

## Appendix A – Operating Parameters

- 1) For the purposes of this *exemption*, the following terms shall have the following meanings:
  - (a) “Charge” means the collective of both the non-accessibility charge specified in section 7.4.2.1 of Chapter 7 and calculated in accordance with section 3.10.1 of Chapter 9 and the real-time make whole payment reversal charge specified in section 3.10.2 of Chapter 9.
  - (b) “Historical Energy Consumption” means the amount determined in accordance with section 11 of this Appendix A.
  - (c) “Maximum OR Offer” means the amount determined in accordance with section 15 of this Appendix A.
  - (d) “Typical Consumption Pattern” means the repeated production cycles at Ivaco’s *dispatchable load* and consists of the following typical *dispatchable* consumption pattern, and as further described in the load profile provided by the *dispatchable load* and determined to be confidential information for public posting:
    - (i) down time or approximately ■ minutes of *dispatchable* consumption of less than ■;
    - (ii) *dispatchable* consumption increase over a period of approximately ■ minute to within ■ MW of maximum *dispatchable* consumption of ■ MW;
    - (iii) continuous *dispatchable* consumption within ■ MW of maximum *dispatchable* consumption of ■ MW for a period of ■ minutes; and
    - (iv) *dispatchable* consumption decrease over a period of approximately ■ minute to *dispatchable* consumption of less than ■ MW
- 2) For the purpose of this *exemption* and understanding the *market rules* in context of this *exemption*, the following references in the *market rules* and/or *market manuals* shall be deemed to be references to the following provisions of this *exemption*:
  - (a) Section 1.2.1 of Appendix 5.1 shall be deemed to be a reference to section 3 of this Appendix A;
  - (b) Section 1.2.4 of Appendix 5.1 shall be deemed to be a reference to section 4 of this Appendix A;
  - (c) Section 2.1.2 of Chapter 7 shall be deemed to be a reference to section 5 of this Appendix A;
  - (d) Section 3.3.8 of Chapter 7 shall be deemed to be a reference to section 6 of this Appendix A;
  - (e) Section 7.5.1 of Chapter 7 shall be deemed to be a reference to section 7 of this Appendix A; and
  - (f) Section 7.5.2 of Chapter 7 shall be deemed to be a reference to section 8 of this Appendix A.
- 3) Ivaco offering *ten-minute operating reserve* shall ensure that Ivaco’s *dispatchable load* that is scheduled to provide *ten-minute operating reserve* is available for *dispatch* as scheduled, in accordance with the terms of this *exemption*;
- 4) Ivaco offering *thirty-minute operating reserve* shall ensure that Ivaco’s *dispatchable load* that is scheduled to provide *thirty-minute operating reserve* is available for *dispatch* as scheduled, in accordance with the terms of this *exemption*;
- 5) Ivaco shall not submit, and the *IESO* shall not accept, any *dispatch data* with respect to Ivaco’s *dispatchable load* unless:

- (a) Ivaco's *dispatchable load* is a *resource* for the provision of the physical services(s) to which the *dispatch data* relate;
  - (b) Ivaco is the *registered market participant* for Ivaco's *dispatchable load*, and
  - (c) the *dispatch data* are consistent with (i) the registration information defining the capabilities Ivaco's *dispatchable load*; (ii) Ivaco's reasonable expectations of the current actual capabilities of Ivaco's *dispatchable load* having regard to this *exemption* and responding to *dispatches* in accordance with the *exemption*, and (iii) any revision in registration information requested by the *IESO* under section 7.5.6.2 of Chapter 7 or other provisions of the *market rules* .
- 6) Notwithstanding any other provision of section 3.3 of Chapter 7 and with the exception of testing specified in section 6.6. of Chapter 5, Ivaco shall as soon as practicable remove its *offers* and *bids* for Ivaco's dispatchable load if, for any *dispatch hour* in the current *pre-dispatch schedule*:
- (a) Ivaco does not reasonably expect Ivaco's dispatchable load to be able to go to or remain at or below 1MW of *dispatchable* consumption in accordance with sections 13(a) or (b) or section 17 of this Exemption; or
  - (b) Ivaco reasonably expects the time Ivaco's dispatchable load consumes less than 1MW to extend for four or more *dispatch intervals* longer than as set out in its Typical Consumption Pattern. For greater certainty, Ivaco shall not have to withdraw its *operating reserve offers* for the current dispatch *hour* in which it reasonably expects the foregoing to be true; or

Where Ivaco must remove its *offers* or *bids* for Ivaco's dispatchable load within the mandatory window, it must do so in accordance with the requirements specified in the *market rules* and applicable *market manuals*.

- 7) Non-compliance with *dispatch instructions*, other than as specified in this Exemption and for the reasons referred to in section 7.5.3 of Chapter 7, shall be a breach of the *market rules* and may be sanctioned in accordance with section 6.2 of Chapter 3 and Section 7.5 of Chapter 7.
- 8) If Ivaco expects Ivaco's dispatchable load to operate, for any reason, in a manner described in section 6(b), it shall notify the *IESO* as soon as possible by calling the *IESO* control room.
- 9) If the *IESO* notifies Ivaco that Ivaco's dispatchable load is experiencing issues with its telemetry data, Ivaco shall as soon as practicable withdraw any *offers for operating reserve* and cease submitting *offers for operating reserve* until such time as the *IESO* advises that the telemetry data issue is resolved.

