Q. With reference to Hydro's responses to IIC-NLH-017 and IIC-NLH-034:

Please provide a table presenting the same information as requested by TC-IC-NLH-003 but focused only on the Hydro perspective. In this regard, any program costs or incentives not provided by Hydro (i.e, provided by NP from their utility Revenue Requirement) should be excluded, and the incremental energy rate should reflect that paid by NP when programs affect wholesales.

A. Please see TC-IC-NLH-004, Attachment 1.

Conservation Programs: 2021–2025 Plan
Program Estimates (2021)[1]
Utility Programs - Hydro Only

	Annual Saved Energy (MWh)	Annual Saved Capacity (kW)	Average Customer Electricity Rate[2] ($/MWh)	Average Customer Demand Rate[3] ($/kW)	Marginal Cost of Energy[4] ($/MWh)	Marginal Cost of Capacity ($/kW)	System Marginal Energy Savings ($)	System Marginal Capacity Savings ($)	Total Marginal System Savings ($)	Lost Revenue ($)	Net System Savings[5] ($)	Program Costs[6] ($)	Incentives Paid to Customers[7] ($)	Total Utility Program Cost[8] ($)	Cumulative System Benefit NPV[9] ($)
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
							A x E	B x F	G + H	(A x C)+(B x D)	I - J			L + M	
Insulation and Air Sealing	162	152	125	-	52	326	8,424	49,552	57,976	20,250	37,726	81,820	23,118	104,938	286,398
Thermostat	55	3	125	-	52	326	2,860	978	3,838	6,875	(3,037)	42,274	2,205	44,479	(74,854)
Isolated Systems CP[10]	960	261	141	-	238		228,480	-	228,480	135,360	93,120	403,340	595,860	999,200	32,648
Small Technology Program	157	25	125	-	52	326	8,164	8,150	16,314	19,625	(3,311)	156,000	17,365	173,365	(214,414)
HRV[11] Program	6	2	125	-	52	326	312	652	964	750	214	5,500	1,925	7,425	(30,949)
Benchmarking	-	-	125	-	52	326	-	-	-	-	-	-	-	-	-
Low Income[12]	-	-	125	-	46	326	-	-	-	-	-	7,797	-	7,797	(7,797)
Isolated Systems BEP[13]	100	21	185	14	238		23,800	-	23,800	18,794	5,006	35,750	35,000	70,750	(12,690)
Business Efficiency Program	361	76	87	7	52	326	18,772	24,776	43,548	31,939	11,609	124,413	74,740	199,153	(105,088)

[1] Program estimates in this table are presented in a manner to respond to TC-IC-NLH-004, and in doing so may produce values different than how program impacts would normally be calculated and presented (i.e., restricting system impacts to 2021–2034, not amortizing program delivery costs, etc.). Values presented are solely from activities in the respective program year, and exclude system impacts as a result of previous years the program was delivered.

[2] Average customer energy rate for customer rate classes within the sector, as per rates approved by the Board of Commissioners of Public Utilities ("Board") in Board Order No. P.U. 31(2019) AMENDED and P.U. 32(2019) and escalated at 2.25%.

[3] Average customer demand rate for customer rate classes within the sector, as per rates approved by the Board in Board Order No. P.U. 31(2019) AMENDED and P.U. 32(2019) and escalated at 2.25%.

[4] Weighted average of marginal energy costs for the respective program and year, based on the profile of when savings occur throughout the year. Reflects marginal costs that were used to develop the tables in Newfoundland and Labrador Hydro's ("Hydro") 2021 Electrification, Conservation and Demand Management Application.

[5] Utility or system impact in the respective program year. Duration of impact used in net present value calculation based on the estimated useful life of conservation measures undertaken, and restricted to the 2021–2034 period.

[6] Exclusive of incentives. Costs associated with delivering programs only for the respective year, and are not amortized.

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[8] TC-IC-NLH-003, part (k) requested Annual Impact on Utilities be presented as Energy Supply Cost Savings + Capacity Supply Cost Savings - Customer Incentives - Program Costs - Lost Revenue. Hydro has provided the information in a more granular manner, as the requested method would have mixed one-time costs with recurring system costs, and as such, would not have represented a true Annual Impact on Utilities or the system. The requested calculation can be achieved as follows: G + H - M - L - J.

[9] Net Present Value ("NPV"). Uses cash flows for the period requested (up to and inclusive of 2034) involving the recurring marginal system cost savings against recurring lost revenues, and initial one-time costs for the respective program year (i.e. program costs and incentives).

[10] Isolated Systems Community program. A direct install program offered to both residential and commercial customers located in isolated diesel systems. Hydro does not currently calculate an average marginal capacity cost for all isolated systems.

