

**ONTARIO ENERGY BOARD**

**Association of Major Power Consumers in Ontario**

**Application to Review Amendments to the Market Rules  
made by the Independent Electricity System Operator**

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**COMPENDIUM OF THE SCHOOL ENERGY COALITION  
(IESO Panel)**

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**SEC INTERROGATORY 11**

**INTERROGATORY**

Reference:

IESO Evidence, para. 77

Question:

Using the most recent DR Auction clearance price as a proxy the TCA auction clearance prices, please provide an estimate of the total amount expected to be paid through the TCA.

**RESPONSE**

The IESO does not believe it is appropriate to use the most recent DR Auction clearing price to determine the value of the upcoming TCA.

However the IESO can provide the total estimated cost of the DR Auction conducted in December, 2018, which will be approximately \$44M. The total amount of capacity cleared was:

- 1. Summer Commitment Period (May 01, 2019 - October 31, 2019) – 818.4 MW
- 2. Winter Commitment Period (November 01, 2019 - April 30, 2020) – 854.2 MW

The estimate does not consider the actual performance of the DR resources.



**Demand Response Auction: Post-Auction Summary Report**

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Created at Nov 08, 2019 14:43:04

**DR Auction Results**

Zone	Summer Commitment Period (May 01, 2019 - Oct 31, 2019)			Winter Commitment Period (Nov 01, 2019 - Apr 30, 2020)		
	Physical DR Cleared (MW)	Virtual DR Cleared (MW)	Auction Clearing Price (\$/MW-day)	Physical DR Cleared (MW)	Virtual DR Cleared (MW)	Auction Clearing Price (\$/MW-day)
EAST	-	64.1	234.64	-	80.7	200
ESSA	-	23	234.64	-	19	200
NIAGARA	8	20.2	234.64	8	20.2	200
NORTHEAST	40	24.8	159.93	40	24.8	113.77
NORTHWEST	34.2	-	234.64	31.5	-	200
OTTAWA	25	27.5	234.64	25	26.5	200
SOUTHWEST	2.4	142.3	234.64	2.4	189.9	200
TORONTO	72	165.4	234.64	72	203.7	200
WEST	-	54.1	234.64	-	66.8	200
<b>Ontario Total</b>	<b>181.6</b>	<b>521.4</b>		<b>178.9</b>	<b>631.6</b>	

**DR Auction Results - Participant Details**

ZONE	Demand Response Auction Participant	Summer Commitment Period (May 01, 2019 - Oct 31, 2019)	Winter Commitment Period (Nov 01, 2019 - Apr 30, 2020)
		Cleared DR (MW)	Cleared DR (MW)
EAST	DIRECT ENERGY MARKETING LIMITED	0	0
	ENEL X CANADA LTD.	17.8	30
	GC PROJECT LP	-	0
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	4.9	9.5
	NRSTOR C&I L.P.	-	0
	RODAN ENERGY SOLUTIONS INC	41.4	38.4
	VOLTUS ENERGY CANADA LTD	0	2.8
ESSA	CPOWER ENERGY MANAGEMENT CORPORATION	0	0
	ENEL X CANADA LTD.	11.2	5.5
	GC PROJECT LP	2.8	2.5
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	2	2
	RODAN ENERGY SOLUTIONS INC	7	8
	VOLTUS ENERGY CANADA LTD	-	1
NIAGARA	DIRECT ENERGY MARKETING LIMITED	0	0
	ENEL X CANADA LTD.	18.7	17.1
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	2.5	4.1
	NRSTOR C&I L.P.	-	0
	RODAN ENERGY SOLUTIONS INC	6	6
	VOLTUS ENERGY CANADA LTD	1	1
NORTHEAST	CPOWER ENERGY MANAGEMENT CORPORATION	1	1
	ENEL X CANADA LTD.	1	1
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	0	0
	RODAN ENERGY SOLUTIONS INC	22.8	22.8
	TEMPEC ENTERPRISES INC.	40	40
NORTHWEST	ENEL X CANADA LTD.	6.2	3.5
	RESOLUTE FP CANADA INC.	28	28
OTTAWA	ENEL X CANADA LTD.	5.5	5.4
	GC PROJECT LP	1.6	1.4
	IVACO ROLLING MILLS 2004 L.P.	25	25
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	1.5	0
	RODAN ENERGY SOLUTIONS INC	17.9	17.7
	VOLTUS ENERGY CANADA LTD	1	2
SOUTHWEST	CPOWER ENERGY MANAGEMENT CORPORATION	0	1.4
	DIRECT ENERGY MARKETING LIMITED	2.2	0
	ENEL X CANADA LTD.	39.5	45
	GC PROJECT LP	3.3	2.8
	GERDAU AMERISTEEL CORPORATION - CAMBRIDGE	2.4	2.4
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	41.8	42.7
	NRSTOR C&I L.P.	0	1.4
RODAN ENERGY SOLUTIONS INC	49	74.2	
	VOLTUS ENERGY CANADA LTD	6.5	22.4
TORONTO	CPOWER ENERGY MANAGEMENT CORPORATION	0	1
	DIRECT ENERGY MARKETING LIMITED	1	1
	ENEL X CANADA LTD.	48.5	58.7
	GC PROJECT LP	8	6.9