### **Participation in the *energy market***

- 10) Subject to the terms and conditions of this *exemption* , Ivaco when participating in the *real-time market* and *day-ahead market* as a *dispatchable load* shall submit *energy bids* at its Historical Energy Consumption, as applicable, in respect of every *dispatch hour* during which it intends to consume *energy* ;
- 11) Subject to section 12, the Historical Energy Consumption will be determined in accordance with the following:

- (a) it shall be equal to Ivaco's *dispatchable load's* hourly average *dispatchable* consumption during *dispatch intervals* when *dispatchable* consumption exceeds 1MW during the applicable 6-month period. For greater certainty, Historical Energy Consumption is calculated as follows:

$$TC/TI * 12$$

Where:

- (i) TC = total *dispatchable* consumption, based on AQEW data, in all *dispatch intervals* during which *dispatchable* consumption exceeded 1MW during the applicable 6-month period, except those *dispatch intervals* for which Ivaco reduced its *energy bid* in accordance with section 12.
- (ii) TI = the total number of *dispatch intervals* during which *dispatchable* consumption exceeded 1MW during the applicable 6-month period, except those *dispatch intervals* for which Ivaco reduced its *energy bid* in accordance with section 12.
- (b) the Historical Energy Consumption shall be calculated every 6 months starting on the effective date of this Exemption.
- (c) the applicable 6-month period shall be the 6-month period commencing 7 months prior to the date on which the Historical Energy Consumption is calculated and ending 1 month prior to the date on which the Historical Energy Consumption is calculated.
- (d) Historical Energy Consumption shall be rounded down to one decimal place.
- (e) If TI is equal to zero for an applicable 6-month period because Ivaco's dispatchable load is offline, is otherwise unavailable for *dispatch* for any reason, has reduced its *energy bid* in accordance with section 12, or any combination thereof, then once Ivaco's dispatchable load's is ready to resume its Typical Consumption Pattern the HEC shall be set to the value of the most recent applicable 6-month period for which TI was not equal to zero.
- 12) If Ivaco reasonably expects the continuous maximum dispatchable consumption at Ivaco's *dispatchable load* to decrease by more than 10% from the continuous maximum *dispatchable* consumption value stated in its Typical Consumption Pattern as a result of decreased capacity for consumption, but will continue to consume in accordance with the timelines associated with its Typical Consumption Pattern, for a period of five hours or more, the Historical Energy Consumption value used for its *energy bids* shall decrease by the same percentage until such time as Ivaco's *dispatchable load* is able to resume the continuous maximum *dispatchable* value stated in its Typical Consumption Pattern, and Ivaco shall revise its *energy bids* accordingly. The *IESO* may at its sole discretion require Ivaco to calculate a new Historical Energy Consumption for any period if the existing value was calculated using data that is determined by the *IESO* to be invalid for any reason.
- 13) If Ivaco receives an *energy dispatch* it shall respond in the following manner:
- (a) if Ivaco's dispatchable load receives an *energy dispatch* to zero, it shall accept its *energy dispatch instruction* and within 5 minutes reduce, or maintain, its *dispatchable* consumption to be equal to or less than 1MW. It shall maintain its *dispatchable* consumption at equal to or less than 1MW until *dispatched* in a manner described in section 13 (c);

- (b) if Ivaco's *dispatchable load* receives an *energy dispatch* to an amount greater than zero but less than 50% of its *energy bid*, it shall reduce, or maintain, its *dispatchable* consumption to be equal to or less than 1MW. It shall accept its *energy dispatch instruction* and maintain its *dispatchable* consumption at equal to or less than 1MW until *dispatched* in a manner described in section 13 (c);
- (c) if Ivaco's dispatchable load receives an *energy dispatch* to an amount equal to or greater than 50% of its *energy bid*, it shall accept its *energy dispatch instruction* and shall as soon as practicable assume its Typical Consumption Pattern.

### Participation in the Operating Reserve markets

- 14) Subject to sections 5, 6, 9, 15 and 16 of this *exemption*, Ivaco shall submit in the *real-time market* and *day-ahead market*, as applicable, *operating reserve offers* up to its *Maximum Operating Reserve Offer* (Maximum OR Offer) in respect of every *dispatch hour* during which it intends to *offer operating reserve* .
- 15) Subject to section 16, the Maximum OR Offer will be determined in accordance with the following:
  - (a) it shall be equal to Ivaco's *dispatchable load's* hourly average *dispatchable* consumption during all *settlement hours* in which Ivaco submitted an *offer for operating reserve* during the applicable 6-month period. For greater certainty, Maximum OR Offer is calculated as follows:  

$$TC/TI$$

Where:

