



POWER AUTHORITY OF THE STATE OF NEW YORK  
30 SOUTH PEARL STREET  
ALBANY, NY 12207

Schedule of Rates for Sale of Firm and Interruptible  
Hydroelectric Power

Service Tariff No. 22

Date of Issue:

Date Effective: July 1, 2013

Issued by James H. Yates, Senior Vice President  
Power Authority of the State of New York  
30 South Pearl Street, Albany, NY 12207

**Table of Contents**

To be completed with final version

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## **Schedule of Rates for Sale of Firm and Interruptible Hydroelectric Power Service**

### **I. Applicability**

This Service Tariff is applicable to the sale of power and energy produced by the Authority's St. Lawrence-FDR Project to Alcoa Inc. ("Alcoa" or "Customer") or other customers engaged in aluminum smelting and related activities and as further defined in the Agreement for the Sale of Firm and Interruptible Hydroelectric Power and Energy from the St. Lawrence-FDR Power Project ("Agreement") between the Power Authority of the State of New York ("Authority" or "NYPA") and Customer.

### **II. Abbreviations and Terms**

A. The following abbreviations are used:

kW	kilowatt(s)
kWh	kilowatt-hour(s)
MWh	megawatt-hour(s)
NYISO	New York Independent System Operator
NY PAL	New York Public Authorities Law

All other capitalized terms and abbreviations used herein shall have the same meaning as set forth in the Agreement between Customer and Authority.

### **III. Rates and Charges**

A. The Base Production Charge (demand and energy) effective July 1, 2013 shall be:

Demand Charge: \$6.23/kW-month

Energy Charge: \$12.30/MWh

The base production rates set forth above shall be subject to an Annual Adjustment Factor in accordance with the Agreement and do not include any applicable costs for delivery services.

Date of Issue:

Date Effective: July 1, 2013

**B. Minimum Monthly Charge (for Firm Service Only)**

The sum of (i) the product of the Demand Charge and the Firm Power portion of Contract Demand, (ii) the product of the Energy Charge and the quantity of energy utilized, and (iii) a charge representing reimbursement to the Authority for all applicable Taxes (as defined herein) incurred by the Authority as a result of providing the Allocation to the Customer.

**C. Contract Demand**

The Contract Demand for Customer will be the amounts of Firm and Interruptible Power allocated to such Customer by the Authority under the Agreement unless reduced pursuant to the Agreement and/or this Service Tariff, which the Customer agrees to take and pay for.

**D. Billing Period**

Any period of approximately thirty (30) days, generally ending with the last day of each calendar month, but subject to the billing cycle requirements of the utility in whose service area Customer's facilities at which Power is delivered are located.

**E. Niagara and St. Lawrence-FDR Hydroelectricity Rates**

At all times the rates for power and energy associated with this Allocation shall be no lower than the rate charged by Authority for the sale of hydroelectricity for the benefit of rural and domestic customer receiving service in accordance with the Niagara Redevelopment Act, 16 U.S.C §836(b)(1) and NY PAL §1005(5).

**IV. General Provisions**

General Provisions for service supplementing or modifying the Rules and Regulations for Power Service (Part 454 of Chapter X of Title 21 of the Official Compilation of Codes, Rules and Regulations of the State of New York) with regard to deliveries to the Customer are as follows:

**A. Character of Service**

Alternating current, 60 hertz, three-phase.

B. Firm Power Service

Firm power and energy under this Service Tariff are power and associated energy intended to be available at all times except for limitations provided in the Agreement, the Rules and in this Service Tariff.

C. Interruptible Power Service

Interruptible Power and Energy under this Service Tariff are power and associated energy normally available continuously, but subject to interruption for extended periods because of decreased water flow as provided herein. Interruptible Power and Energy under this Service Tariff will be subject to curtailment or interruption upon two business days' notice if the seven-day rolling average of hourly net generation for the Authority at its Hydro Projects is less than 2250 megawatts for hydraulic or hydrological reasons. The Authority will provide Customer with a daily measure of the average hourly net generation during periods when the seven-day average is 2450 megawatts or below. This information will be provided on a weekly basis during periods that the seven-day average is greater than 2450 megawatts. These procedures are consistent with the document, "NIA & STL Generation and DAM Scheduling for ALCOA and Reynolds, Hydro Notification Procedures" (hereinafter, "Notification Procedures"), which has been agreed upon by NYPA and Customer.

If Customer requests that it be provided an alternate source of power and energy in lieu of the curtailed power and energy, such alternate power and energy being referred to as "Alternative Energy," Authority will provide Alternative Energy from the NYISO Day Ahead and Real Time Markets as directed by the Customer in accordance with the Notification Procedures, or as otherwise agreed upon by Authority and Customer, i.e. to acquire "3<sup>rd</sup> Party Supplemental Energy."

