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November 27, 2019

Delivered by Email, RESS & Courier

Ms. Christine Long, Registrar and Board Secretary
Ontario Energy Board
P.O. Box 2319, 27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Long:

Re: **Application for Review of an Amendment to the Independent Electricity**
System Operator Market Rules
Board File No. EB-2019-0242
Kingston CoGen Limited Partnership - Witness Statement of Brian Rivard

Please find enclosed the Witness Statement of Brian Rivard in the above-captioned matter. Paper
copies of this letter and the accompanying Witness Statement will be delivered to you by courier.

Should you have any questions or require further information in this regard, please do not hesitate
to contact me.

Yours very truly,

BORDEN LADNER GERVAIS LLP

Per:

Original signed by Gian Minichini

Gian Minichini

cc: John Vellone, BLG
Ewa Krajewska, BLG
John Windsor, Northland Power Inc.
James Hunter, IESO
Colin Anderson, AMPCO
Ian A. Mondrow, Gowling WLG
Michael Bell, OEB Staff
Intervenors of Record

In my examination in chief, I intend, *inter alia*, to respond to two issues raised by Colin Anderson in his witness statement dated November 22, 2019, and further discussed by Mr. Anderson in his subsequent testimony before the Ontario Energy Board on November 25, 2019.

1. **Issue 1:** Does the analysis change when a DR resources does not have behind-the-meter ("BTM") generation?

Response:

The purpose of the examples in my affidavit (as revised November 21, 2019) was to show that the Amendments are consistent with the principle of horizontal equity and by this principle, the Amendments are not discriminatory.

Horizontal equity requires that individuals or corporations that are alike in all relevant respects are treated the same. The examples show how two companies, that are identical in all relevant respects (both demand and supply), and that differ only by the arbitrary placement of a meter, would be compensated the same under the Amendments. This is consistent with horizontal equity. By extension, when the DR resource receives an energy payment (the market price) to curtail demand, the DR resource receives preferable treatment. This is inconsistent with horizontal equity.

Mr. Anderson assumes a different situation in which a DR resource does not have a BTM generator to supply its own demand. This sets up a comparison of two different individuals: a DR resource without a BTM generator to a generator. This comparison requires consideration of the principle of vertical equity, which states that individuals that differ in relevant respects should often be treated differently. The challenge for evaluating what is vertically equitable is in determining a principled basis for the differential treatment. I propose that a constructive way to think about this is to understand what the purpose of the TCA is and hence to evaluate the differential treatment of different participants in the auction against this purpose. The purpose of the TCA as stated in the evidence is to promote or enhance competition and efficiency to the benefit of Ontario consumers.

I offer the following example to show how the Amendments are consistent with the promotion of fair and efficient competition. Attached are Figure 1.A' and 1.B' that illustrate implications on efficiency and competition. The example shows that if a DR resource and a Generation resource each needed to recover a $1,000 fixed avoidable cost in order to be available, the Amendments result in an outcome that is efficient. Both are incented to offer in the capacity auction at a price that just recovers this cost. By this principle, it is vertically equitable.

If instead, DR Resources are paid the market price to reduce demand, then they are incented to lower their bid price to the point where it is indifferent between consuming or being paid not to consume (i.e., $75/MWh). In this scenario, the DR resource forgoes some productive value from consumption, equal to the difference between what it is willing to pay, $150/MWh and the market price it would pay $100/MWh (i.e., $50/MWh) in order to receive a payment of $100/MWh. This would be inefficient from a societal standpoint because the value to society from producing the good ($150/MWh) is greater than cost to society to produce the electricity needed to produce the good ($100/MWh). Paying the DR resource therefore induces inefficiency. Furthermore, it provides

the DR resources a competitive advantage in the TCA against a generator that has the same avoidable cost. By this standard, paying DR resources the market price when activated is vertically inequitable.

2. **Issue 2:** Mr. Anderson states:

> Dr. Rivard suggests that providing a DR resource with capacity payments rewards it twice for the same demand reduction if the resource also participates in the Industrial Conservation Initiative (ICI) peak reduction program. Dr. Rivard is mistaken about this. If a DR resource reduces load for the purposes of reducing its peak for ICI calculations, that reduction would by definition be unavailable to the market and the IESO would thus claw back availability payments for the period during which the resource was not available at a 2:1 ratio.

