Q. (Reference Application Schedule B, page 3 of 98)

(a) **Please provide a table for NP's 23 hydro generation facilities showing age, capacity, annual energy production, storage capacity, capital spending over the past 10 years and levelized cost.**

(b) **Is the Mobile electrical power plant in operation? What maintenance has gone into that plant over the past five (5) years? Does NP's ratepayers continue to pay for the maintenance and operation of the Mobile watershed power plant? Please provide an update on discussions with the City of St. John's in reference to the Mobile issues.**

A. (a) Attachment A provides a table showing the age, capacity, annual energy production, storage capacity, capital spending over the past 10 years and levelized cost for Newfoundland Power's 23 hydro generation facilities.

(b) The Mobile Hydro Plant is still in service.

Table 1 provides operating and capital expenditures associated with the Mobile Hydro Plant over the last 5 years.

Table 1:
Mobile Plant Expenditures
2015 to 2019
($000s)

	2015	**2016**	**2017**	**2018**	**2019**
Operating expenditures[1]	90	59	41	65	41
Capital expenditures	14	-	79	10	-
Total	**104**	**59**	**120**	**75**	**41**

The cost of maintaining and operating the Mobile Hydro Plant was included in the 2020 Test Year used to set Newfoundland Power current customer rates. The Mobile plant provides approximately 40 GWh of low-cost energy production annually to the benefit of Newfoundland Power's customers.[2]

[1] Operating expenditures include costs to operate and maintain the plant. The Company cannot readily separate labour costs between operations and maintenance. In terms of non-labour costs, maintenance expenditures averaged $14,000/year over the 5-year period 2015 to 2019. The figure also includes generation taxes of approximately $3,000 a year.

[2] The estimated reduction in purchased power expense related to 40 GWh of energy is approximately $7.3 million. This is calculated as: 40 GWh x the 2nd block rate charged by Hydro of 18.165 ¢/kWh approved in Order No. P.U. 30 (2019). Further, the capacity of the Mobile Plant reduces the demand charges billed annually by Hydro.

Since 2008, Newfoundland Power and the City of St. John's ("the City") have been engaged in an arbitration process to determine the outcome of the City's purported termination of the lease under which Newfoundland Power held the rights to use the waters of the Mobile River watershed for electricity generation. An initial ruling by the arbitration panel was appealed to the courts. In 2013, the Supreme Court of Canada dismissed the Company's application for leave to appeal a decision of the Newfoundland and Labrador Court of Appeal. Since that time, Newfoundland Power and the City have been engaged in formal negotiations. The City and Newfoundland Power recently reached agreement in principle on the matter, and are currently negotiating the terms of a definitive agreement. If the negotiations are successful, the arbitration will be adjourned.

Newfoundland Power Hydroelectric Facilities
Statistics and Cost Information

Newfoundland Power Hydroelectric Facilities Statistics and Cost Information								
Plant	**Year Commissioned**	**Maximum Rated Demand Capacity[1] (MW)**	**Maximum Winter Demand Capacity[2] (MW)**	**Normal Annual Energy Production (GWh)**	**Maximum Storage Capacity (GWh)**	**10 Year Capital[3] ($000)**	**Levelized Cost[4] (¢/kWh)**	**Year Levelized Cost was Determined**
Cape Broyle[5]	1954	6.280	6.280	34.30	19.789	786		
Horsechops[5]	1954	8.130	7.900	42.40		2,093	1.02	2010
Mobile[5]	1951	10.500	10.500	41.10	15.804	138		
Morris[5]	1983	1.100	0.900	6.60		86		
Petty Harbour[6]	1910/1924/1986	5.250	4.700	16.30	2.232	1,160	3.31	2019
Pierre's Brook	1931	4.100	4.100	24.90	5.752	15,871	4.87	2015
Rocky Pond[5]	1941	3.250	3.250	14.40	6.770	2,362		
Tors Cove[5,6]	1941/1951	6.500	6.300	27.90		5,724	3.54	2016
Seal Cove	1924	3.580	3.000	9.40	0.639	1,468	2.83	2009
Topsail[7]	1983	2.600	2.200	13.30	1.718	1,824	6.69	2020
Heart's Content	1959	2.700	2.700	8.40	0.463	7,204	5.93	2012
New Chelsea[5]	1957	4.300	4.300	17.60	8.914	1,875	1.37	2012
Pitman's Pond[5]	1959	0.625	0.570	2.90		1,560	6.90	2012
Victoria	1914	0.550	0.490	3.10	0.762	146		
Fall Pond	1939	0.350	0.240	1.00	0.040	116		
Lawn	1983	0.600	0.520	2.60	0.000	1,174		
West Brook	1942	0.680	0.420	2.80	0.000	683	5.38	2010
Lockston[6]	1956/1962	3.000	3.000	8.50	2.716	3,391	5.92	2011
Port Union	1917	0.511	0.511	2.30	0.106	2,795		
Rattling Brook	1959	14.800	14.800	78.20	16.523	7,857	1.58	2019
Sandy Brook	1963	6.310	6.310	27.50	3.175	3,632	2.37	2010

Lookout Brook[6]	1958/1984	5.800	5.600	28.90	4.064	2,933	2.68	2009
Rose Blanche	1998	6.000	5.600	24.70	1.000	3,059		
Totals		**97.516**	**94.191**	**439.10**	**90.467**	**67,937**		

Notes

1 Hydro plant ratings are based on initial design for each unit including full hydraulic supply and 100% gate.

2 Hydro plant "maximum winter demand capacities" reflect the performance of the generating units during winter capacity tests. Reduced capacities would reflect issues such as actual water levels during testing, ability of forebay to sustain production over the one-hour test period, aggregate capacities at plants with multiple generating units, and reduction of output due to wear and tear factors such as gates not achieving 100% fully open position and loss of runner efficiency over time.

3 Capital expenditures in this table do not include insurance proceeds received that would have partially offset the expenditure. Between 2010 and 2012, insurance proceeds of approximately $2.4 million were received to offset capital expenditures required following Hurricane Igor. This primarily relates to the Lawn and Port Union hydro plants. In 2017, insurance proceeds of approximately $1.6 million were received to offset capital expenditures at the Rose Blanche Hydro plant.

4 Levelized costs estimates are determined prior to major upgrades to a generating plant. Those plants without a levelized cost have not had a major upgrade performed on them since 2009. The Levelized Cost is based on a forward looking estimate of the cost to continue operation which includes future capital and operating expenditures to operate the plant over a 50 year period. 50 years was used as the anticipated remaining life of the hydroelectric plant if fully maintained.

5 Cape Broyle/Horsechops, Mobile/Morris, Rocky Pond/Tors Cove and New Chelsea/Pitman's Pond are developments located on common storage systems.

6, 7 Multiple years indicate that the generating units were installed at different times. Topsail plant was originally built in 1932. The turbine-generator was replaced in 1983 with a larger capacity unit.