

**APPENDIX 2C**

**DESIGN AND CONSTRUCTION ENERGY TARGET**

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**ATTACHMENT 1 – ENERGY MODEL ASSUMPTIONS**

## APPENDIX 2C

### DESIGN AND CONSTRUCTION ENERGY TARGET

#### 1. INTERPRETATION

##### 1.1 Definitions

In this Appendix, in addition to the definitions set out in Schedule 1 of this Agreement:

**"Adjusted Energy Target"** mean the Design and Construction Energy Target, as adjusted pursuant to Section 4.3 (Adjustment to Design and Construction Energy Target) or Section 4.7 (Retest Period Adjustment to Energy Target) of this Appendix, as applicable;

**"Average Unit Cost"** for a type of Energy, during a period, means the average cost to the Province of each gigajoule or Megawatt Hour of the applicable type of Energy purchased by the Province for the Facility during the applicable period, calculated by dividing:

- (a) all amounts paid or payable by the Province in respect of the supply of the particular type of Energy, for the Facility, during the applicable period; by
- (b) the Energy Consumption, for the applicable type of Energy, during the applicable period.

**"Design and Construction Energy Target"** means MWh per year;

**"Energy Assumptions"** means the assumptions set out in Attachment 1 to this Appendix;

**"Escalation Factor"** for the purpose of Section 4.8 (Failure to Achieve Energy Target after Retest Period) of this Appendix, means 2.5% in respect of electricity and 2.5% in respect of gas;

**"Excess Energy Consumption"** for a specified period means the amount by which the actual Energy Consumption for that period exceeds the Adjusted Energy Target, if any, provided that under no circumstances will Excess Energy Consumption be a negative number;

**"Megawatt Hour"** or **"MWh"** means a unit for measuring power;

**"Monitoring Period"** means the 12 month period commencing on the first day of the calendar month immediately following the Occupying Period;

**"Occupying Period"** means the period commencing on the Service Commencement Date and ending on the last day of the calendar month in which the 6 month anniversary of the Service Commencement Date occurs;

**"Retest Period"** has the meaning set out in Section 4.6 (Retest Period) of this Appendix;

**"Test Period"** means the 12 month period commencing on the first day of the calendar month immediately following the Monitoring Period;

## **2. ENERGY SUPPLY**

### **2.1 Energy Supply**

During the Construction Period, Project Co will be responsible for the supply and delivery of electricity, natural gas and any other energy source as required for the Construction. Project Co will ensure that all diesel fuel oil tanks are full prior to Service Commencement.

## **3. MONITORING AND MEASUREMENT OF ENERGY CONSUMPTION**

### **3.1 Installation**

- (a) Project Co will install equipment to record and monitor the consumption of each type of Energy in the Facility.
- (b) The Energy Consumption monitoring equipment must be suitable to enable a detailed monitoring of Energy trends and consumption to allow analysis of the data collected to enable various matters, including:
  - (1) comparisons to be made with the Design and Construction Energy Target and the Adjusted Energy Target;
  - (2) early warning of malfunctions and deviations from norms; and
  - (3) provide an Energy Dashboard to the Province.

### **3.2 Monitoring**

During the Occupying Period, Monitoring Period, Test Period and Retest Period, Project Co will:

- (a) secure all information recorded by the Energy Consumption monitoring equipment so that it is not lost or degraded as a result of any equipment or service malfunctions, and will secure such information from any adjustment, modification or loss from any source;
- (b) calibrate the Energy Consumption monitoring equipment annually by an independent qualified expert who will provide certification of such calibration to Project Co and the Province;
- (c) monitor and verify consumption of each type of Energy in the Facility in accordance with International Performance Measurement & Verification Protocol (IPMVP) Volume I: Concepts and Options for Determining Energy and Water Savings and in compliance with the requirements of LEED Canada-NC, Version 1.0, EA Credit 5: Measurement and Verification; and
- (d) until the end of the Test Period or the Retest Period, as the case may be, but not beyond, collect the Site Weather Data from the Weather Monitoring Station to calibrate the Energy Model to reflect actual weather conditions.

## **4. DESIGN AND CONSTRUCTION ENERGY GUARANTEE**

### **4.1 Facility to Meet or Beat Design and Construction Energy Target**

Project Co warrants to the Province that the Facility will be designed and constructed so that the Energy Consumption per year will not exceed the Design and Construction Energy Target. The consequences to Project Co for breach of this warranty are limited to those set out in Section 4.4 (Failure to Achieve Design and Construction Energy Target) and Section 4.8 (Failure to Achieve Energy Target after Retest Period) of this Appendix. For greater certainty, the Energy Consumption will be adjusted in accordance with Section 4.3 (Adjustment to Design and Construction Energy Target) and Section 4.7 (Retest Period Adjustment to Energy Target) of this Appendix.

### **4.2 Monitoring of Energy Consumption**

The Occupying Period will be used by the Province to transition into occupying the Facility and by Project Co to monitor and stabilize the Energy Consumption.

During the Monitoring Period, Project Co and the Province will jointly monitor the Energy Consumption in order to allow Project Co to identify and, subject to Section 4.5 (Facility Modifications) of this Appendix, make such modifications and adjustments to the Facility as are necessary for the Facility to achieve the Design and Construction Energy Target.

