of its current individual generator and transmission single largest contingencies (SLC) to the BA. At least six months prior to GWP acquiring a new generation or transmission resource that could be an individual SLC of GWP, or increase the BA MSSC, the Parties will meet and confer.

## 12. Emergency Conditions

- a. If GWP is unable to provide the Spinning Reserves it has committed to the BAA in real time and GWP is not in a Contingency Recovery Period but the BAA has sufficient Spinning Reserves, GWP will pay to LADWP  $3x$  [Daily OATT Rate]  $\times$  [MW Short] per calendar day until such Spinning Reserves are restored.
- b. If GWP is unable to provide the Spinning Reserves it has committed to the BAA in real time and GWP is not in a Contingency Recovery Period and the BAA has insufficient reserves the Parties will implement their Emergency plans. In the event that such Emergency plans require load shedding, GWP will shed load up to the quantity of GWP's real time deficiency. LADWP will shed any additional load required to meet the Applicable Reliability Standards for BAA reserves. Any load shed by any Party will only be for the quantity and duration necessary.
- c. If the BAA is deficient in Spinning Reserves, and GWP is providing its committed Spinning Reserves, LADWP will shed load for the quantity and duration necessary to meet the Applicable Reliability Standards for BAA reserves.
- d. Should any Party be energy deficient, the Emergency assistance provisions documented elsewhere will apply. The deficient Party may need to request an Energy Emergency Alert declaration from the Reliability Coordinator and shed load in order to maintain load/resource balance.

## 13. Other Conditions

- a. If the BA (1) determines that the BAA is deficient of Spinning Reserves in a reserve recovery period or projects the BAA will be deficient of Spinning Reserves, and (2) the BA is unable to acquire additional Spinning Reserves or determines it would be beneficial to have GWP supply additional reserves, GWP may, at GWP's sole discretion, and upon the BA's request, either:
  - i. Make an energy sale to LADWP if such energy is available. This generation will be used to back down LADWP generation resources thereby increasing the BAA Spinning Reserves. LADWP will pay GWP  $1.1x$  [the GWP costs] for each MWh LADWP purchases, or

- ii. Provide Spinning Reserves to the BA from resources available to the GWP System as GWP determines such reserves to be available. The BA will request that such Spinning Reserves be made available to the BAA on an hourly, daily, weekly or monthly basis and LADWP shall pay the applicable Hourly, Daily, Weekly, or Monthly LADWP OATT Rate in Schedule 5 x MW provided by GWP .
- iii. GWP shall not unreasonably deny a request by the BA to purchase Spinning Reserve service under Section 13, provided however, that GWP has no obligation to sell reserves if to do so would (1) inhibit GWP's ability to meet its own Spinning Reserve commitments, or (2) subject GWP to any charges set forth in this Schedule.

**SCHEDULE 6**  
**OPERATING RESERVE - SUPPLEMENTAL RESERVE SERVICE**

1. Supplemental Reserve Service is needed to serve load in the event of a System contingency; however, it is not available immediately to serve load but rather within a short period of time. Supplemental Reserve Service may be provided by generating units that are on-line but unloaded, by quick-start generation or by interruptible load or other non-generation resources capable of providing this service.
2. The BA shall be responsible for determining and providing information in real-time to GWP regarding the BAA's MSSC.
3. The BA assumes full obligation for BAA Supplemental Reserves, which include Supplemental Reserves owned, contracted for, or procured by the Balancing Authority and any Supplemental Reserves made available to the BAA by GWP under this or similar agreements.
4. GWP will receive the full Supplemental Reserve portion of the full contingency reserve service described in Section 2.0 of this Agreement if GWP purchases this service from the BA on an annual basis.
  - a. The price GWP will pay for full Supplemental Reserves service shall be calculated based on 40 MW as is reflected in Appendix D of this Agreement.
    1. Pursuant to Section 3.4.4 of this Agreement, the Parties agree to promptly meet to review any new, revised or eliminated Applicable Reliability Standard that changes the obligations of any Party during the term of this Agreement, including but not limited to adjustments to the calculation of charges and payment obligations as a result of the changes in reserve obligations under this Agreement (e.g., a change in the Supplemental Reserve obligations under this Schedule 6).
    2. If the BA's Applicable Reliability Standards are modified such that the BA's obligation to provide reserves of any type are modified or eliminated, GWP's obligation under this Agreement to pay for said reserves shall be deemed proportionately modified or eliminated as of the effective date of such modification and LADWP shall credit back or invoice to GWP any payments for said reserves after the modification's effective date.
  - b. To reduce all or a portion of its payment for full Supplemental Reserves, GWP may, at its option, self-supply and/or purchase from a third-party Supplemental Reserves. Such Supplemental Reserves may be comprised of any combination of reserves owned, contracted for, or purchased from a third-party and must be available to the BA in advance of the operating period for which the reserves are to be provided. Reserves purchased from a third-party must be deliverable using GWP's or the third-party's firm transmission rights, and e-Tagged with LASYSTEM as the point of delivery (POD) and sink.