Response:

Mr. Anderson is correct to say that if a DR resource intentionally ignores its obligation under the TCA to benefit from the ICI program, it is subject to a daily Availability Charge for the hours in the day that it was not available to meet its obligation. The Availability Charge is equal to the daily unavailable MWh times the daily availability payment divided by the number of hours in the day the DR resource was obligated to be available. In the peak demand months, this charge is doubled. So, for example, assume the DR resource was obligated to make 1 MW of demand reduction available in 9 hours in a day during a peak month, and the TCA auction provided a daily availability payment of $230/ MW- day (the TCA capacity clearing price). If the DR resource decided that it was in its financial interest to not meet its TCA obligation for the entire day in order to instead benefit from the ICI and avoid the Global Adjustment, it would be subject to an Availability Charge equal to:

Availability Charge = Unavailable MWh x Hourly Availability Payment x Factor of 2

$$= (1MW \times 9hrs) \times ((\$230/MWh - day)/9 \text{ hrs}) \times 2$$

$$= \$460$$

However, this does not change the conclusion illustrated in Figure 4 of my affidavit. In all other days, the DR resource would receive an Availability Payment if it makes itself available, that can be used to offset the fixed avoidable cost of being available to reduce system demand. It would have the double incentive to incur the fixed avoided cost because it would allow it to avoid the Global Adjustment charge (which alone covers the $1,000 fixed avoided cost), and it would receive an Availability Payment in all hours that it chose to make itself available. This provides an advantage to the DR resource over the Generation resources, since the Generation resource can only apply the Availability Payment to cover its $1,000 fixed avoided cost.

Figure 1.A': No Energy Payments for DR Resources

DR Corp.

Demand
4 MWh

VOLL
$150
/MWh

4 MWh

Gen Corp.

Capacity
4 MW
MC
$100/MWh
FA Cost
$1,000

4 MWh

IESO Energy Market
Market Price = $100/MWh

Bid Price	= $150	Offer Price	= $100
Cost = 4MWh x $100/MWh	= -$400	Cost = 6MWh x $100/MWh	= $0
Rev	= $0	Rev = $4MWh x $100/MWh	= $400
Net IESO Settlement	= -$400	Net IESO Settlement	= $400

If Available		**If Available**	
Energy at Voll	= $600	Net IESO Settlement	= $400
Net IESO Settlement	= -$400	Marginal Cost	= -$400
FA Cost	= -$1,000	FA Cost	= -$1,000
Net Value	= **-$800**	Net Value	= **-$1,000**

If Unavailable		**If Unavailable**	
Energy at Voll	= $600	Net IESO Settlement	= $0
Net IESO Settlement	= -$400	Marginal Cost	= $0
FA Cost	= $0	FA Cost	= $0
Net Value	= **$200**	Net Value	= **$0**

Opportunity Cost of Availability	**Opportunity Cost of Availability**
= **-$1,000**	= **-$1,000**

