

1 **Q. *Hydro ("Hydro") has information on customer trade offs between cost and***
 2 ***reliability through their digital engagement process in 2018 as part of its***
 3 ***Reliability and Resource Adequacy Study."***

4 **a) Specifically, what questions were posed to customers during this**
 5 **engagement relating to trade-offs between service improvements and**
 6 **cost, and customer willingness to pay?**

7 **b) What were the findings of this initiative relating to customer trade-offs**
 8 **between cost and service improvements, and customer willingness to**
 9 **pay?**

10 **c) How has this information been incorporated in Newfoundland Power's**
 11 **2022 and 2023 Capital Budget Applications?**

12 **d) Please file for the record a copy of the report documenting the results of**
 13 **this process.**

15 A. a) See Attachment A for information on Hydro's 2018 Digital Engagement Initiative,
 16 including: (i) the full summary of questions; (ii) the summary report provided by
 17 Corporate Research Associates; and (iii) the summary report prepared by Hydro
 18 for the public.

19
 20 b) See part a).

21
 22 c) The results of Hydro's Digital Engagement Initiative have not been incorporated
 23 into Newfoundland Power's *2022 Capital Budget Application* or *2023 Capital*
 24 *Budget Application*.

25
 26 The results of Hydro's Digital Engagement Initiative were reviewed by the
 27 Board's consultant, The Liberty Consulting Group ("Liberty"). Liberty found that
 28 the initiative did not provide substantial guidance in analyzing trade offs between
 29 cost and reliability. In its review, Liberty stated:

30
 31 *"Hydro surveyed customers to understand their preferences between*
 32 *reliability and cost. The results, while interesting, do not provide*
 33 *substantial guidance in analyzing specific tradeoffs between cost and*
 34 *reliability here. Decisions like Holyrood's future, or any other post-LCP*
 35 *investment, should follow an explicit balancing of the cost of reliability*
 36 *improvements and the value to electricity customers of the reduced risk*
 37 *of power outages. Quantifying the value of lost load to customers*
 38 *comprises a central element of such an analysis, particularly with respect*
 39 *to issues like mitigating the effects of extended LIL bipole unavailability."*¹

40
 41 Newfoundland Power's capital budget applications incorporate the findings of its
 42 own customer engagement initiatives. For further information, see the response
 43 to Request for Information CA-NP-016.

44
 45 d) See part a).

¹ See Liberty's *Review of Newfoundland and Labrador Hydro's Reliability and Resource Adequacy Study*, August 19, 2019, page 13, filed with the Board in relation to Hydro's *Reliability and Resource Adequacy Study* review.



ATTACHMENT A:

NL Hydro Digital Engagement Initiative

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TABLE 2:

Which of the following best describes you?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
I am a NL resident	99	99	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100
I am an NL business owner/operator	5	6	4	3	0	2	5	2	3	8	6	6	1	4	2	2	4
I am an NL elected official	1	0	1	0	0	1	0	0	1	1	0	0	0	0	1	0	0
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955

TABLE 3:

How would you rate the reliability of electricity you receive?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Excellent	19	15	24	24	5	21	19	22	18	20	16	17	25	19	18	27	19
9	22	21	25	21	12	21	23	21	22	23	20	22	24	22	18	27	22
8	26	28	24	26	23	27	26	25	25	31	25	29	26	27	21	22	26
7	15	17	14	12	15	14	16	12	18	13	21	15	12	15	16	7	15
6	6	7	3	5	13	6	6	5	8	4	6	6	5	5	7	6	6
5	6	7	4	6	15	6	5	8	5	5	7	6	4	6	9	8	6
4	2	2	2	2	5	2	2	2	2	2	2	2	1	2	4	2	2
3	1	2	2	1	3	1	1	1	1	1	2	2	1	1	2	0	1
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 - Poor	1	1	2	2	8	1	2	2	1	2	2	1	1	1	4	0	2
Don't know	1	1	1	1	0	1	0	2	1	0	0	0	1	1	1	0	1
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	82	81	87	82	55	83	84	80	83	86	82	82	88	84	72	83	82
MID 2 BOX (% 5-6)	12	14	7	12	28	12	11	13	12	9	12	12	9	11	17	15	12
BOTTOM 4 BOX (% 1-4)	5	5	5	6	17	4	5	5	4	4	6	5	3	4	11	2	5
MEAN	7.9	7.8	8.2	8.0	6.4	8.0	7.9	7.9	7.9	8.0	7.7	7.8	8.3	8.0	7.4	8.3	7.9

Note: Responses of 'Don't know' have been excluded from the calculation of the mean.