[11] Heat Recovery Ventilator ("HRV").

[12] Program design in 2021, launch in 2022.

[13] Isolated Systems Business Efficiency Program is for custom measures and projects at commercial sites located in isolated diesel systems.

Conservation Programs: 2021–2025 Plan
Program Estimates (2022)[1]
Utility Programs - Hydro Only

	Annual Saved Energy (MWh)	Annual Saved Capacity (kW)	Average Customer Electricity Rate[2] ($/MWh)	Average Customer Demand Rate[3] ($/kW)	Marginal Cost of Energy[4] ($/MWh)	Marginal Cost of Capacity ($/kW)	System Marginal Energy Savings ($)	System Marginal Capacity Savings ($)	Total Marginal System Savings ($)	Lost Revenue ($)	Net System Savings[5] ($)	Program Costs[6] ($)	Incentives Paid to Customers[7] ($)	Total Utility Program Cost[8] ($)	Cumulative System Benefit NPV[9] ($)
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
							A x E	B x F	G + H	(A x C)+(B x D)	I - J			L + M	
Insulation and Air Sealing	179	172	128	-	52	333	9,308	57,276	66,584	22,912	43,672	89,486	25,430	114,916	327,398
Thermostat	54	3	128	-	52	333	2,808	999	3,807	6,889	(3,082)	41,532	2,161	43,693	(74,069)
Isolated Systems CP[10]	719	221	145	-	249		179,031	-	179,031	103,960	75,071	403,340	595,860	999,200	(249,745)
Small Technology Program	157	25	128	-	52	333	8,164	8,325	16,489	20,031	(3,542)	156,000	17,365	173,365	(213,551)
HRV[11] Program	6	2	128	-	52	333	312	666	978	765	213	5,500	1,925	7,425	(5,706)
Benchmarking	-	-	128	-	52	333	-	-	-	-	-	-	-	-	-
Low Income[12]	623	135	128	-	47	333	29,281	44,955	74,236	79,484	(5,248)	45,887	15,431	61,318	(111,018)
Isolated Systems BEP[13]	100	21	145	15	249		24,900	-	24,900	14,774	10,126	35,750	35,000	70,750	(14,224)
Business Efficiency Program	361	76	89	7	52	333	18,772	25,308	44,080	32,710	11,370	124,413	74,740	199,153	(103,935)

[1] Program estimates in this table are presented in a manner to respond to TC-IC-NLH-004, and in doing so may produce values different than how program impacts would normally be calculated and presented (i.e., restricting system impacts to 2021–2034, not amortizing program delivery costs, etc.). Values presented are solely from activities in the respective program year, and exclude system impacts as a result of previous years the program was delivered.

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[12] Program design in 2021, launch in 2022.

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Conservation Programs: 2021–2025 Plan
Program Estimates (2023)[1]
Utility Programs - Hydro Only

	Annual Saved Energy (MWh)	Annual Saved Capacity (kW)	Average Customer Electricity Rate[2] ($/MWh)	Average Customer Demand Rate[3] ($/kW)	Marginal Cost of Energy[4] ($/MWh)	Marginal Cost of Capacity ($/kW)	System Marginal Energy Savings ($)	System Marginal Capacity Savings ($)	Total Marginal System Savings ($)	Lost Revenue ($)	Net System Savings[5] ($)	Program Costs[6] ($)	Incentives Paid to Customers[7] ($)	Total Utility Program Cost[8] ($)	Cumulative System Benefit NPV[9] ($)
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
							A x E	B x F	G + H	(A x C)+(B x D)	I - J			L + M	
Insulation and Air Sealing	196	192	130	-	46	341	9,016	65,472	74,488	25,480	49,008	97,920	27,973	125,893	360,002
Thermostat	53	3	130	-	46	341	2,438	1,023	3,461	6,890	(3,429)	40,804	2,118	42,922	(73,287)
Isolated Systems CP[10]	395	122	148	-	266		105,070	-	105,070	58,460	46,610	403,340	595,860	999,200	(603,827)
Small Technology Program	-	-	130	-	46	341	-	-	-	-	-	-	-	-	-
HRV[11] Program	6	2	130	-	46	341	276	682	958	780	178	5,500	1,925	7,425	(5,799)
Benchmarking	-	-	130	-	46	341	-	-	-	-	-	-	-	-	-
Low Income[12]	623	135	130	-	42	341	26,166	46,035	72,201	80,990	(8,789)	58,840	15,431	74,271	(125,546)
Isolated Systems BEP[13]	100	21	194	15	266		26,600	-	26,600	19,715	6,885	35,750	35,000	70,750	(16,443)
Business Efficiency Program	361	76	91	7	46	341	16,606	25,916	42,522	33,383	9,139	124,413	74,740	199,153	(102,742)