During the Test Period, Project Co and the Province will jointly monitor the Energy Consumption in order to establish whether, and to what extent, the actual Energy Consumption for each type of Energy differs from the applicable Adjusted Energy Target for the Test Period.

### **4.3 Adjustment to Design and Construction Energy Target**

Prior to the expiry of the Test Period, Project Co will engage an independent energy consultant, acceptable to Project Co and the Province acting reasonably (the "**Independent Energy Consultant**"). Where, for any reason during the Operating Period, the Independent Energy Consultant is, or becomes, unable or unwilling to continue to perform the Independent Energy Consultant's services Project Co will promptly engage a replacement Independent Energy Consultant, acceptable to Project Co and the Province, acting reasonably.

Promptly after the expiry of the Test Period, Project Co will cause the Independent Energy Consultant to review the Energy Consumption certificates and all other relevant data collected during the Test Period and to determine, in his or her professional opinion, whether, and to what extent, the Design and Construction Energy Target should be adjusted to account for observed conditions during the Test Period which differ materially from the Energy Assumptions. Project Co will ensure that, in determining whether any adjustment should be made to the Design and Construction Energy Target, the Independent Energy Consultant considers adjustments to the portion of the Design and Construction Energy Target attributable to gas and to electricity separately, and does not take into account any increased Energy Consumption caused by the acts or omissions of any Project Co Persons.

Within 30 days after the expiry of the Test Period, Project Co will cause the Independent Energy Consultant to issue a certificate documenting the applicable adjustments, if any, to be made to the Design and Construction Energy Target, in respect of the Test Period.

### **4.4 Failure to Achieve Design and Construction Energy Target**

If the annual Energy Consumption during the Test Period exceeds the Adjusted Energy Target for the Test Period, then Project Co will:

- (a) Within 60 days after expiry of the Test Period, complete such modifications and adjustments to the Facility, subject to Section 4.5 (Facility Modifications) of this Appendix, as are necessary for the Facility to achieve the Design and Construction Energy Target; and
- (b) pay to the Province a lump sum amount calculated as follows:

$$\text{Payment Amount} = (\text{Eg} \times \text{ACg}) + (\text{Ee} \times \text{ACe})$$

Where:

- Eg** = the Excess Energy Consumption (gas) during the Test Period
- Ee** = the Excess Energy Consumption (electricity) during the Test Period
- ACg** = the Average Unit Cost of gas for the Test Period
- ACe** = the Average unit Cost of electricity for the Test Period

#### 4.5 Facility Modifications

Where Project Co is required to make modifications or adjustments to the Facility in order for the Facility to achieve the Design and Construction Energy Target, all such modifications and adjustments will be subject to:

- (a) compliance with the Design and Construction Specifications;
- (b) minimization of disruption to the operation of the Facility; and
- (c) the prior approval of the Province, not to be unreasonably withheld or delayed.

#### 4.6 Retest Period

Where the annual Energy Consumption during the Test Period exceeds the Adjusted Energy Target for the Test Period, then commencing on the day which is 60 days after the expiry of the Test Period, and continuing for a period of 12 months thereafter (the "**Retest Period**"), Project Co and the Province will monitor the Energy Consumption in order to establish whether, and to what extent, the actual Energy Consumption during the Retest Period differs from the applicable Adjusted Energy Target for the Retest Period.

#### 4.7 Retest Period Adjustment to Energy Target

Promptly after the expiry of the Retest Period, Project Co will cause the Independent Energy Consultant to review the Energy Consumption certificates and all other relevant data collected during the Retest Period and to determine whether, and to what extent, the Design and Construction Energy Target should be adjusted, using the same methodology as applied by the Independent Energy Consultant pursuant to Section 4.3 (Adjustment to Design and Construction Energy Target) of this Appendix.

Within 30 days after the expiry of the Retest Period, Project Co will cause the Independent Energy Consultant to issue a certificate documenting the applicable adjustments, if any, to be made to the Design and Construction Energy Target in respect of the Retest Period.

#### 4.8 Failure to Achieve Energy Target after Retest Period

If the annual Energy Consumption during the Retest Period exceeds the Adjusted Energy Target for the Retest Period, then Project Co will pay to the Province a lump sum amount equal to the lesser of:

- (a) ; and
- (b) the net present value of the cost to the Province, over the remainder of the 75-year Design Life of the Facility, of the amount by which the Energy Consumption will exceed the Adjusted Energy Target for the Retest Period, on the assumption that the Excess Energy Consumption during the Retest Period will continue for the balance of the Design Life of the Facility. For the purpose of calculating the net present value pursuant to this Section 4.8(b) (Failure to Achieve Energy Target after Retest Period), the cost of each type of Energy (including application of the applicable Escalation Factors) will be discounted using .

If this Section 4.8 (Failure to Achieve Energy Target after Retest Period) is applied, the provisions of Schedule 9 [Compensation on Termination] will be amended as necessary to ensure that the Province will not, as a consequence of the application of this Section 4.8 (Failure to Achieve Energy Target after Retest Period), face any additional liability upon early termination of this Agreement.

**ATTACHMENT 1**  
**ENERGY ASSUMPTIONS**