	GERDAU AMERISTEEL CORPORATION	72	72
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	38.5	48.1
	NRSTOR C&I L.P.	0	1
	PEAK POWER INC.	-	0
	RODAN ENERGY SOLUTIONS INC	64.5	74.6
	VOLTUS ENERGY CANADA LTD	4.9	12.4
WEST	DIRECT ENERGY MARKETING LIMITED	0	0
	ENEL X CANADA LTD.	15.9	22.2
	GC PROJECT LP	3.3	2.7
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	5.4	2.7
	NRSTOR C&I L.P.	-	0
	RODAN ENERGY SOLUTIONS INC	18.1	26
	VOLTUS ENERGY CANADA LTD	11.4	13.2

## DR Qualified Capacity - Participant Details

ZONE	Demand Response Auction Participant	Summer Commitment Period (May 01, 2019 - Oct 31, 2019)			Winter Commitment Period (Nov 01, 2019 - Apr 30, 2020)		
		Total DR Qualified (MW)	Surplus Total DR Qualified (MW)	Surplus Virtual DR Qualified (MW)	Total DR Qualified (MW)	Surplus Total DR Qualified (MW)	Surplus Virtual DR Qualified (MW)
BRUCE	CPOWER ENERGY MANAGEMENT CORPORATION	1	1	1	1	1	1
	ENEL X CANADA LTD.	5	5	5	5	5	5
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	5	5	5	5	5	5
	RODAN ENERGY SOLUTIONS INC	10	10	10	10	10	10
EAST	CPOWER ENERGY MANAGEMENT CORPORATION	12	12	12	12	12	12
	DIRECT ENERGY MARKETING LIMITED	5	5	5	5	5	5
	ENEL X CANADA LTD.	39	21.2	21.2	44	14	14
	GC PROJECT LP	1.5	1.5	1.5	1.2	1.2	1.2
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	15	10.1	10.1	20	10.5	10.5
	NRSTOR C&I L.P.	0	0	0	1.2	1.2	1.2
	RODAN ENERGY SOLUTIONS INC	50.4	9	9	38.4	0	0
	VOLTUS ENERGY CANADA LTD	10	10	10	10	7.2	7.2
ESSA	ALECTRA UTILITIES CORPORATION	3	3	3	0	0	0
	AMP SOLAR GROUP INC.	4.9	4.9	4.9	4.9	4.9	4.9
	CPOWER ENERGY MANAGEMENT CORPORATION	2	2	2	1	1	1
	ENEL X CANADA LTD.	18	6.8	6.8	20	14.5	14.5
	ENERGYHUB CANADA ULC	1.5	1.5	1.5	0	0	0
	GC PROJECT LP	3.5	0.7	0.7	2.9	0.4	0.4