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Conservation Programs: 2021–2025 Plan
Program Estimates (2024)[1]
Utility Programs - Hydro Only

	Annual Saved Energy (MWh)	Annual Saved Capacity (kW)	Average Customer Electricity Rate[2] ($/MWh)	Average Customer Demand Rate[3] ($/kW)	Marginal Cost of Energy[4] ($/MWh)	Marginal Cost of Capacity ($/kW)	System Marginal Energy Savings ($)	System Marginal Capacity Savings ($)	Total Marginal System Savings ($)	Lost Revenue ($)	Net System Savings[5] ($)	Program Costs[6] ($)	Incentives Paid to Customers[7] ($)	Total Utility Program Cost[8] ($)	Cumulative System Benefit NPV[9] ($)
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
							A x E	B x F	G + H	(A x C)+(B x D)	I - J			L + M	
Insulation and Air Sealing	216	212	133	-	47	350	10,152	74,200	84,352	28,728	55,624	107,197	30,770	137,967	384,419
Thermostat	52	3	133	-	47	350	2,444	1,050	3,494	6,916	(3,422)	40,091	2,075	42,166	(70,183)
Isolated Systems CP[10]	285	88	151	-	272		77,520	-	77,520	43,035	34,485	403,340	595,860	999,200	(730,576)
Small Technology Program	-	-	133	-	47	350	-	-	-	-	-	-	-	-	-
HRV[11] Program	6	2	133	-	47	350	282	700	982	798	184	5,500	1,925	7,425	(5,856)
Benchmarking	-	-	133	-	47	350	-	-	-	-	-	-	-	-	-
Low Income[12]	623	131	133	-	42	350	26,166	45,850	72,016	82,859	(10,843)	52,468	11,981	64,449	(122,809)
Isolated Systems BEP[13]	100	21	198	15	272		27,200	-	27,200	20,115	7,085	35,750	35,000	70,750	(20,105)
Business Efficiency Program	356	76	93	8	47	350	16,732	26,600	43,332	33,716	9,616	124,413	74,500	198,913	(103,908)

[1] Program estimates in this table are presented in a manner to respond to TC-IC-NLH-004, and in doing so may produce values different than how program impacts would normally be calculated and presented (i.e., restricting system impacts to 2021–2034, not amortizing program delivery costs, etc.). Values presented are solely from activities in the respective program year, and exclude system impacts as a result of previous years the program was delivered.

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Conservation Programs: 2021–2025 Plan
Program Estimates (2025)[1]
Utility Programs - Hydro Only

	Annual Saved Energy (MWh) A	Annual Saved Capacity (kW) B	Average Customer Electricity Rate[2] ($/MWh) C	Average Customer Demand Rate[3] ($/kW) D	Marginal Cost of Energy[4] ($/MWh) E	Marginal Cost of Capacity ($/kW) F	System Marginal Energy Savings ($) G	System Marginal Capacity Savings ($) H	Total Marginal System Savings ($) I	Lost Revenue ($) J	Net System Savings[5] ($) K	Program Costs[6] ($) L	Incentives Paid to Customers[7] ($) M	Total Utility Program Cost[8] ($) N	Cumulative System Benefit NPV[9] ($) O
							A x E	B x F	G + H	(A x C)+(B x D)	I - J			L + M	
Insulation and Air Sealing	238	234	136	-	47	358	11,186	83,772	94,958	32,368	62,590	117,402	33,847	151,249	403,836
Thermostat	51	2	136	-	47	358	2,397	716	3,113	6,936	(3,823)	39,392	2,034	41,426	(72,369)
Isolated Systems CP[10]	285	88	155	-	267		76,095	-	76,095	44,175	31,920	403,340	595,860	999,200	(748,799)
Small Technology Program	-	-	136	-	47	358	-	-	-	-	-	-	-	-	-
HRV[11] Program	6	2	136	-	47	358	282	716	998	816	182	5,500	1,925	7,425	(5,917)
Benchmarking	-	-	136	-	47	358	-	-	-	-	-	-	-	-	-
Low Income[12]	623	131	136	-	43	358	26,789	46,898	73,687	84,728	(11,041)	62,883	11,981	74,864	(130,871)
Isolated Systems BEP[13]	100	21	202	16	267		26,700	-	26,700	20,536	6,164	35,750	35,000	70,750	(24,178)
Business Efficiency Program	356	76	95	8	47	358	16,732	27,208	43,940	34,428	9,512	124,413	74,500	198,913	(107,625)

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