IESO RESPONSES TO SCHOOL ENERGY COALITION SUPPLEMENTAL INTERROGATORY

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SEC INTERROGATORY 7

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5 **INTERROGATORY**

- 6 Reference:
- 7 IESO Evidence, para. 1
- 8 Question:
- 9 Is there a forecast capacity gap before the summer of 2023? If so, please provide details.

10 **RESPONSE**

- 11 Yes. Refer to IESO Evidence, Tab 15 "Technical Planning Conference Presentation September
- 12 13, 2018", slide 51. See row on "Summer Adequacy: Reference Outlook Without Existing 13 Resources" :
- 14

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	023	2024)25	2026		027	2028		029	2030			2032	2033	2034	
Capacity Surplus (+)/Deficit (-) (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Summer Adequacy: Reference Outlook	1,454	81	622	433	-1,377	-1,673	-3,711	-3,099	-2,536	-2,330	-2,118	-2,065	-2,192	-1,729	-1,895	-1,625	-1,566
Summer Adequacy: Reference Outlook Without Existing Res.	847	-811	-335	-583	-3,844	-4,686	-6,878	-6,736	-6,292	-6,018	-8,689	-9,096	-10,077	-10,418	-10,475	-10,724	-11,273
Winter Adequacy: Reference Outlook	2,091	1,364	1,408	1,698	435	-192	-1,229	-1,770	-1,343	-366	47	825	184	-2	983	-176	523
Winter Adequacy: Reference Outlook Without Existing Res.	2,060	710	1,143	1,410	-1,085	-2,263	-4,063	-5,124	-4,838	-3,675	-4,833	-5,4 <mark>51</mark>	-7,344	-7,921	-7,306	-8,834	-8,419
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3 **INTERROGATORY**

- 4 Reference:
- 5 IESO Evidence, para. 14
- 6 Question:

Did the IESO undertake a business case or similar analysis created for the TCA? If so, please
 provide a copy.

9 **RESPONSE**

- 10 The IESO assessed the costs and benefits of the TCA. At the time of the assessment, the project
- 11 was expected to deliver a conservatively calculated net benefit of approximately \$180M compared
- 12 to traditional contract procurement over 5 years of the TCA (p. 7). A copy of the assessment was
- 13 included in the *License Filings*, and is available at:
- 14 http://www.rds.oeb.ca/HPECMWebDrawer/Record/654291/File/document
- 15
- 16

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3 INTERROGATORY 9

- 4 Reference:
- 5 Question:

6 SEC understands that the IESO plans to amend the market rules between now and 2023 to allow

7 for other resources to take part in the TCA. With the exception of the necessary amendments for

8 that purpose, what other market rules amendments does the IESO believe will be required before

9 it undertakes the auction to fulfill the 2023 forecast capacity gap?

10 **RESPONSE**

The IESO has not determined what market rule amendments may be required between now and 2023 beyond those required to enable other resources to participate in the capacity auction for the June 2020 and December 2020 auctions. The IESO is currently engaging with stakeholders on the evolution of the capacity auction to fulfill the 2023 forecast capacity gap. The content of the subsequent market rules will be informed by the learnings gained through the preceding auctions.

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3 **INTERROGATORY**

- 4 Reference:
- 5 Question:

6 Do the Market Rules require the IESO to undertake the TCA (or previous DR Auction), or do they

7 simply provide the option for the IESO to decide to undertake the TCA (or previous DR Auction)?

8 **RESPONSE**

- 9 The Market Rules require the IESO to conduct capacity auctions. See Market Rules, Chapter 7,
- 10 section 18.5.1.

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3 **INTERROGATORY**

- 4 Reference:
- 5 IESO Evidence, para. 77
- 6 Question:
- 7 Using the most recent DR Auction clearance price as a proxy the TCA auction clearance prices,
- 8 please provide an estimate of the total amount expected to be paid through the TCA.

9 RESPONSE

- 10 The IESO does not believe it is appropriate to use the most recent DR Auction clearing price to 11 determine the value of the upcoming TCA.
- 12 However the IESO can provide the total estimated cost of the DR Auction conducted in December,
- 13 2018, which will be approximately \$44M. The total amount of capacity cleared was:
- 14 1. Summer Commitment Period (May 01, 2019 October 31, 2019) 818.4 MW
- 15 2. Winter Commitment Period (November 01, 2019 April 30, 2020) 854.2 MW
- 16 The estimate does not consider the actual performance of the DR resources.
- 17

<u>Help</u>

Demand Response Auction: Post-Auction Summary Report

Created at Nov 08, 2019 14:43:04

DR Auction Results

Connecting Today. Powering Tomorrow.