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	10	8	8	10	8	8
	NRSTOR C&I L.P.	0	0	0	0.4	0.4	0.4
	RODAN ENERGY SOLUTIONS INC	11.1	4.1	4.1	11.1	3.1	3.1
VOLTUS ENERGY CANADA LTD	5.5	5.5	5.5	5.5	4.5	4.5	
NIAGARA	CPOWER ENERGY MANAGEMENT CORPORATION	1	1	1	1	1	1
	DIRECT ENERGY MARKETING LIMITED	5	5	5	5	5	5
	ENEL X CANADA LTD.	30	11.3	9.5	30	12.9	11.1
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	15	12.5	12.5	15	10.9	10.9
	NRSTOR C&I L.P.	0	0	0	1.6	1.6	1.6
	RODAN ENERGY SOLUTIONS INC	17.3	11.3	7.3	13	7	3
	VOLTUS ENERGY CANADA LTD	8.6	7.6	7.6	8.6	7.6	7.6
NORTHEAST	CPOWER ENERGY MANAGEMENT CORPORATION	5	4	4	5	4	4
	ENEL X CANADA LTD.	5	4	4	10	9	9
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	20	20	20	20	20	20
	RODAN ENERGY SOLUTIONS INC	35.6	12.8	12.8	35.6	12.8	12.8
	TEMPEC ENTERPRISES INC.	40	0	0	40	0	0
	VOLTUS ENERGY CANADA LTD	8	8	8	8	8	8
NORTHWEST	CPOWER ENERGY MANAGEMENT CORPORATION	1	1	1	1	1	1
	ENEL X CANADA LTD.	10	3.8	2.1	10	6.5	2.1
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	15	15	2.1	15	15	2.1
	RESOLUTE FP CANADA INC.	29	1	0	29	1	0
	RODAN ENERGY SOLUTIONS INC	5	5	0	5	5	0
	VOLTUS ENERGY CANADA LTD	2.1	2.1	2.1	2.1	2.1	2.1
OTTAWA	CPOWER ENERGY MANAGEMENT CORPORATION	3	3	3	2	2	2
	ENEL X CANADA LTD.	10	4.5	4.5	10	4.6	4.6
	GC PROJECT LP	4.1	2.5	2.5	3.4	2	2
	IVACO ROLLING MILLS 2004 L.P.	25	0	0	25	0	0
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	10	8.5	8.5	10	10	10
	RODAN ENERGY SOLUTIONS INC	21.8	3.9	3.9	30	12.3	12.3
	VOLTUS ENERGY CANADA LTD	6.4	5.4	5.4	6.4	4.4	4.4
SOUTHWEST	ALECTRA UTILITIES CORPORATION	3	3	3	0	0	0
	AMP SOLAR GROUP INC.	0	0	0	2.1	2.1	2.1
	CPOWER ENERGY MANAGEMENT CORPORATION	16	16	16	15	13.6	13.6