- c. If GWP schedules more than 86 MW (at Nevada Oregon Border ("NOB")) on the PDCI sinking in the BAA, GWP shall self-supply or purchase additional Supplemental Reserves from a third-party to support the greater than 86 MW. For such schedules, GWP must notify LADWP no less than one hour prior to scheduling more than 86 MW on the Pacific HVDC Intertie.
  - d. No later than six months prior to each calendar year, the Parties will agree on the amount of Supplemental Reserves that GWP will self-provide or purchase from third-parties as described below. Upon mutual written agreement, this six month notice period may be reduced.
  - e. No later than six months prior to each calendar year ("Planning Horizon"), the Balancing Authority may request that GWP provide Supplemental Reserves during the calendar year. GWP, at its sole discretion, may provide the requested reserves, in which case LADWP's charges for these reserves will be proportionately reduced.
5. LADWP will be responsible for fully responding to all BAA contingencies utilizing any Spinning and Supplemental Reserves available to LADWP as the BAA operator. LADWP shall be authorized to call on any Supplemental Reserves made available by GWP and such reserves must respond within 10 minutes of the request for activation from LADWP.
6. If Supplemental Reserves made available by GWP fail to respond within 10 minutes of the time the reserves are requested by LADWP, GWP will pay to LADWP a fee equal to  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  per reserve activation. This charge will not apply if GWP is in a Contingency Recovery Period, however other Emergency provisions may apply as set forth in Section 12.b of this Schedule 6.
7. GWP may sell Supplemental Reserve service outside of the BAA subject to the following conditions:
- a. If GWP sells Supplemental Reserves it shall provide said Supplemental Reserves from its resources or resources that it contracts for that are separate and distinct from the purchase of reserves from LADWP under this Agreement. Notwithstanding the foregoing, upon mutual agreement of the Parties, GWP may purchase and resell additional Supplemental Reserves from LADWP over and above the reserves provided for under this Agreement.
  - b. Any GWP sale, transfer or conveyance of Supplemental Reserves purchased from LADWP shall be subject to the terms and conditions of Section 8.16 of this Agreement.
  - c. GWP must provide firm transmission needed to support the Supplemental Reserve sale.
  - d. LADWP must be advised of the details of a Supplemental Reserve sale under this Section, no less than one hour prior to scheduling the Supplemental Reserve sale.



- e. GWP must ensure an appropriate capacity e-Tag is generated.
  - f. If GWP fails to have the Supplemental Reserves available during the period of the Supplemental Reserve sale, it will pay LADWP for each MW of shortage  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  per calendar day until such Supplemental Reserves are restored.
  - g. If the Supplemental Reserves supporting the sale fail to respond when called upon, GWP will pay a capacity charge to LADWP of  $3 \times [\text{Monthly OATT Rate}] \times [\text{MW Short}]$  for each occurrence plus an energy charge of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy delivered by LADWP on GWP's behalf from the time of the event until reserve energy service is terminated or for 60 minutes whichever occurs first. If the reserve energy draw continues past 60 minutes, they will pay to LADWP  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy provided from 60 minutes after the time of the event until the reserve energy service is terminated.
8. GWP may draw energy from the BAA following a contingency event causing a resource reduction for GWP up to 60 minutes from the time of the event.
  9. GWP must be able to deliver energy associated with the Supplemental Reserves it makes available to the BAA for a minimum of 60 minutes following receipt of notice of a contingency event.
  10. Energy delivered in conjunction with Supplemental Reserve capacity activation following a contingency event will (1) be added to the Deviation Bank and will be returned in kind (same provisions as other deviation return), and (2) will be paid for as follows :
    - a. If energy flows to GWP from LADWP, GWP will pay an additional charge to LADWP of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from the time of the event until either GWP's CE returns to zero or for 60 minutes whichever occurs first. If GWP fails to return CE to zero within 60 minutes, it will pay an additional charge to LADWP of  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from 60 minutes after the time of the event until GWP's CE returns to zero. The energy subject to this charge will be calculated in MW/minutes converted to MWh by LADWP summing the one minute CE reads (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute) times the MW deviation at each minute divided by 60.
    - b. If energy flows from GWP to LADWP, GWP will receive an additional payment from LADWP of  $1.5 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy delivered from the time of the reserve activation until the request for energy associated with the reserves is terminated. The energy subject to this charge will be calculated in MW/minutes converted to MWh by LADWP summing the one minute CE reads (with sampling from the top of each minute using the first valid data point within 10 seconds after the top of such minute) times the MW deviation at each minute (not to exceed the amount of reserves requested) divided by 60. Any energy delivered to LADWP beyond the conclusion of the Supplemental Reserve activation period will be excluded from any Schedule 4

Period Deviation Charges unless LADWP expressly terminates the Supplemental Reserve activation but GWP continues to supply the energy. If LADWP does not expressly terminate the reserve activation and GWP continues to supply energy after the 60 minute period, LADWP shall pay GWP  $3 \times [\text{LADWP Energy Rate}] \times \text{MWh}$  for the energy received from 60 minutes after the time of the event until their CE returns to zero.

- c. Following 10-minutes notice to terminate energy associated with Supplemental Reserves to ramp to return CE to zero, LADWP shall cease payment for energy associated with Supplemental Reserves.

11. GWP will annually provide a list of its current individual generator and transmission single largest contingencies (SLC) to the BA. At least six months prior to GWP acquiring a new generation or transmission resource that could be an individual SLC of GWP, or increase the BA MSSC, the Parties will meet and confer.

## 12. Emergency Conditions

- a. If GWP is unable to provide the Supplemental Reserves it has committed to the BAA in real time and GWP is not in a Contingency Recovery Period but the BAA has sufficient Supplemental Reserves, GWP will pay to LADWP  $3x [\text{Daily OATT Rate}] \times [\text{MW Short}]$  per calendar day until such Supplemental Reserves are restored.
- b. If GWP is unable to provide the Supplemental Reserves it has committed to the BAA in real time and GWP is not in a Contingency Recovery Period and the BAA has insufficient reserves the Parties will implement their Emergency plans. In accordance with its Emergency plan, GWP shall request from the Reliability Coordinator an Energy Emergency Alert, in accordance with Applicable Reliability Standards, and designate an amount of load to be shed equal to its real-time deficiency. LADWP will designate sufficient additional load required to meet the Applicable Reliability Standards for BAA reserves. Any load designated by any Party will only be for the quantity and duration necessary.
- c. If the BAA is deficient in Supplemental Reserves, and GWP is providing its committed Supplemental Reserves, LADWP will follow its Emergency plan and designate load for the quantity and duration necessary to meet the Applicable Reliability Standards for BAA reserves.
- d. Should any Party be energy deficient, the Emergency assistance provisions in Section 3.6.1 of this Agreement shall apply. The deficient Party may need to request an Energy Emergency Alert declaration from the Reliability Coordinator and shed load in order to maintain load/resource balance.