D. Availability of Energy

1. The Authority shall provide to Customer in any Billing Period Firm and Interruptible Energy (subject to hydrologic conditions, see subsection 2, below) in amounts equal to the amount of power and energy set forth in the Agreement. The offer of Energy for delivery shall fulfill Authority's obligations for purposes of this Provision whether or not the Energy is taken by Customer.
2. The Authority will have the right to reduce on a pro rata basis with respect to other firm hydropower customers supplied by the Hydro Projects the amount of Firm Energy provided to Customer if such reductions are necessary due to low flow (i.e., hydrologic) conditions at the Hydro Projects. Contract Demand for the affected Billing Period(s) shall reflect all such

Date of Issue:

Date Effective: July 1, 2013

reductions. The Authority shall be under no obligation to deliver and will not deliver any such curtailed energy to Customer in later Billing Periods. No reductions in Contract Demand shall apply for the provision of Substitute Energy.

E. Adjustment of Rates

To the extent consistent with the Agreement between Authority and the Customer, the rates contained in this ST-22 may be revised from time to time on not less than sixty (60) days written notice to Customer. Should Authority need to increase rates in order to meet all requirements specified in its bond and note resolutions and covenants with holders of its financial obligations, Authority may do so upon 30 days' prior written notice if permitted under the Agreement.

F. Delivery

For the purpose of this Service Tariff, Power and/or Energy shall be deemed to be offered when Authority is able to supply Power and Energy and NYISO transmits it to its designated points of interconnection with Customer's Transmission Agent(s). If, despite such offer, there is a failure of delivery by Customer or Customer's designated transmission agents, such failure shall not be subject to a billing adjustment pursuant to Section 454.6(d) of the Rules.

G. Payment by Customer to Authority

1. Power and Energy Rates, Taxes.

The Customer shall pay the Authority for Firm and Interruptible Power and Energy during any Billing Period the higher of either (i) the sum of a), b) and c) below or (ii) the Monthly Minimum Charge as defined herein:

- a) The Demand Charge per kilowatt for Firm and Interruptible Power and Energy specified in this Service Tariff or any modification thereof applied to the Customer's Billing Demand (as defined in General Provision H.1 below) for the Billing Period; and
- b) The Energy Charge specified in this Service Tariff or any modification thereof applied to the amount of firm Energy delivered by Authority to the Customer during such Billing Period as determined in General Provision H.2.
- c) A charge representing reimbursement to the Authority for all applicable Taxes (as defined herein) incurred by the Authority as a result of

Date of Issue:

Date Effective: July 1, 2013

providing the Firm and Interruptible Power and Energy allocated to the Customer.

2. Transmission Charge.

The Customer shall compensate the Authority for all transmission costs incurred by the Authority with respect to the Allocation, including such costs that are charged pursuant to the NYISO Open Access Transmission Tariff ("OATT").

3. NYISO Charges.

With respect to all Electric Service provided to Customer in accordance with the Agreement and this Service Tariff, the Customer shall compensate the Authority for the following NYISO Charges assessed on the Authority for services provided by the NYISO or any successor organization pursuant to its OATT or other applicable tariffs (as the provisions of those tariffs maybe amended and in effect from time to time):

- A. Ancillary Services 1 through 6 and any new ancillary services as may be defined and included in the OATT from time to time;
- B. Marginal losses;
- C. The New York Power Authority Transmission Adjustment Charge ("NTAC");
- D. Congestion costs, less any associated grandfathered Transmission Congestion Contracts ("TCCs") as provided in Attachment K of the OATT; and
- E. Any and all other charges, assessments or other amounts associated with deliveries to Customer or otherwise associated with the Authority's responsibilities as a Load Serving Entity for the Customer that are assessed on the Authority by the NYISO or any successor organization under the provisions of its OATT or under other applicable tariffs.

4. Other Third-Party Charges.

The Customer shall compensate the Authority for any third-party charges attributable to Customer, including without limitation, any costs incurred to comply with any programs applicable in New York State related to the payment for reliability or infrastructure upgrades, energy efficiency

Date of Issue:

Date Effective: July 1, 2013

programs, renewable portfolio standards or carbon emissions laws or regulations.

5. Taxes Defined.

Under this Service Tariff, Taxes shall be any adjustment as Authority deems necessary to recover from Customer any taxes, assessments or any other charges mandated by federal, state and local agencies that are levied on the Authority or that the Authority is required to collect from Customer if and to the extent such rates, charges, taxes or assessments are not recovered by Authority pursuant to another provision of this Service Tariff.

6. The Customer shall pay for Substitute Energy, if applicable, as specified in the Agreement between the Customer and Authority.