## Demand Response Auction: Post-Auction Summary Report

	DIRECT ENERGY MARKETING LIMITED	10	7.8	7.8	10	10	10
	ENEL X CANADA LTD.	78	38.5	38.5	88	43	43
	ENERGYHUB CANADA ULC	1.5	1.5	1.5	0	0	0
	GC PROJECT LP	9.6	6.3	6.3	7.8	5	5
	GERDAU AMERISTEEL CORPORATION - CAMBRIDGE	2.4	0	0	2.4	0	0
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	135	93.2	93.2	135	92.3	92.3
	NRSTOR C&I L.P.	1.4	1.4	1.4	10.7	9.3	9.3
	RODAN ENERGY SOLUTIONS INC	75.9	26.9	26.9	79.5	5.3	5.3
	VOLTUS ENERGY CANADA LTD	53.7	47.2	47.2	53.7	31.3	31.3
TORONTO	ALECTRA UTILITIES CORPORATION	10	10	10	0	0	0
	AMP SOLAR GROUP INC.	5.3	5.3	2.1	5.3	5.3	2.1
	CPOWER ENERGY MANAGEMENT CORPORATION	12	12	12	12	11	11
	DIRECT ENERGY MARKETING LIMITED	22	21	21	22	21	21
	ENEL X CANADA LTD.	80	31.5	31.5	90	31.3	31.3
	ENERGYHUB CANADA ULC	1.5	1.5	1.5	0	0	0
	GC PROJECT LP	14.1	6.1	6.1	11.4	4.5	4.5
	GERDAU AMERISTEEL CORPORATION	72	0	0	72	0	0
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	90	51.5	51.5	90	41.9	41.9
	NRSTOR C&I L.P.	1	1	1	7.1	6.1	6.1
	OHMCONNECT, INC	3	3	3	3	3	3
	PEAK POWER INC.	0	0	0	2	2	2
	RODAN ENERGY SOLUTIONS INC	79.8	15.3	15.3	75	0.4	0.4
	TORONTO HYDRO-ELECTRIC SYSTEM LIMITED	10	10	10	0	0	0
	VOLTUS ENERGY CANADA LTD	35.4	30.5	30.5	35.4	23	23
WEST	CPOWER ENERGY MANAGEMENT CORPORATION	6	6	6	6	6	6
	DIRECT ENERGY MARKETING LIMITED	10	10	10	10	10	10
	ENEL X CANADA LTD.	30	14.1	14.1	34	11.8	11.8
	GC PROJECT LP	4.7	1.4	1.4	3.8	1.1	1.1
	NRG CURTAILMENT SOLUTIONS CANADA, INC.	10	4.6	4.6	10	7.3	7.3
	NRSTOR C&I L.P.	0	0	0	1.2	1.2	1.2
	RODAN ENERGY SOLUTIONS INC	30.7	12.6	12.6	33.6	7.6	7.6
	VOLTUS ENERGY CANADA LTD	20.9	9.5	9.5	20.9	7.7	7.7

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**OEB STAFF INTERROGATORY 8**

2 **INTERROGATORY**

3 Ref: Presentation to IESO Board - IESO Market Rule Amendments: Transitional Capacity  
4 Auction, August 28, 2019, p.6

5 Questions:

6 (a) IESO staff notes at slide 6 in the presentation that “Access to energy payments for DR  
7 resources with a capacity obligation has not been material historically nor is it expected to be  
8 material under the TCA rules for the December 2019 auction”. Please explain this statement,  
9 including the meanings of “access” and “material” in this context.

10 Further on slide 6, IESO staff also notes “Economic activations of DR resources have been very  
11 limited to date, and we do not expect the likelihood of economic activation to increase  
12 appreciably in 2020”.

13 (b) Please clarify the number of economic activations of DR resources in each year since the  
14 DRA was introduced in 2015 for: (1) HDR resources; and (2) Dispatchable load resources.

15 (c) Please describe the IESO’s expectations for 2020 in relation to the number of economic  
16 activations of DR resources under the current TCA design. Please describe the anticipated  
17 market conditions (such as total load, MCP and/or HOEP) at times when activations, if any,  
18 would be expected.

19 (d) Would IESO expect the frequency of activations to change if DR resources received an  
20 energy payment and, if so, how?

21 **RESPONSE**

22 (a) In the referenced statement, the term “access” means an opportunity for a DR resource  
23 to receive an energy payment if activated. The IESO stated that access has not been historically  
24 “material” because HDR resources have only been economically dispatched on one occasion  
25 since the introduction of the DRA in 2015 and dispatchable loads have been dispatched less  
26 than 1% of the time over that same time period.

27 Based on the historical infrequency of DR resource activation in the DRA, and the IESO’s short-  
28 term forecast for capacity need, the IESO estimates a very low probability of economic DR  
29 resource activation during the December 2019 TCA commitment period. Given this low

1 probability of DR resource activation, theoretical access to energy payments should have no  
 2 material impact on DR auction offers, and so would have no effect on their competitiveness in  
 3 the auction.

4 (b) The number of activations under the DRA by year are shown on the table below for DL  
 5 resources only.