IESO TCA

TCA Offer:
Capacity = 4 MW
Price = $1,000 ÷ 4MW =
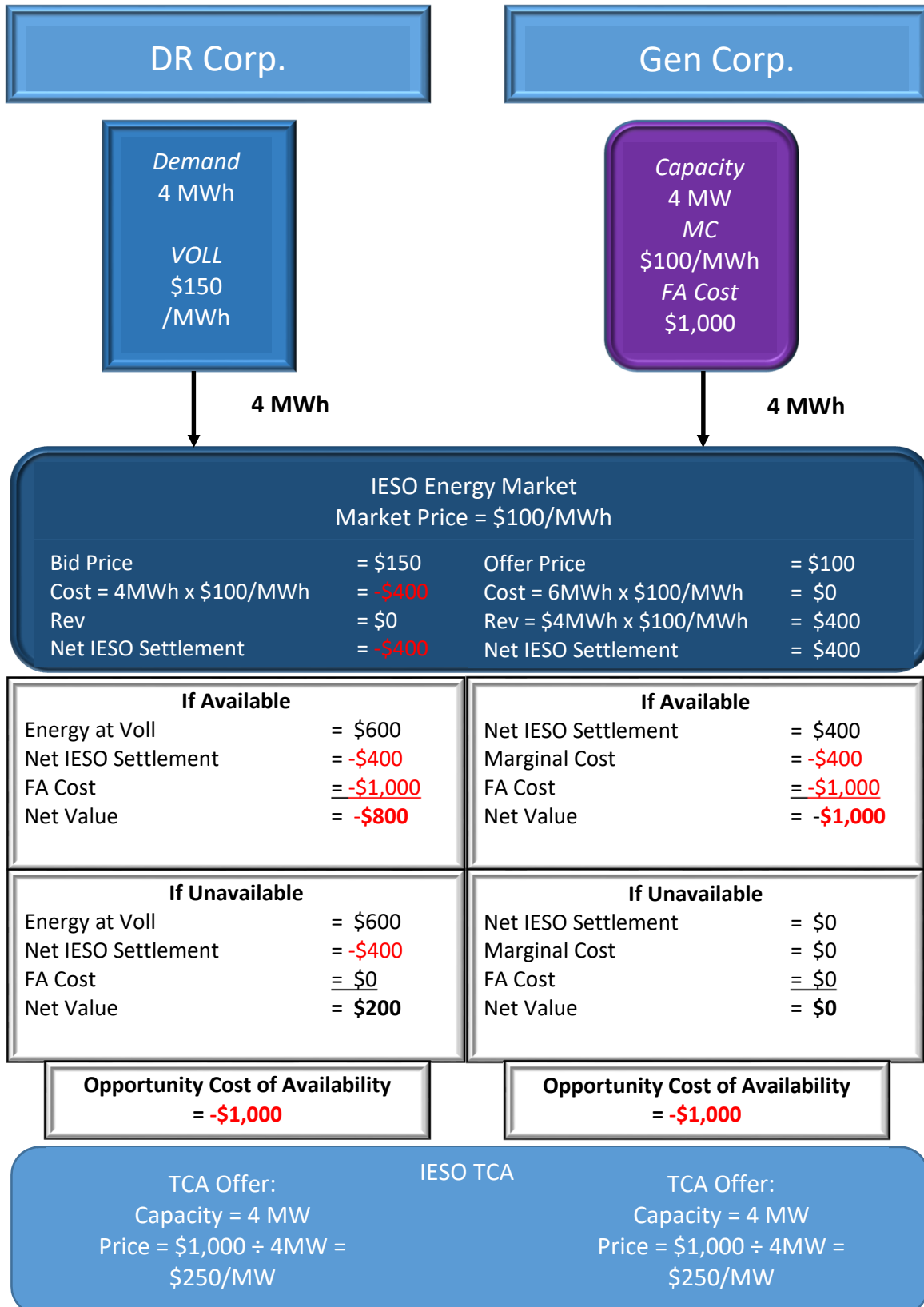$250/MW

TCA Offer:
Capacity = 4 MW
Price = $1,000 ÷ 4MW =
$250/MW

Figure 1.B': Energy Payments for DR Resources

DR Corp.

Gen Corp.

| Demand 4 MWh

VOLL $150/MWh | Capacity 4 MW
MC $100/MWh
FA Cost $1,000 |

↓ **4 MWh**   ↓ **4 MWh**

IESO Energy Market
Market Price = $100/MWh

Bid Price	= $75	Offer Price	= $100
Cost = 4MWh x $100/MWh	= $0	Cost = 6MWh x $100/MWh	= $0
Rev	= $400	Rev = $4MWh x $100/MWh	= $400
Net IESO Settlement	= $400	Net IESO Settlement	= $400

If Available		**If Available**	
Energy at Voll	= $0	Net IESO Settlement	= $400
Net IESO Settlement	= $400	Marginal Cost	= -$400
FA Cost	= -$1,000	FA Cost	= -$1,000
Net Value	= **-$600**	Net Value	= **-$1,000**

If Unavailable		**If Unavailable**	
Energy at Voll	= $600	Net IESO Settlement	= $0
Net IESO Settlement	= -$400	Marginal Cost	= $0
FA Cost	= $0	FA Cost	= $0
Net Value	= **$200**	Net Value	= **$0**

| **Opportunity Cost of Availability**
= **-$800** | **Opportunity Cost of Availability**
= **-$1,000** |

IESO TCA

| TCA Offer:
Capacity = 4 MW
Price = $800 ÷ 4MW = $200/MW | TCA Offer:
Capacity = 4 MW
Price = $1,000 ÷ 4MW = $250/MW |