Zone		Summer Commitment Perioc May 01, 2019 - Oct 31, 2019		Winter Commitment Period (Nov 01, 2019 - Apr 30, 2020)				
Zone	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		
Ontario Total	181.6	521.4		178.9	631.6			

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)		
	DIRECT ENERGY MARKETING LIMITED	0	0		
	ENEL X CANADA LTD.	17.8	30		
	GC PROJECT LP	-	0		
EAST	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		
	CPOWER ENERGY MANAGEMENT CORPORATION	0	0		
	ENEL X CANADA LTD.	11.2	5.5		
ESSA	GC PROJECT LP	2.8	2.5		
ESSA	NRG CURTAILMENT SOLUTIONS CANADA, INC.	2	2		
	RODAN ENERGY SOLUTIONS INC	7	8		
	VOLTUS ENERGY CANADA LTD	-	1		
	DIRECT ENERGY MARKETING LIMITED	0	0		
	ENEL X CANADA LTD.	18.7	17.1		
NIAGARA	NRG CURTAILMENT SOLUTIONS CANADA, INC.	2.5	4.1		
NIAGAKA	NRSTOR C&I L.P.	-	0		
	RODAN ENERGY SOLUTIONS INC	6	6		
	VOLTUS ENERGY CANADA LTD	1	1		
	CPOWER ENERGY MANAGEMENT CORPORATION	1	1		
	ENEL X CANADA LTD.	1	1		
NORTHEAST	NRG CURTAILMENT SOLUTIONS CANADA, INC.	0	0		
	RODAN ENERGY SOLUTIONS INC	22.8	22.8		
	TEMBEC ENTERPRISES INC.	40	40		
NORTHWEST	ENEL X CANADA LTD.	6.2	3.5		
NORTHWEST	RESOLUTE FP CANADA INC.	28	28		
	ENEL X CANADA LTD.	5.5	5.4		
	GC PROJECT LP	1.6	1.4		
OTTANA	IVACO ROLLING MILLS 2004 L.P.	25	25		
OTTAWA	NRG CURTAILMENT SOLUTIONS CANADA, INC.	1.5	0		
	RODAN ENERGY SOLUTIONS INC	17.9	17.7		
	VOLTUS ENERGY CANADA LTD	1	2		
	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		
SOUTHWEST	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		

11/20/2019

Demand Response Auction: Post-Auction Summary Report

	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
	DIRECT ENERGY MARKETING LIMITED	0	0
	ENEL X CANADA LTD.	15.9	22.2
	GC PROJECT LP	3.3	2.7
WEST	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