	Activation (Interval Based)	Percentage of All Intervals within hours of availability (Interval Based)	Activation (Hourly Based)	Percentage of all hours within hours of availability (Hourly Based)
2016 (Since May 1st)	244	0.40%	74	1.45%
2017	142	0.20%	44	0.72%
2018	79	0.10%	34	0.49%
2019 to date	64	0.09%	23	0.38%
Total	529	0.18%	175	0.72%

6 Where:

- 7 • Activation (Interval Based) – Occurrences (count of intervals) that DLs were  
 8 activated
- 9 • Activation (Hourly Based) – Occurrences (count of hours) that DLs were  
 10 activated

11 Percentage of all hours within hours of availability - percentage of all hours within the  
 12 availability window of the mentioned period

13 There has only been one activation for three hours of an HDR resource, this occurred in July,  
 14 2019.

15 (c) The IESO does not anticipate any change in the frequency of activations for the December  
 16 2019 commitment. There has been no material change in the target capacity for the December  
 17 2019 commitment period (675 MW for summer and winter commitment periods) as compared  
 18 to the December 2018 commitment period (611 MW for summer and 606 MW for winter). The  
 19 total target capacity is negligible in the context of total system need.

1 The IESO does not anticipate any activations of HDR resources during the December 2019  
2 commitment period.

3 The IESO does not anticipate any activations of HDR resources and anticipated a similar  
4 historical activation of DL resources during the December 2019 commitment period.

5 (d) No. For the reasons described in paragraph (a), the IESO would not expect any energy  
6 payments to be material in respect of the December 2019 commitment period. Therefore, the  
7 IESO does not expect that the availability of an energy payment would influence frequency of  
8 activations of DR resources. As Navigant stated in section 3.1.5 of its report (Exhibit "I" to the  
9 Affidavit of David Short sworn October 25, 2019, "[l]arge commercial and industrial customers  
10 with a high value of lost load are not likely to change their bids into the energy market because  
11 of utilization payments".



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**SEC INTERROGATORY 12**

**INTERROGATORY**

Reference:

IESO Evidence, para. 92(b)

Question:

The IESO has provided its view on its expectation regarding the frequency of economic activation of DR resources. On a comparative basis, what is its view on the forecast quantity of energy that the generators who have capacity obligations as a result of the TCA will produce.

**RESPONSE**

The IESO's expectations with respect to economic activation of DR resources is informed by four years of successful DR auctions and stable demand and supply conditions forecasted for 2020. The IESO and the MSP have had an opportunity to examine DR resource bids and their associated economic dispatch frequency. By contrast there is no energy market history for generators with capacity auction obligations relative to which the IESO can form a comparable view.

1                                    **IESO'S RESPONSES TO SEC INTERROGATORIES**

2    **SEC INTERROGATORY 1**

3    **INTERROGATORY**

4    SEC wishes to better understand the impact on ratepayers of the Market Rules amendments at  
5    issue, and AMPCO's position that Demand Response providers should be eligible for energy  
6    payment, Please provide the IESO's views, including a copy of all analysis that is has  
7    undertaken or is aware of, regarding impact on costs that will ultimately be borne by Ontario  
8    ratepayers of providing energy payments to Demand Response providers.

9    **RESPONSE**

10   The IESO has not yet performed analysis of the impact on Ontario ratepayers of making energy  
11   payments to DR resources. In its report, Navigant noted that any reductions in the IESO market  
12   price may simply be offset by out of market Global Adjustment payments. As described in the  
13   response to OEB Staff 5, the IESO has initiated a consultation with stakeholders and will be  
14   undertaking a study on this issue.

**IESO RESPONSES TO SCHOOL ENERGY COALITION SUPPLEMENTAL INTERROGATORY**

**SEC INTERROGATORY 7**

**INTERROGATORY**

Reference:

IESO Evidence, para. 1

Question:

Is there a forecast capacity gap before the summer of 2023? If so, please provide details.

**RESPONSE**

Yes. Refer to IESO Evidence, Tab 15 “Technical Planning Conference Presentation September 13, 2018”, slide 51. See row on “Summer Adequacy: Reference Outlook Without Existing Resources” :