## 13. Other Conditions

- a. If the BA (1) determines that the BAA is deficient of Supplemental Reserves in a reserve recovery period or projects the BA will be deficient of Supplemental Reserves, and (2) the BA is unable to acquire additional Supplemental Reserves

or determines it would be beneficial to have GWP supply additional reserves, GWP may, at GWP's sole discretion, and upon the BA's request, either:

- i. Make an energy sale to LADWP if such energy is available. This generation will be used to back down LADWP generation resources thereby increasing the BAA Supplemental Reserves. LADWP will pay GWP  $1.1 \times$  [the GWP costs] for each MWh LADWP purchases, or
- ii. Provide Supplemental Reserves to the BAA from resources available to the GWP System as GWP determines such reserves to be available. The BA will request that such Supplemental Reserves be made available to the BAA on an hourly, daily, weekly or monthly basis and LADWP shall pay the applicable Hourly, Daily, Weekly, or Monthly LADWP OATT Rate in Schedule 5 x MW provided by GWP .
- iii. GWP shall not unreasonably deny a request by the BA to purchase Supplemental Reserve service under Section 13, provided however, that GWP has no obligation to sell reserves if to do so would (1) inhibit GWP's ability to meet its own Supplemental Reserve commitments, or (2) subject GWP to any charges set forth in this Schedule.

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**APPENDIX A**

**[PLACEHOLDER FOR EXECUTED GWP  
GOVERNMENTAL PERSON USE CERTIFICATE]**

## **APPENDIX B**

### **LADWP TRANSMISSION AND ANCILLARY SERVICE RATES DATED 9-1-14**

LADWP's OATT Transmission and Ancillary Service Rates are provided at  
[http://www.oasis.oati.com/LDWP/LDWPdocs/OATT\\_Rates.pdf](http://www.oasis.oati.com/LDWP/LDWPdocs/OATT_Rates.pdf)

Or OATT Cost of Service Study Summary as posted on OASIS.

LADWP's OATT rates listed below are the rates put into effect on 9-1-14. For the calculations in Schedule 3, below, data for "Net Energy for Load" (NEL) will be taken from the FERC Form 714 filed by LADWP for the same test year used to calculate LADWP's OATT rates used herein.

#### **SCHEDULE 1**

##### **SCHEDULING, SYSTEM CONTROL AND DISPATCH SERVICE**

The charge for Scheduling, System Control Service is set forth below.

Annual Scheduling, System Control Service = \$1,310/MW.

#### **SCHEDULE 2**

##### **Reactive Supply and Voltage Control from Generation or Other Sources Service**

The charge for Reactive Supply Service is set forth below.

Annual Reactive Supply = \$4,990/MW.

#### **SCHEDULE 3**

##### **Regulation and Frequency Response Service**

Components of the formula to determine the amount of and charges for RFR Service are set forth below.

RFR Annual Revenue Requirement = \$547,775,766

RFR Purchase Obligation = 1.1%

$NEL_{LADWP} = 27,160,120$  MWh.

$NEL_{BWP} = 1,185,006$  MWh

$NEL_{GWP} = 1,182,736$  MWh

Annual RFR rate = \$0.204/MWh

**Schedule 5- OPERATING RESERVE:  
Spinning Reserve Service**

The charge for Spinning Reserve Service is set forth below.

Annual Spinning Reserve Service = \$47,040/MW.

**Schedule 6- OPERATING RESERVE:  
Supplemental Reserve Service**

The charge for Supplemental Reserve Service is set forth below.

Annual Supplemental Reserve Service = \$5,190/MW.

**Schedule 7  
Firm Point to Point Transmission Service**

The charge for Firm Point to Point Transmission Service is set forth below.

Annual Firm Point to Point Transmission Service, as rate divisor has been adjusted for inclusion of BWP/GWP load = \$39,257/MW.

**REVISION OF THIS APPENDIX**

The costs in this Appendix B may be changed from time-to-time to reflect LADWP's then current OATT rates.

**Definitions of Annual Reserve Rate Variables Used in Formula**

- S<sub>5</sub>: Spinning Reserve Rate associated with the 50% Purchase Requirement Yearly Rate under the OATT in \$/MW-Yr.
- S<sub>6</sub>: Supplemental Reserve Rate associated with the 50% Purchase Requirement Yearly Rate under the OATT in \$/MW-Yr.
- D: Delivery of Reserve based on Transmission Rate under the OATT in \$/MW-Yr.
- R: Reactive Power Rate under the OATT in \$/MW-Yr.
- S: Scheduling, System Control and Dispatch Rate under the OATT in \$/MW-Yr.
- SS<sub>5</sub>: Amount of GWP self-supply Spinning Reserve in MW.
- SS<sub>6</sub>: Amount of GWP self-supply Supplemental Reserve in MW.

**Formula**

$$\text{Annual Reserve Cost} = ((S_5 \times (40 \text{ MW} - SS_5)) + (S_6 \times (40 \text{ MW} - SS_6)) + (D + R + S) \times$$

$$((40 \text{ MW} + 40 \text{ MW}) - (SS_5 + SS_6)) \times ((100 - 43.32) / 100)^*$$

$$\text{Monthly Reserve Cost} = \text{Annual Reserve Cost} / 12$$

### Illustrative Example Applying Formula

S<sub>5</sub>: \$47,040 [\$/MW-Yr.]

S<sub>6</sub>: \$5,190 [\$/MW-Yr.]

D: \$39,257 [\$/MW-Yr.]

R: \$1,310 [\$/MW-Yr.]

S: \$4,990 [\$/MW-Yr.]

SS<sub>5</sub>: Amount of GWP self-supply Spinning Reserve in MW.

SS<sub>6</sub>: Amount of GWP self-supply Supplemental Reserve in MW.