    - (i) TC = total *dispatchable* consumption, based on AQEW data, in all *settlement hours* in relation to which Ivaco had submitted an *offer for operating reserve* during the applicable 6-month period except those *settlement hours* for which Ivaco reduced its *operating reserve offer* in accordance with section 16.
    - (ii) TI = the total number of settlement hours in relation to which Ivaco had submitted an *offer for operating reserve* during the applicable 6-month period except those *settlement hours* for which Ivaco reduced its *operating reserve offer* in accordance with section 16.
  - (b) the Maximum OR Offer shall be calculated every 6 months starting on the effective date of this Exemption.
  - (c) the applicable 6-month period shall be the 6-month period commencing 7 months prior to the date on which the Maximum OR Offer is calculated and ending 1 month prior to the date on which the Maximum OR Offer is calculated.
  - (d) Maximum OR Offer shall be rounded down to one decimal place.
  - (e) the *IESO* may at its sole discretion require Ivaco to calculate a new Maximum OR Offer for any period if the existing value was calculated using data that is determined by the *IESO* to be invalid for any reason.
  - (f) If TI is equal to zero for an applicable 6-month period because Ivaco's dispatchable load is offline, is otherwise unavailable for *dispatch* for any reason, has reduced its *operating reserve offer* in accordance with section

16, or any combination thereof, then once Ivaco's dispatchable load's is ready to resume its Typical Consumption Pattern the Maximum OR Offer shall be set to the value of the most recent applicable 6-month period for which TI was not equal to zero.

- 16) If Ivaco reasonably expects the continuous maximum dispatchable consumption at Ivaco's dispatchable load to decrease by more than 10% from its continuous maximum dispatchable consumption stated in its Typical Consumption Pattern as a result of decreased capacity for consumption, but will continue to consume in accordance with the timelines associated with its Typical Consumption Pattern, for a period of five hours or more, the Maximum OR Offer used for its *operating reserve offers* shall decrease by the same percentage decrease until such time as Ivaco's dispatchable load is able to resume the continuous maximum dispatchable consumption stated in its Typical Consumption Pattern and Ivaco shall revise its *operating reserve offers* accordingly.
- 17) If Ivaco receives an *operating reserve* activation (ORA) *dispatch instruction*, it shall respond in the following manner:
- (a) if Ivaco's dispatchable load is at or below *dispatchable* consumption of 1MW, it shall accept the ORA *dispatch instruction* and remain at or below *dispatchable* consumption of 1MW regardless of the value of the ORA *dispatch instruction* until *OR* is deactivated and an *energy dispatch* is received; or
  - (b) if Ivaco's dispatchable load is above 1MW *dispatchable* consumption, it shall accept the ORA *dispatch instruction* and go to 1MW *dispatchable* consumption or less regardless of the value of the ORA *dispatch instruction* until *OR* is deactivated and an *energy dispatch* is received.

#### **Application of the Charge**

- 18) In regards to the application of the Charge, Ivaco's *dispatchable load* shall be exempt from the Charge, subject to the following:
- (a) compliance with the terms and conditions of this Exemption. Where, in the *IESO's* sole determination, Ivaco does not comply with the terms and conditions of this *exemption*, it shall be subject to the Charge, and any payments for inaccessible *operating reserve* will be recovered by the *IESO* in accordance with the terms of the Charge, for the *dispatch intervals* in which the *IESO* determined Ivaco failed to comply with the terms and conditions of this Exemption. For example, where Ivaco submits an *offer* for *operating reserve* in excess of its Maximum OR Offer for one or more *settlement hours*, it shall be subject to the Charge for all *dispatch intervals* in those *settlement hours*. The application of the Charge is separate and apart from any investigation or enforcement activity by the *IESO* in relation to any non-compliance with the terms and conditions of the Exemption, pursuant to section 6 of Chapter 3 of the market rules;
  - (b) the *IESO* may assess the application of the Charge at its sole discretion and may make the appropriate manual adjustments to a current *billing period* to reflect the application of the Charge in respect of the periods in which the *IESO* determined Ivaco failed to comply with the terms and conditions of this Exemption or section 18(c) applies, as the case may be;
  - (c) if Ivaco's *dispatchable load* consumes less than 1MW for 25 or more consecutive *dispatch intervals*, the *IESO* may apply the Charge to all *dispatch*

*intervals* beginning with the 25<sup>th</sup> *dispatch interval* in which it was consuming less than 1MW and ending with the *dispatch interval* in which it consumes greater than 1MW; and

- (d) for greater certainty, this *exemption*, including the *IESO's* application of the Charge in accordance with the terms and conditions herein, shall not limit any right of the *IESO* under the *market rules*, or otherwise, to take action against Ivaco for failing to comply with the terms and conditions of the Exemption, including initiating a reconsideration of the *exemption*. Any failure of the *IESO* to apply the Charge in accordance with this Section 19 shall not be construed as a waiver of the *IESO's* right to seek any remedy, including investigation and enforcement pursuant to section 6 of Chapter 3 in respect of non-compliance, for the failure to comply with the terms and conditions of the *exemption*, nor will it be construed as a waiver of Ivaco's obligation to comply with the terms and conditions of this *exemption*.