

1 Q. **Reference: Application**

2 Please provide for the hydro plants: age, capacity, annual energy production, storage capacity  
3 and levelized cost.

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6 A. Tables 1 and 2 provide the age, capacity, and storage capacity for Newfoundland and Labrador  
7 Hydro’s (“Hydro”) Island hydro generation facilities and Exploits facilities, respectively. Tables 3  
8 and 4 provide the Annual Energy Production (GWh) by facility for the period from 2011 to 2020.

9 **Table 1: Island Hydro Generation Parameters by Facility – Hydro (as of 2020)**

Facility	Unit	Parameters		
		Age	Capacity (MVA <sup>1</sup> )	Storage Capacity (MCM <sup>2</sup> )
Bay d'Espoir Powerhouse 1	1	54	85	839
	2	54	85	
	3	54	85	
	4	53	85	
	5	51	85	
	6	51	85	
Bay d'Espoir Powerhouse 2	7	44	172	
Upper Salmon	1	38	88.4	47
Cat Arm	1	36	75.5	448
	2	36	75.5	
Hinds Lake	1	41	83.3	273
Granite Canal	1	18	46.7	82
Paradise River	1	32	8.9	Run-of-River <sup>3</sup>

<sup>1</sup> Megavolt ampere (“MVA”).

<sup>2</sup> Million cubic metres (“MCM”).

<sup>3</sup> A run-of-river facility considers volumetric flow of water through the generating station rather than storage capacity. There is little or no water storage provided and the generating facility is subject to seasonal river flows.

**Table 2: Island Hydro Generation Parameters by Facility – Exploits (as of 2020)**

Facility	Unit	Parameters		
		Age	Capacity (MVA)	Storage Capacity (MCM)
Grand Falls	4	83	30.7	Run-of-River
	5	71	5	
	6	71	6	
	8	71	6	
	9	18	33.3	
Bishops Falls	1	19	3	Run-of-River
	2	19	3	
	3	19	3	
	4	19	3	
	5	19	3	
	6	19	3	
	7	71	2.25	
Star Lake	1	23	18.4	90

**Table 3: Island Hydro Generation Annual Energy Production (GWh) by Facility – Hydro (2011–2020)**

Facility	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bay d'Espoir	2,811.4	2,627.7	2,876.4	2,723.8	2,855.0	2,514.4	2,514.4	2,869.9	2,521.4	2,605.3
Hinds Lake	324.1	327.4	386.7	362.2	369.0	335.6	335.6	331.7	324.8	300.5
Upper Salmon	448.3	551.1	436.5	519.9	592.5	572.9	572.9	562.6	529.6	530.9
Cat Arm	659.7	821.5	693.3	775.5	739.9	833.0	833.0	895.7	871.9	814.2
Paradise River	36.1	34.5	36.5	37.3	24.9	28.4	28.4	38.9	31.2	38.4
Granite Canal	242.9	241.9	268.8	250.4	252.1	232.1	232.1	246.7	256.7	231.4
Snook's Arm-Venam's Bight	4.2	3.5	3.5	2.2	3.9	3.2	3.2	2.5	1.7	0.0
Roddickton	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.5	0.4	0.0

**Table 4: Island Hydro Generation Annual Energy Production (GWh) by Facility – Exploits (2011–2020)**

Facility	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Star Lake	129.8	144.4	140.6	122.4	135.3	135.7	138.0	140.4	125.7	132.2
Grand Falls	435.6	469.7	475.7	450.5	437.7	391.9	403.5	449.3	465.7	447.4
Bishop's Falls	62.7	104.8	114.2	124.0	121.8	103.4	115.7	120.4	108.2	121.3

1 With respect to the request for levelized cost, Hydro is able to provide the annual cost of  
2 hydraulic generation recovered through rates from customers on the Island Interconnected  
3 System.<sup>4</sup>

**Table 5: Island Interconnected System Hydraulic Generation Revenue Requirement**

<b>Cost Type</b>	<b>\$</b>
Depreciation Expense	17,084,956
Operations and Maintenance	11,739,614
Return on Debt	27,860,044
Return on Equity	12,267,287
<b>Total</b>	<b>68,951,901</b>

4 The above costs translate to an average unit rate of 1.5 cents per kWh.

5 With respect to the Exploits assets, Hydro's cost of energy is 4 ¢/kWh.<sup>5</sup>

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<sup>4</sup> Based on Hydro's 2019 Test Year Cost of Service Study.

<sup>5</sup> As per the Exploits power purchase agreement directed by the Government of Newfoundland and Labrador.