7. Bills computed under this Service Tariff are due and payable by electronic wire transfer in accordance with the Rules. Such wire transfer shall be made to J P Morgan Chase NY, NY / ABA021000021 / NYPA A/C # 008-030383, unless otherwise indicated in writing by Authority. In the event that there is a dispute on any items of a bill rendered by Authority, Customer shall pay such bill and adjustments, if necessary, will be made thereafter.

H. Billing

The following billing provisions shall apply to the sum of all the meters used to determine the Customer's load:

1. Demand – The Billing Demand will be the highest sixty (60) minute integrated demand measured during the Billing Period. Should service be interrupted during the Billing Period, the Billing Demand will be adjusted pursuant to Section 454.6(d) of the Rules.
2. Energy – Unless separately metered, the kilowatt-hours charged by Authority to Customer (billed usage) will be the total number of kilowatt-hours recorded on the Customer's meters for the Billing Period as adjusted per NYISO procedures for losses or unaccounted for energy which shall be equal to the energy billed to NYPA by the NYISO on the Customer's behalf.

The Customer's billed hourly usage shall be allocated among their available energy types hourly in the following order:

Date of Issue:

Date Effective: July 1, 2013

- a. Firm Energy (hydroelectric, plus any Substitute Energy)
- b. Firm Incremental Energy (from Contract FD-4)
- c. Interruptible Energy (hydroelectric; when available)
- d. 3rd Party Supplemental Energy
- e. Alternative Energy

For each of the NYPA-supplied energy types, the amount of hourly energy available will be determined using the Customer's actual metered monthly load factor and Contract Demand for that energy type up to but not exceeding their hourly billed usage, where load factor is the average of the hourly kilowatt-hours recorded on the Customer's meters during the Billing Period divided by the Billing Demand.

In cases where the Customer's hourly billed energy quantity exceeds the quantities available for Firm, Firm Incremental, Interruptible, 3<sup>rd</sup> Party Supplemental or Alternative Energy, the Customer will be responsible for purchases from the NYISO balancing market which is settled in the NYISO "Real Time Market" as that term is defined and as modified from time to time in the NYISO OATT.

In cases where the Customer's hourly billed energy does not require full utilization of 3<sup>rd</sup> Party Supplemental or Alternative Energy, the Customer will be entitled to the revenue received from the NYISO for sales of these energy amounts into the NYISO balancing market which is settled in the NYISO Real Time Market.

Any quantity of unused hourly Firm or Interruptible energy types will not be charged to the Customer, nor will the Customer receive the proceeds from any balancing market sales of those energy types.

#### I. Electrical Fluctuations

The power and energy taken hereunder shall not be used in such a manner as to cause unusual fluctuations or disturbances on Authority's system. Customer shall provide, at its expense, suitable apparatus which will reasonably limit such fluctuations. In the event that unreasonable fluctuations or disturbances, including without limitation harmonic currents resulting in actionable interference with communications systems or in harmonic resonance of now existing facilities, are caused by Customer's facilities, Authority shall immediately notify Customer of the circumstances and Authority shall then have the right to discontinue the delivery of power and energy under this contract upon 30 days prior written notice until conditions causing such fluctuations or disturbances are corrected by Customer. Despite such discontinuance of

service Customer shall be obligated to pay the amounts due for power and energy under this contract, including the minimum bills for such power.

J. Adjustment of Charges

1. Power Factor

For service provided under this and any other Service Tariff or agreement Customer shall maintain not less than ninety-seven and one-half percent (97.5%) power factor at the point of delivery. The Billing Demand under this Service Tariff will be increased one-half percent (1/2%) for each one-half percent (1/2%) by which the average power factor at which energy is supplied during such Billing Period is less than ninety-seven and one-half percent (97.5%). Average power factor will be computed to the nearest one-half percent (1/2%) according to the following formula:

$$\text{Average Power Factor} = \frac{kWh}{\sqrt{kWh^2 + k \text{ var } h^2}}$$

The data used in the above formula shall be obtained from meters which are ratcheted to prevent reverse registration.

2. Adjustment for Transformer Losses

If delivery is made at a transmission voltage but metered on the low-voltage side of Customer's substation, the meter readings will be increased by two percent (2%) to compensate for transformer losses; provided, however, that this percentage may be reduced to reflect improvements in loss rates should new transformers be put in use at Customer's plants.

K. Conflicts.

In the event of any inconsistencies, conflicts or differences between the provisions of this Service Tariff and the Rules, the provisions of this Service Tariff shall govern. In the event of any inconsistencies, conflicts or differences between the provisions of the Agreement and the Service Tariff, the provisions of the Agreement shall govern.