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TABLE 4:

Approximately how many outages have you experienced within the past 12 months?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
None	6	7	5	7	0	6	7	8	6	8	2	7	8	7	2	8	6
1	17	18	16	18	0	17	19	11	20	23	17	19	19	19	8	32	17
2	24	25	26	20	5	23	24	23	23	24	19	23	27	26	11	21	24
3	15	16	13	13	3	15	15	17	13	15	19	13	15	15	12	9	15
4	10	9	12	9	22	10	9	10	10	10	14	9	7	8	18	7	10
5 or more	16	15	15	20	58	16	16	14	20	15	23	19	11	14	33	12	16
Don't know/Can't recall	12	9	14	13	12	13	10	17	8	6	6	9	13	11	16	11	12
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
MEAN	3.0	2.8	3.2	3.5	7.1	3.1	3.0	3.0	3.2	2.8	3.6	3.1	2.6	2.7	5.1	2.5	3.1

Note: Responses of 'Don't know/Can't recall' have been excluded from the calculation of the mean.

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TABLE 5:

Was this fewer, about the same, or more outages than you experienced in previous years?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Fewer outages	28	31	28	22	12	30	26	29	25	31	24	27	30	29	19	29	28
About the same number of outages	55	54	57	57	57	51	59	53	57	59	58	56	55	56	57	58	55
More outages	6	6	4	8	22	6	6	6	7	5	9	7	5	5	13	7	6
Don't know/Can't recall	11	9	11	13	10	13	8	12	10	5	8	10	10	12	6	11	
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955

TABLE Q6:

On average, how long was your last outage? [CODED INTO HOURS]

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Less than 30 minutes	20	21	24	17	12	20	21	19	20	23	22	22	20	22	14	24	20
At least 30 minutes, but less than 2 hours	17	19	14	15	8	15	18	15	17	22	19	18	16	18	11	18	17
At least 2 hours, but less than 4 hours	21	23	22	19	23	20	22	19	24	23	25	23	19	21	22	28	21
4 hours or more	16	13	14	22	45	16	16	18	14	16	20	18	12	14	34	12	16
Don't know/Can't recall	26	24	26	27	12	28	23	30	24	17	14	19	34	26	20	18	26
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
MEAN	2.9	2.8	2.2	3.3	5.6	3.3	2.4	3.3	2.5	2.6	2.7	3.2	2.3	2.6	4.2	2.2	2.9

Note: Responses of more than 96 hours and 'Don't know/Can't recall' have been excluded from the calculation of the mean.

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TABLE 7A:

Please indicate to what extent you agree or disagree with each of the following statements.

NL needs a more reliable system than it has right now

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Completely agree	19	19	16	19	40	17	20	20	18	17	24	16	18	17	26	18	19
9	6	7	5	6	3	7	6	7	6	6	6	6	7	7	7	4	7
8	12	15	10	9	17	12	12	11	13	14	14	12	12	13	8	6	12
7	10	10	10	9	5	8	11	9	10	11	11	11	8	10	6	5	10
6	8	9	8	6	5	9	8	8	9	7	6	9	8	8	8	8	8
5	16	14	21	17	8	18	15	16	16	16	15	17	16	17	16	16	16
4	5	5	8	4	2	6	5	5	6	6	5	5	6	5	3	5	5
3	7	6	8	7	3	7	6	6	7	6	6	6	8	7	6	11	6
2	5	4	5	5	3	6	4	5	4	7	3	5	5	5	4	10	4
1 - Completely disagree	8	6	6	11	8	6	9	9	7	7	6	8	8	8	9	13	8
Don't know	4	4	3	6	5	5	4	5	4	3	4	4	4	4	6	3	4
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	47	52	41	44	65	44	49	47	47	48	55	45	45	47	48	34	48
MID 2 BOX (% 5-6)	24	23	29	23	13	27	22	24	25	23	21	26	24	24	24	24	24
BOTTOM 4 BOX (% 1-4)	24	21	27	27	17	24	24	25	24	26	20	25	27	25	22	39	24
MEAN	6.3	6.5	6.0	6.0	7.4	6.2	6.3	6.2	6.3	6.2	6.7	6.1	6.1	6.2	6.5	5.4	6.3

Note: Responses of 'Don't know' have been excluded from the calculation of the mean.