			mmer Commitment Pe y 01, 2019 - Oct 31, 20					
ZONE	Demand Response Auction Participant	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)	
	CPOWER ENERGY MANAGEMENT CORPORATION	1	1	1	1	1	1	
	ENEL X CANADA LTD.	5	5	5	5	5	5	
BRUCE	NRG CURTAILMENT SOLUTIONS CANADA, INC.	5	5	5	5	5	5	
	RODAN ENERGY SOLUTIONS INC	10	10	10	10	• 01. 2019 - Apr 30, 20 Surplus Total DR Qualified (MW) 1 5 10 5 10 12 14 1.2 0 7.2 0 4.9 1 4.9 0.4 3.1 4.5 12.9 10.4 7.2 0 4.9 1 5 10.1 12.9 10.4 7 6 7 7.6 4 9 20 12.8 0 12.8 0 12.8 0 12.1 2 1.6 7 6.5 15 12.1 2.1	10	
	CPOWER ENERGY MANAGEMENT CORPORATION	12	12	12	12	12 5 14 1.2 10.5 1.2 0 7.2 0 4.9 1 14.5 0 0.4 8 0.4 8 0.4 3.1 4.5 1 5 5 12.9 10.9	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	
EAST	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	
	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	
ESSA	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	v 01, 2019 - Apr 30, 20 Surplus Total DR Qualified (MW) 1 5 10 5 10 12 5 14 1.2 0 7.2 0 4.9 1 0.4.9 1.2 0.4.9 1.2 0 4.9 0.4.9 1 1.5 0 1.4.5 0 1.4.9 1.5 1.72 0.4 1.5 1.1 5 1.2.9 1.6 7 1.6 7 1.6 7 1.6 7 1.6 7 1.6 7 2.0 1.2.8	4.5	
	CPOWER ENERGY MANAGEMENT CORPORATION	1	1	1	5.5	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	
NIAGARA	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	
	RODAN ENERGY SOLUTIONS INC	17.3	11.3	7.3	13		3	
	VOLTUS ENERGY CANADA LTD	(MW)QION15110101012105391151015010103311031021031013.51101.5101.5101.5101.5101.5101.5101.1.15.511015.511011051015.511051015.5110510510510510510110510110110110110211031021.8101101101101101101101101101101101101101101101101101101101	7.6	7.6	8.6	7.6	7.6	
	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	
NORTHEAST	RODAN ENERGY SOLUTIONS INC		12.8	12.8	35.6		12.8	
	TEMBEC ENTERPRISES INC.		0	0	40		0	
	VOLTUS ENERGY CANADA LTD		8	8	8	8	8	
	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	
NORTHWEST	RESOLUTE FP CANADA INC.		1	0	29		0	
	RODAN ENERGY SOLUTIONS INC		5	0	5	Qualified (MW) 1 5 10 12 5 112 5 112 5 114 1.2 0 1.2 10.5 1.2 0 1.2 0 1.2 0 1.2 0 1.2 0 1.2 0 1.2 0 1.2 0 1.2 0 14.5 0 14.5 1 5 1.2.9 1.6 7 1.6 7 1.6 7 1.6 1.1 9 20 12.8 0 1.1 </td <td>0</td>	0	
	VOLTUS ENERGY CANADA LTD		2.1	2.1	2.1		2.1	
	CPOWER ENERGY MANAGEMENT CORPORATION		3	3	2		2	
	ENEL X CANADA LTD.		4.5	4.5	10		4.6	
	GC PROJECT LP		2.5	2.5	3.4		2	
OTTAWA	IVACO ROLLING MILLS 2004 L.P.		0	0	25		0	
	NRG CURTAILMENT SOLUTIONS CANADA, INC.		8.5	8.5	10		10	
	RODAN ENERGY SOLUTIONS INC		3.9	3.9	30		12.3	
	VOLTUS ENERGY CANADA LTD		5.4	5.4	6.4		4.4	
SOUTHWEST	ALECTRA UTILITIES CORPORATION		3	3	0		0	
	AMP SOLAR GROUP INC.		0	0	2.1		2.1	
	CPOWER ENERGY MANAGEMENT CORPORATION		16	16	15		13.6	

reports.ieso.ca/public/DR-PostAuctionSummary/PUB_DR-PostAuctionSummary_2019.xml

11/20/2019

Demand Response Auction: Post-Auction Summary Report

1	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
	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
TORONTO	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	43 0 5 0 92.3 9.3 5.3 31.3 0 5.3 11 21 31.3 0 4.5 0 41.9 6.1 3 2 0.4	23
	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
WEST	GC PROJECT LP	4.7	1.4	1.4	3.8	1.1	1.1
WEST	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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3 **INTERROGATORY**

- 4 Reference:
- 5 IESO Evidence, para. 92(b)
- 6
- 7 Question:
- 8 The IESO has provided its view on its expectation regarding the frequency of economic activation
- 9 of DR resources. On a comparative basis, what is its view on the forecast quantity of energy that
- 10 the generators who have capacity obligations as a result of the TCA will produce.

11

12 **RESPONSE**

13 The IESO's expectations with respect to economic activation of DR resources is informed by four

14 years of successful DR auctions and stable demand and supply conditions forecasted for 2020.

15 The IESO and the MSP have had an opportunity to examine DR resource bids and their

16 associated economic dispatch frequency. By contrast there is no energy market history for 17 generators with capacity auction obligations relative to which the IESO can form a comparable

18 view.

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3 **INTERROGATORY**

- 4 Reference:
- 5 IESO Evidence, para. 107
- 6 Question:
- 7 Please provide an example of the situation that Navigant was alluding to regarding more DR
- 8 activations may not reduce costs to customers due to the Global Adjustments.

9 **RESPONSE**

10 The issue identified by Navigant is illustrated at paragraph 62 of the Evidence of Dr. Rivard.

2 **INTERROGATORY**

3 Reference:

1

- 4 KingstonCoGen, Evidence of Brian Rivard, para. 73
- 5 Question:

Please provide the IESO's views on the information that Mr. Rivard says is required for the IESO
to develop a net benefits test.

8 **RESPONSE**

9 The IESO is in the process of studying the issue of energy payments and the possibility of 10 developing a net benefits for Ontario. The IESO has not yet determined what additional 11 information would be required to develop an Ontario-specific net benefits test. The IESO will 12 consider the comments of Dr. Rivard as part of its work