### Full Operating Reserve Service Example:

SS<sub>5</sub>: 0 MW

SS<sub>6</sub>: 0 MW

$$\begin{aligned} \text{Annual Reserve Cost} = & ((\$47,040 \times (40 \text{ MW} - 0 \text{ MW})) + (\$5,190 \times (40 \text{ MW} - 0 \text{ MW})) + \\ & (\$39,257 + \$1,310 + \$4,990) \times ((40 \text{ MW} + 40 \text{ MW}) - (0 \text{ MW} + 0 \text{ MW}))) \times ((100 - 43.32) \\ & / 100)^* = \$3,249,895.17 \end{aligned}$$

$$\text{Monthly Reserve Cost} = \$3,249,895.17 / 12 = \$270,824.60$$

### Partial Operating Reserve Service Example:

SS<sub>5</sub>: 10 MW

SS<sub>6</sub>: 15 MW

$$\begin{aligned} \text{Annual Reserve Cost} = & ((\$47,040 \times (40 \text{ MW} - 10)) + (\$5,190 \times (40 \text{ MW} - 15)) + \\ & (\$39,257 + \$1,310 + \$4,990) \times ((40 \text{ MW} + 40 \text{ MW}) - (10 + 15))) \times ((100 - 43.32) / 100)^* = \\ & \$2,293,604.38 \end{aligned}$$

$$\text{Monthly Reserve Cost} = \$2,293,604.38 / 12 = \$191,133.70$$

\* This discount shall not be changed.



**APPENDIX C**  
**INTERCONNECTION FACILITIES**

Energy Imbalance may be returned in-kind at the following points of delivery: Airway, and any other facilities mutually agreed to by the Parties.

The Interconnection Facilities include the interconnection between GWP and LADWP at Airway and the interconnection between BWP and GWP at Western substation.

**LADWP-Burbank**

The interconnection facilities between LADWP and Burbank shall include the following equipment at Toluca Receiving Station E (RS-E):

230-kV Bus 1 and Bus 2  
Transformer Banks E and F  
69-kV Bus 1 and Bus 2  
69-kV Toluca-Capon Lines 1, 2 & 3  
69-kV Burbank Toluca-Valley 1, 2 & 3  
Switchgear associated with the above listed

The interconnection is metered at the high side bushings of Banks E & F.

LADWP operates and maintains all Interconnection Facilities at RS-E except for operation of the load tap changers on Banks E & F which are jointly controlled with primary responsibility resting with Burbank.

Burbank operates and maintains all 69-kV equipment outside the RS-E fence line.

In case of any conflict or inconsistency between this Appendix C and the City-Burbank Interconnection Agreement, the City-Burbank Interconnection Agreement shall control.

**LADWP-Glendale**

The interconnection facilities between LADWP and Glendale shall include the following equipment at Air Way Receiving Station (AWY-RS):

230-kV Bus 1 and Bus 2  
230-kV Rinaldi-Air Way Lines 1 & 2  
230-kV Atwater-Air Way Lines 1 & 2  
Transformer Banks 1, 2 & 3  
69-kV Air Way-Kellogg 1, 2 and 3  
Switchgear associated with the above listed

The interconnection is metered at the high side bushings of Banks 1, 2 and 3.

LADWP operates and maintains all Interconnection Facilities at AWY-RS up to and including the 69-kV disconnects on the Air Way-Kellogg 1, 2 and 3 except for operation of the load tap changers on Banks 1, 2 and 3, which are jointly controlled with primary responsibility resting

with Glendale.

Glendale operates and maintains all 69-kV equipment from the potheads on the 69-kV Air Way-Kellogg 1, 2 and 3 to the Glendale system.

In case of any conflict or inconsistency between this Appendix C and the Air Way Interconnection Agreement, the Air Way Interconnection Agreement shall control.

### **Burbank-Glendale**

The interconnection facilities between Burbank and Glendale at Western shall include the following equipment:

69-kV East Bus

69-kV West Bus

Olive-Capon-Western Lines 1 and 2

Switchgear associated with the above listed

The interconnection is metered as follows: Meter No. 1 is located at the terminus of the Olive-Capon-Western No. 1 Line at the 69 KV East Bus of the Western Substation. Meter No. 2 is located at the terminus of the Olive-Capon-Western No. 2 Line at the 69 KV West Bus of the Western Substation.

## APPENDIX D

### FORMULA FOR CALCULATING THE RATE FOR GWP'S PURCHASE OF FULL OR PARTIAL CONTINGENCY RESERVES FROM LADWP

#### OPERATING RESERVES

##### (Schedule 5- Spinning Reserve Service and Schedule 6- Supplemental Reserve Service)

The formula to determine the amount of and charges for Operating Reserve Service are set forth below. Operating Reserve Service as provided under this Agreement is only applicable to those point(s) of delivery located within the Balancing Authority Area. The rates and charges for Operating Reserve Service, applying the formula set forth below.

##### Definitions of Annual Reserve Rate Variables Used in Formula

- S<sub>5</sub>: Spinning Reserve Rate associated with the 50% Purchase Requirement Yearly Rate under the OATT in \$/MW-Yr.
- S<sub>6</sub>: Supplemental Reserve Rate associated with the 50% Purchase Requirement Yearly Rate under the OATT in \$/MW-Yr.
- D: Delivery of Reserve Service based on Transmission Rate under the OATT in \$/MW-Yr.
- R: Reactive Power Rate under the OATT in \$/MW-Yr.
- S: Scheduling, System Control and Dispatch Rate under the OATT in \$/MW-Yr.
- SS<sub>5</sub>: Amount of GWP self-supply of Spinning Reserve Service in MW.
- SS<sub>6</sub>: Amount of GWP self-supply of Supplemental Reserve Service in MW.

##### Formula

$$\text{Annual Reserve Cost} = ((S_5 \times (40 \text{ MW}^{**} - SS_5)) + (S_6 \times (40 \text{ MW}^{**} - SS_6)) + (D + R + S) \times ((40 \text{ MW}^{**} + 40 \text{ MW}) - (SS_5 + SS_6))) \times ((100 - 43.32) / 100)^*$$

$$\text{Monthly Reserve Cost} = \text{Annual Reserve Cost} / 12$$

##### Illustrative Example Applying Formula

- S<sub>5</sub>: \$47,040 [\$/MW-Yr.]
- S<sub>6</sub>: \$5,190 [\$/MW-Yr.]
- D: \$39,257 [\$/MW-Yr.]
- R: \$1,310 [\$/MW-Yr.]
- S: \$4,990 [\$/MW-Yr.]
- SS<sub>5</sub>: Amount of GWP self-supply of Spinning Reserve Service in MW.
- SS<sub>6</sub>: Amount of GWP self-supply of Supplemental Reserve Service in MW.

