Q. Please provide tables that indicate SAIFI, CAIDI, and SAIDI for 2016, 2017, and 2018 for (1) transmission system, (2) the interconnected distribution system, by TRO Region, and (3) each of the isolated diesel plant systems for Newfoundland Hydro (major event day excluded – planned outages excluded).

A. The following tables outline SAIFI, CAIDI and SAIDI for the years 2016, 2017 and 2018 with Significant Events[1] and Planned Outages excluded.

1. Please note that T-SAIFI, T-SARI[2] and T-SAIDI are the equivalent measures used for the transmission system. Table 1.1 lists the Transmission System Performance for T-SAIFI, T-SARI and T-SAIDI for the years 2016, 2017 and 2018 with Significant Events, and Planned Outages excluded.

   Definitions:
   T-SAIFI = Sustained Interruptions /Delivery Point
   T-SAIDI = Total Duration (minutes)/Delivery Point
   T-SARI = Total Duration (minutes)/Sustained Interruption

   SAIFI = Total Sustained Interruptions/Customer
   SAIDI = Total Sustained Interruption Duration (Hours)/Customer

[1] For Significant Events, Hydro uses the Canadian Electricity Association (CEA) definition, defined as extreme conditions where "events that exceed reasonable design and/or operational limits of the electrical power system". Examples of significant events include hurricanes, ice storms, and loss of supply, such as the generation shortages and assumed to be equivalent to Major Event Day.

[2] **System Average Restoration Index – (T-SARI).** A measure of the average duration of a delivery point interruption, representing the average restoration time for each delivery point Interruption during a given period, usually a year.

CAIDI= Total Sustained Interruption Duration (Hours)/ Average Sustained Interruption

Table 1.1 - Transmission Performance

	2016	2017	2018
T-SAIFI	1.88	1.12	2.47
T-SAIDI	126.45	138.98	196.48
T-SARI	67.26	124.09	79.55

2. Tables 2.1, 2.2 and 2.3 list the Interconnected Distribution system for SAIFI, CAIDI and SAIDI for the years 2016, 2017 and 2018 respectively with Significant Events, and Planned Outages excluded by TRO Region.

Table 2.1 - TRO Central Interconnected

	2016	2017	2018
SAIFI	5.06	3.66	4.98
SAIDI	21.38	20.44	17.78
CAIDI	4.23	5.58	3.57

Table 2.2 - TRO Labrador Interconnected

	2016	2017	2018
SAIFI	4.27	8.03	9.92
SAIDI	9.39	26.21	26.64
CAIDI	2.20	3.26	2.69

Table 2.3 - TRO Northern Interconnected

	2016	2017	2018
SAIFI	9.43	2.06	4.05
SAIDI	15.60	9.34	11.41
CAIDI	1.65	4.53	2.82

3. Tables 3.1, 3.2, and 3.3 list each diesel plant SAIFI, CAIDI and SAIDI for the years 2016, 2017 and 2018 respectively with Significant Events, and Planned Outages excluded.

Table 3.1 – SAIFI – Isolated Diesel Systems

REGION	SYSTEM	2016	2017	2018
Central Isolated		2.18	2.29	1.47
	Francois	5.00	3.00	5.04
	Gray River	1.01	2.02	1.00
	Little Bay Islands	4.08	1.03	1.23
	McCallum	0.02	3.12	0.02
	Ramea	1.53	2.03	1.26
	St. Brendan's	2.01	0.00	1.03
Labrador Isolated		6.27	3.79	3.90
	Black Tickle	2.38	7.19	10.14
	Cartwright	8.05	4.00	5.02
	Hopedale	10.07	2.01	1.02
	Makkovik	9.99	2.00	3.99
	Nain	3.50	3.69	3.01
	Paradise River	3.00	0.00	0.05
	Postville	2.03	1.00	2.00
	Rigolet	5.99	10.01	8.01
Northern Isolated		7.46	3.08	2.20
	Charlottetown	6.78	0.00	1.00
	L'Anse-Au-Loup	7.16	4.03	2.50
	Mary's Harbour	15.79	4.01	3.82
	Port Hope Simpson	5.00	1.04	1.01
	St. Lewis	1.02	3.00	1.07
	William's Harbour	2.11	2.00	N/A

Table 3.2 - SAIDI – Isolated Diesel Systems

REGION	SYSTEM	2016	2017	2018
Central Isolated		4.77	4.58	1.43
	Francois	0.35	0.00	1.91
	Gray River	0.10	5.20	0.17
	Little Bay Islands	28.95	0.71	5.49
	McCallum	0.27	3.62	0.02
	Ramea	0.39	0.62	0.86
	St. Brendan's	0.46	18.77	0.33
Labrador Isolated		9.43	8.17	4.94
	Black Tickle	8.04	85.08	39.74
	Cartwright	25.90	1.45	1.55
	Hopedale	9.19	1.36	0.55
	Makkovik	2.98	0.35	2.13
	Nain	6.64	7.66	6.13
	Paradise River	1.83	0.00	0.36
	Postville	1.08	0.17	0.25
	Rigolet	4.33	9.73	4.60
Northern Isolated		5.87	2.23	4.15
	Charlottetown	1.56	0.00	0.05
	L'Anse-Au-Loup	3.90	3.69	6.24
	Mary's Harbour	6.11	1.07	2.05
	Port Hope Simpson	23.10	0.19	3.57
	St. Lewis	0.29	1.43	0.58
	William's Harbour	1.67	0.17	N/A

Table 3.3 – CAIDI – Isolated Diesel Systems

REGION	SYSTEM	2016	2017	2018
Central Isolated		2.18	2.00	0.97
	Francois	0.07	0.00	0.38
	Gray River	0.10	1.73	0.17
	Little Bay Islands	7.09	0.35	4.45
	McCallum	16.50	3.50	1.00
	Ramea	0.25	0.20	0.68
	St. Brendan's	0.23	9.23	0.32
Labrador Isolated		1.50	2.16	1.27
	Black Tickle	3.37	11.83	3.92
	Cartwright	3.22	0.36	0.31
	Hopedale	0.91	0.68	0.54
	Makkovik	0.30	0.18	0.53
	Nain	1.90	2.07	2.04
	Paradise River	0.61	0.00	6.58
	Postville	0.53	0.17	0.12
	Rigolet	0.72	0.97	0.57
Northern Isolated		0.79	0.73	1.88
	Charlottetown	0.23	0.00	0.05
	L'Anse-Au-Loup	0.54	0.91	2.50
	Mary's Harbour	0.39	0.27	0.54
	Port Hope Simpson	4.62	0.18	3.52
	St. Lewis	0.29	0.48	0.55
	William's Harbour	0.79	0.08	N/A

Notes:

- TRO Labrador Interconnected outage statistics include forced outages due to loss of supply from Churchill Falls, such as annual maintenance outages.
- NL Hydro is a member of CEA Region 2 for distribution outage statistical reporting. Compared to other members of CEA Region 2, Hydro's distribution systems are more rural and more geographically dispersed.
- William's Harbour was resettled in 2017 and diesel generating plant was removed.