##### Full Operating Reserve Service Example:

SS<sub>5</sub>: 0 MW

SS<sub>6</sub>: 0 MW

$$\begin{aligned} \text{Annual Reserve Cost} &= ((\$47,040 \times (40 \text{ MW}^{**} - 0 \text{ MW})) + (\$5,190 \times (40 \text{ MW}^{**} - 0 \text{ MW})) \\ &+ (\$39,257 + \$1,310 + \$4,990) \times ((40 \text{ MW}^{**} + 40 \text{ MW}^{**}) - (0 \text{ MW} + 0 \text{ MW}))) \times ((100 - \\ &43.32) / 100)^* = \$3,249,895.17 \end{aligned}$$

$$\text{Monthly Reserve Cost} = \$3,249,895.17 / 12 = \$270,824.60$$

**Partial Operating Reserve Service Example:**

SS<sub>5</sub>: 10 MW

SS<sub>6</sub>: 15 MW

$$\begin{aligned} \text{Annual Reserve Cost} &= ((\$47,040 \times (40 \text{ MW}^{**} - 10)) + (\$5,190 \times (40 \text{ MW}^{**} - 15)) + \\ &(\$39,257 + \$1,310 + \$4,990) \times ((40 \text{ MW}^{**} + 40 \text{ MW}^{**}) - (10 + 15))) \times ((100 - 43.32) \\ &/ 100)^* = \$2,293,604.38 \end{aligned}$$

$$\text{Monthly Reserve Cost} = \$2,293,604.38 / 12 = \$191,133.70.$$

**REVISION OF THIS APPENDIX**

The costs in this Appendix D may be changed from time-to-time to reflect LADWP's then current OATT rates.

\* This discount shall not be changed.

\*\* The references to the 40 MWs shall only be adjusted in accordance with the provisions of Section 3.4 of this Agreement.

## APPENDIX E

### START-UP AND SHUTDOWN ENERGY

In order to minimize CE and Energy Imbalance, Parties agree that LADWP will purchase the Start-up and Shutdown energy for units and unit combinations (combined cycle) with a Start-up time greater than 15 minutes per the terms of this Appendix E. Since Start-up/Shutdown energy is scheduled and delivered dynamically and therefore not a contributor to CE, the Out-of-Band Motivators will apply to all PD, subject to any exclusions, per Schedule 4.

- A. **“Start-Up”** for the purposes of this Agreement shall be defined as the period starting when the generator synchronizes and concluding when both (i) the generator output is fully scheduled to the unit participant(s) and (ii) the energy being delivered to LADWP returns to zero. The Start-Up period shall not normally exceed six hours.
- B. **“Shutdown”** for the purposes of this Agreement shall be defined as the period starting when the generator operator commences the (i) reduction of the unit participant(s) energy schedule to zero and (ii) transfer the corresponding energy schedule to LADWP, and concluding when the generator is off line and the energy schedule to LADWP returns to zero. The Shutdown period shall not normally exceed three hours.
- C. **Start-up and Shut-down Comparable to “Test”.** Parties recognize that energy provided during the periods defined above may vary and deviate from the Start-Up or Shutdown schedule provided by the generator operator.
- D. **Units with a Dynamic Schedule to LADWP:** Units, while operating with a dynamic schedule to LADWP, will have self-correcting schedules that will not impact GWP's CE calculations.
- E. **Coordination of Start-ups and Shutdowns**
  - 1. Generator operator will supply a typical Start-up and Shutdown schedule showing time vs. MW for each generator subject to this Appendix.
  - 2. Generator operator will notify LADWP of the schedule of planned Start-ups and Shutdowns with a minimum of two (2) business day notice (preferably three (3) days) for all planned unit Start-ups and Shutdowns. Parties will coordinate the timing of the proposed Start-ups and Shutdowns.
  - 3. Generator operator will provide notice of unplanned Start-ups and Shutdowns to LADWP's generation dispatcher as soon as the need and timing is known. This includes restarts after a trip.
  - 4. Generator operator and LADWP will work cooperatively to determine an optimal time for a Start-up or Shutdown to occur. Generator operator will provide outage plans to LADWP on a quarterly basis to ensure that LADWP can sufficiently integrate these events into their forward System planning. LADWP shall accept Start-up/Shutdown energy unless doing so would cause a reliability condition on the LADWP System (*i.e.* inability to control ACE need to curtail interchange

schedules, line flow problems, and/or voltage control problems). LADWP Balancing Authority (BA) will assess the System conditions and provide a "go, no-go" to the generator operator on a day-ahead basis. The LADWP on duty dispatchers will make the final determination based on prevailing system conditions.

#### **F. Start-up Event**

1. Generator operator will advise LADWP of when the Start-up will occur.
2. Prior to Start-up, Generator operator and LADWP will initiate a dynamic signal with an initial value of zero.
3. Generator operator will generate a dynamic e-Tag for the Start-up energy.
4. During the Start-up period, start-up energy will flow to and be purchased by LADWP until the energy is scheduled to the generator participant(s).
5. When the generator(s) reaches stable operating conditions and the generator operator is ready to schedule to the generator participant(s), the generator operator will advise the LADWP generation dispatcher and:
  - a. For dynamically scheduled unit(s), the generator operator will commence ramping out the start-up dynamic schedule and the ramping in the participant dynamic schedules in equal and opposite directions until the LADWP dynamic reaches zero.
  - b. For statically scheduled unit(s), the generator operator will identify a ramp time and duration for initiating schedules to the generator participants and ramp out the dynamic schedule to LADWP across the started ramp period. Generator operator will strive to commence scheduling to the unit participants at the lowest load level practical.
6. For each hour of the Start-up period, LADWP and the generator operator will agree to an integrated MWh value. The generator operator will input the after the-fact value in the dynamic e-Tag per scheduling practice.

#### **G. Shutdown Event**

1. Generator operator will advise LADWP when the Shutdown will occur.
2. Generator operator will notify LADWP at least 30-minutes prior to the time they are ready to ramp out the energy schedules for the unit participants and ramping in the schedule to LADWP.
3. Prior to ramping out the schedules to the participants and ramping in the schedule to LADWP, the generator operator and LADWP will initiate a dynamic schedule to LADWP with an initial value of zero.
4. Generator operator will generate a dynamic e-Tag for the Shutdown energy.

5. Generator operator will strive to reduce the participant schedules to the lowest value practical prior to initiating dynamic energy delivery to LADWP.
  6. During the Shutdown period, all energy will flow to and be purchased by LADWP.
  7. When the generator(s) reaches minimum loading and the generator operator is ready to zero the schedules to the generator participant(s), the generator operator will advise the LADWP generation dispatcher and:
    - a. For dynamically scheduled unit(s), the generator operator will commence ramping in the dynamic schedule to LADWP and ramping out the participant dynamic schedules in equal and opposite directions until the participant dynamic reaches zero.
    - b. For statically scheduled unit(s), the generator operator will identify a ramp time and duration for ramping out the generator participant schedules and will ramp in the dynamic schedule to LADWP across the started ramp period.
  8. The generator operator will reduce the unit(s) output to the most practical minimum load prior to shutting down the unit. For each hour of the Shutdown period, LADWP and generator operator will agree to an integrated MWh value. The generator operator will input the after-the-fact value in the e-Tag per scheduling practices.
- H. Net Output of GWP's Generators.** The net output (MW and MWh) for the Start-ups and Shutdowns of dynamically scheduled and non-dynamically schedule generators covered under this Agreement will be provided to LADWP by the generator operator per the communication protocol set forth in this Appendix.
- I. Communication Protocol:** Proposed communication protocol and acceptance procedure will be comprised of the following:
1. All meter and status data will be supplied via an ICCP link.
  2. A single status binary (0/1) point will be provided to LADWP "system" from the generator operator requesting acceptance of the energy for either period. A single status (0/1) point will be provided from LADWP "system" to the generator operator indicating acceptance of said energy. A single analog point providing generator(s) Net MW output will be provided to LADWP "System" exclusion from the generator operator's deviation calculations. The generator operator will create a dynamic e-Tag to be effective during the Start-up or Shutdown period. The e-Tag will contain the estimated MWh for each hour and will be adjusted after the hour to reflect the MWh output.
- J. Alternate Scheduling Method.** If dynamic scheduling is not available, a unit Start-up/Shutdown will be accomplished using one of the following options at LADWP's discretion:
- a) If LADWP is receiving an output value from generator(s), LADWP will calculate a clock 15-minute average of the generator(s) output and an integrated hourly MWh.

- i. Each clock 15-minute average will be subtracted from the corresponding Period Deviation. This adjusted Period Deviation shall be deemed to be the value for billing under Schedule 4.
  - ii. The calculated integrated MWH value will be used to adjust the Start-up/Shutdown e-Tag unless the generator operator provides an appropriate value.
- b) If LADWP is not receiving an output value from generator(s), the calculated Schedule 4 Period Deviation will be exempted from Schedule 4 billing. The generator operator must be able to provide an integrated MWH value for each hour. Said value will be used to adjust the Start-up/Shutdown e-Tag.

Parties will make reasonable efforts to (re)establish systems and communications necessary to implement the dynamic schedule to LADWP prior to commencing a Start-up or Shutdown. However, lack of dynamic scheduling capability shall not be sufficient reason for LADWP to deny a Start-up or Shutdown.



## APPENDIX F

### NOTICES AND SYSTEM OPERATIONS PERSONNEL

All notices under this Agreement shall be provided in writing to the Authorized Representatives listed below. For convenience, notices may be routed via electronic mail or facsimile, provided, however, that such notice is also routed contemporaneously in written form via U.S. Mail to the Authorized Representative's address indicated below. The Authorized Representatives are permitted to delegate such Authorized Representative's responsibilities under this Agreement to another employee of the Party. Any Authorized Representative making such delegation will provide notice pursuant to Section 4.1 of this Agreement.

**Notices to LADWP.** Notices to LADWP under this Agreement shall be provided in writing to the following Authorized Representatives:

Los Angeles Department of Water and Power  
Attn: Mark Lieberman, Manager of Long Term Transmission Mgmt  
Address: 111 N Hope St, JFB Room: 1246, Los Angeles  
Phone: (213) 367-2454  
Email: [Mark.Lieberman@ladwp.com](mailto:Mark.Lieberman@ladwp.com)

With Copy to:

Los Angeles Department of Water and Power  
Attn: John R. Dennis, Director of Power System Planning &  
Development  
Address: 111 N Hope St, JFB Room: 921, Los Angeles  
Phone: (213) 367-0881  
Email: [John.Dennis@ladwp.com](mailto:John.Dennis@ladwp.com)

**Notices to GWP.** Notices to GWP under this Agreement shall be provided in writing to the following Authorized Representatives:

General Manager, Glendale Water & Power  
141 N. Glendale Avenue, Level 4  
Glendale, CA 91206  
Ph (818) 548-2107  
Email: [szurn@glendaleca.gov](mailto:szurn@glendaleca.gov)

With a copy to:

City Attorney's Office  
Attn: GWP Counsel  
613 E. Broadway, Suite 220  
Glendale, CA 91206  
(818) 548-2080  
Email: [cgodinez@glendaleca.gov](mailto:cgodinez@glendaleca.gov)

**2. NOTICES OF AN OPERATING NATURE**

Prior to the Implementation Date, the Parties shall exchange the names, titles, address, voice phone number and Fax number for routine operational activities associated with operation activities delineated under this Agreement. Such operational activities shall include, but are not limited to outage coordination, generation dispatch and system dispatch. Any notice, request or demand of an operating nature between the BA and GWP shall be made orally, via electronic communication, or in writing, by facsimile, by First Class mail or overnight delivery service.

**\*\*\*\*\*NON-PUBLIC INFORMATION BELOW\*\*\*\*\***

**\*\*\*\*\*NOT FOR INCLUSION IN PUBLIC DOCUMENT\*\*\*\*\***

**[EACH PARTY TO CREATE ITS OWN PAGE FOR EXCHANGE WITH OTHER PARTY.]**

	LADWP	GWP
Dispatcher Shift Supervisor	-	
Generation Dispatcher	-	
Transmission Dispatcher	-	
Scheduler	-	
Grid Prescheduler	-	
Outage Coordination	-	
Manager of Grid Operations	-	
Real-Time Marketer	-	
Forward Marketer	-	
Marketing Manager	-	

LADWP		GWP	
Dispatcher Shift Supervisor	-	Dispatcher Shift Senior	-
Generation Dispatcher	-	Real-Time Trader	-
Transmission Dispatcher	-	Dispatcher Shift Senior	-
Scheduler	-	DA Tagger/Scheduler	-
Grid Prescheduler	-		
Outage Coordination	-	Dispatcher Bid Desk	-
Grid Operations Manager	-	Dispatch Supervisor	-
		Cash Trader	-
Real-Time Marketer	-	Real-Time Trader	-
Forward Marketer	-		
Marketing Manager	-	Trading Manager	-

PRO-FORMA SAMPLE INVOICE

Department of Water and Power

Of the City of Los Angeles  
Cost and Project Accounting, Room 450

P.O. Box 51212  
Los Angeles, California 90051-5512

**PRO FORMA INVOICE**

Date	9/23/2015
Due Date	10/5/2015
Invoice #	GAXXXXXX
Customer ID	City of Glendale
Service Month	Aug-2015

**BILLED TO**

Accounts Payable  
Glendale Water and Power  
141 N. Glendale Avenue, Level 4  
Glendale, CA 91206  
(818) 548-6461

**INVOICE COLLECTIBLE NO. GAXXXXXX**

Please Pay **AMOUNT DUE** \$ 290,931.11

**SEND PAYMENT TO:**  
DEPARTMENT OF WATER & POWER  
COST AND PROJECT ACCOUNTING, ROOM 450  
P.O. BOX 51212, LOS ANGELES, CA 90051-5512

AGREEMENT NO. BAASA

UNIT OF MEASURE	DESCRIPTION	QTY	UNIT PRICE	TOTAL AMOUNT
MW	Schedule 3 - Regulation and Frequency Response Services	1	20,106.51	20,106.51
MW	Annual RFR Service Contracted - 2015 +/- 8 MW	0	2,513.31	
	Incremental Deviation Bandwidth Contracted for August 2015 +/- 1 MW			
Instances * MW	Schedule 4 - Period Deviation Charges (Net Tie Deviation)	0	varies	
Instances * MW	Second Deviation Band (10% of energy rate)	0	varies	
	Third Deviation Band (25% of energy rate)			
MW	Schedule 5 - Spinning Reserve Service			
MW	Reserves Purchased-- Deliv, Reactive Power, Sched/Syst Cntrl/Disp Rate	0	3,796.42	
	Amount of Self-Supply Spinning Reserve		3,920.00	
	Monthly Reserve Cost - Net After Self-Supply			174,946.60
MW	Schedule 6- Supplemental Reserve Service			
MW	Reserves Purchased-- Deliv, Reactive Power, Sched/Syst Cntrl/Disp Rate	0	3,796.42	
	Amount of Self-Supply Supplemental Reserve		432.50	
	Monthly Reserve Cost - Net After Self-Supply			95,878.00
MW	Motivators for Schedules 5 & 6			
MW	Failure for Capacity Perform $(3 \times \text{Monthly OATT Rate}) \times (\text{MW Short}) \text{ per occurrence}$			
MW	Energy Associated w/ Activation of Reserves $(1.5 \times \text{Energy Price}) \times \text{Return in Kind}$			
MW	Failure to Terminate Energy Draw after 60 min $(3 \times \text{Energy Price}) \times \text{Return in Kind}$			
MW	RT Failure to Supply Reserves $(3 \times \text{Monthly OATT Rate}) \times (\text{MW Short}) \text{ per occurrence}$			
MW	Energy Delivered to LADWP to Create Reserves $(1.1 \times \text{BWP/GWP Cost})$			
MW	Reserve Purchase (short-term) from BWP or GWP by LADWP $((\text{Applicable OATT Rate}) \times (\text{MW}))$			

Total \$ 290,931.11

TO ENSURE PROPER CREDIT TO YOUR ACCOUNT, PLEASE RETURN BOTTOM PORTION WITH PAYMENT.

APPROVER: MANAGER OF PROJECTS AND BILLINGS

Please do not combine payment of this invoice with utility bills.

REFERENCE NO. TEAR OFF HERE AND RETURN WITH PAYMENT - KEEP TOP FOR YOUR RECORDS.

Credit Account: Work Order No: Symbol Code: Amount  
\$ 290,931.11

I.C. No.

1111111

I.C. Date

9/23/2015

Fund

Power RBs

Amount Enclosed

\$

Accounts Payable  
Glendale Water and Power  
141 N. Glendale Avenue, Level 4  
Glendale, CA 91206

Issuing Organization Copy

## APPENDIX H

### FORMULA FOR CALCULATING THE RATE FOR GWP'S PURCHASE OF REGULATION AND FREQUENCY RESPONSE SERVICE FROM LADWP

#### **SCHEDULE 3 Regulation and Frequency Response Service**

The formula to determine the amount of and charges for RFR Service are set forth below. RFR Service as provided under this Agreement is only applicable to those point(s) of delivery located within the Balancing Authority Area. The rates and charges for RFR Service, applying the formula set forth below.

1. **Annual RFR Rate** = 
$$\frac{ARR_t \times PR_t}{(NEL_{LADWP} + NEL_{BWP} + NEL_{GWP})_t}$$

Where:

Annual RFR Rate = Cost of RFR Service expressed in \$/MWh of load.

ARR = Annual Revenue Requirement for RFR Service

PR = Purchase Requirement stated as the "percent of the Transmission Customer's Reserved Capacity for Point-to-Point Transmission Service" (e.g., 1.1 percent) in Schedule 3 of the LADWP OATT.

NEL<sub>LADWP</sub> = LADWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

NEL<sub>BWP</sub> = BWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

NEL<sub>GWP</sub> = GWP Annual Net Energy for Load as filed by LADWP in FERC Form 714

t = LADWP Cost of Service Study Test Year used in the calculation of the LADWP OATT rates in effect for the year in which service is elected.

2. **Billing Demand for Annual Service:**

If GWP elects to purchase annual RFR Service from the Balancing Authority, LADWP shall supply and GWP shall purchase a base amount of regulation equal to +/- 8 MW, and the billing determinants for such Service charges shall be based on NEL<sub>GWP</sub> as defined in Section 1 of this Schedule 3. LADWP shall invoice GWP on a monthly basis for one-twelfth of the annual cost of providing this service to GWP, which is annual RFR Rate times NEL<sub>GWP</sub>.

If GWP elects not to purchase annual RFR Service from the Balancing Authority, the Deviation Bands will be adjusted as indicated in Schedule 4.

3. **Illustrative Example Applying Annual RFR Rate and Billing Demand for Annual RFR Service:**

For the 8-MW purchased by GWP in the First Deviation Band reflected in Schedule 4, the following charges will result:

ARR<sub>t</sub> = \$547,775,766

PR = 1.1%

$NEL_{LADWP} = 27,160,120 \text{ MWh}$ .

$NEL_{BWP} = 1,185,006 \text{ MWh}$

$NEL_{GWP} = 1,182,736 \text{ MWh}$

Annual RFR rate = \$0.204/MWh

Annual Cost of RFR Service =  $1,185,006 \text{ MWh} \times \$0.204/\text{MWh} = \$241,278$

Monthly Cost of RFR Service =  $\$241,278 / 12 = \$20,107$ .

**4. Rate for Incremental Deviation Bandwidth:**

GWP may elect to purchase additional RFR Service from LADWP on a monthly or annual basis. Such purchase will increase the Deviation Bands, as described in Section C of Schedule 4 for the period of time such RFR Service is purchased..

$IRFR_y = (\text{Annual Cost of RFR Service} / 8) \times \text{MW}$

$IRFR_m = ((\text{Monthly Cost of RFR Service} / 8) \times \text{MW})$

Where:

$IRFR_y$  = The rate per MWh for incremental MW of bandwidth for a year.

$IRFR_m$  = The rate per MWh for incremental MW of bandwidth for a month.

MW = The number of additional MW requested and provided for a year or month.

**5. Illustrative Example Applying Rate for Incremental Deviation Bandwidth:**

A. GWP requests 5 MW of additional deviation bandwidth for one year:

$IRFR_y = \$241,278 / 8 = \$30,159.75 \times 5 \text{ MW} = \$150,798.75$

B. GWP requests 5 MW of additional deviation bandwidth for one month:

$IRFR_m = \$20,107 / 8 = \$2,513.38 \times 5 \text{ MW} = \$12,566.88$

**REVISION OF THIS APPENDIX**

The costs in this Appendix H may be changed from time-to-time to reflect LADWP's then current OATT rates.

**APPENDIX I**  
**FORM OF**  
**GOVERNMENTAL PERSON USE CERTIFICATE**

In connection with the execution of the Balancing Authority Area Services Agreement ("Agreement"), dated as of September \_\_\_\_\_, 2015, is entered into by and between the City of Los Angeles on behalf of its Department of Water and Power ("LADWP") in its capacity as the operator of the LADWP Balancing Authority Area ("Balancing Authority") and City of Glendale, on behalf of its Water and Power Department ("GWP"), DWP No. \_\_\_\_ (Agreement), [NAME OF GOVERNMENTAL ENTITY OR COUNTER PARTY] ("Certifying Entity") relating to balancing area services as described therein, Eligible Customer certifies, represents and agrees as follows::

**(a) Officer Signing.** I am the duly [elected/appointed] [Title] of Certifying Entity, authorized to sign this Certificate.

**(b) Tax-Exempt Bonds.** Certifying Entity understands that this Certificate relates to LADWP facilities that were financed with tax-exempt bonds, Build America Bonds and/or Qualified Energy Conservation Bonds, issued by or on behalf of LADWP ("Facilitites").

**(c) Governmental Status.** The Certifying Entity is a municipal utility that is owned by a state or local governmental unit or a political subdivision or instrumentality thereof, or is itself a state or local governmental unit or a political subdivision or instrumentality thereof (a "Governmental Person").

**(d) Qualifying Use.** Except as provided in (e) and (f) below, for the term of any services set forth in the Agreement, including any renewal periods, the Certifying Entity will use the service for the Facilities only in connection with its retail electric system in providing electricity to its retail electric customers.

**(e) Short-term Uses.** Any sale, assignment, transfer or lay-off in any manner of any service provided to the Certifying Entity under this Agreement shall comply with the Agreement's procedures for resale, assignment or transfer of service and this Certificate.

**(f) Governmental Person Uses Permitted.** In the event there is to be a sale, lay-off, or other transfer in any manner, of any scheduling service pursuant to the Agreement, by the Certifying Entity, to another Governmental Person for a period of longer than 3 years, such may only be permitted if such other Governmental Person will not, in LADWP's exclusive determination, jeopardize the tax-exempt status of any municipal bond(s) used to finance the Facilities and executes a form of this Certificate.

**(g) Reimbursement of Reasonable Costs and Expenses for LADWP Review.** Certifying Entity agrees to pay or reimburse LADWP for reasonable costs and expenses (including fees and expenses of counsel) that may be incurred by LADWP for review of the individual Certifying Entity's Governmental Person Use Certificate.

**(h) Additional information.** Certifying Entity agrees to immediately inform, in writing, LADWP of any change regarding the foregoing certifications, representations and agreements and agrees that, if such change is reasonably likely, in the discretion of LADWP, to

adversely affect the tax exempt status of the LADWP's bonds, LADWP may immediately terminate all scheduling services affected by such change under the Agreement.

SUBSCRIBED AND SWORN BEFORE A NOTARY PUBLIC

Dated:

by \_\_\_\_\_

[Name and title of senior management representative duly authorized to represent Certifying Entity]