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TABLE 7B:

Please indicate to what extent you agree or disagree with each of the following statements.

My power reliability has improved over the past few years, since DarkNL

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Completely agree	15	15	15	17	3	17	16	18	13	18	11	14	20	16	12	23	15
9	10	10	13	9	2	10	11	11	11	8	9	10	11	10	9	12	10
8	18	19	17	16	10	18	19	16	19	21	18	18	18	19	13	13	18
7	13	15	14	10	12	14	13	12	14	16	13	15	13	14	8	17	13
6	8	8	7	10	7	8	8	8	10	7	10	8	8	9	8	7	8
5	14	13	11	15	23	13	14	13	14	14	14	14	12	13	19	9	14
4	3	3	3	3	3	3	3	4	2	3	4	4	2	3	5	3	3
3	3	3	2	2	7	3	2	2	2	3	3	3	3	2	3	1	3
2	2	2	2	2	8	2	2	2	2	1	2	2	1	1	3	1	2
1 - Completely disagree	5	4	7	7	13	5	5	6	5	3	5	4	6	5	10	4	6
Don't know	8	7	9	9	12	9	7	9	8	6	10	7	6	7	10	9	8
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	57	60	59	51	27	58	59	57	57	63	52	57	62	60	43	65	56
MID 2 BOX (% 5-6)	22	22	18	25	30	21	22	21	24	21	25	22	20	22	26	16	22
BOTTOM 4 BOX (% 1-4)	13	11	14	15	32	13	12	13	12	11	13	13	12	12	21	9	13
MEAN	6.8	7.0	6.9	6.7	4.9	6.9	7.0	6.9	6.8	7.1	6.7	6.9	7.1	7.0	6.1	7.4	6.8

Note: Responses of 'Don't know' have been excluded from the calculation of the mean.

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TABLE 8A:

Please indicate to what extent you agree or disagree with each of the following statements.

I am comfortable with our power system's current level of reliability, so I would prefer that additional investment be made cautiously

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Completely agree	36	32	38	40	35	36	36	41	34	34	30	33	42	36	36	34	36
9	11	12	11	10	7	13	10	12	11	11	11	12	11	11	8	10	11
8	15	17	14	15	17	14	17	13	15	19	17	16	16	16	15	18	15
7	9	11	7	8	3	9	9	7	11	10	12	12	5	10	8	10	9
6	7	7	6	6	10	7	7	7	7	6	7	8	5	6	7	5	7
5	9	8	12	8	7	9	9	8	11	7	8	9	9	9	8	7	9
4	3	3	3	2	3	2	3	1	3	4	3	3	3	3	4	3	3
3	3	3	3	4	3	3	3	3	4	2	4	3	3	3	3	8	3
2	1	1	1	1	2	2	1	2	1	1	1	0	2	2	0	0	1
1 - Completely disagree	4	4	3	4	13	3	4	4	3	5	4	4	3	3	9	3	4
Don't know/Not sure	2	2	2	2	0	1	1	2	1	1	2	1	2	1	2	2	2
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	71	72	70	73	62	73	71	73	70	74	70	72	74	73	67	72	71
MID 2 BOX (% 5-6)	16	16	17	14	17	16	16	15	18	13	15	18	14	16	15	12	16
BOTTOM 4 BOX (% 1-4)	11	11	11	11	22	9	11	10	11	12	13	10	10	10	16	14	11
MEAN	7.7	7.6	7.7	7.8	7.0	7.8	7.7	7.9	7.6	7.7	7.5	7.7	8.0	7.8	7.4	7.6	7.7

Note: Responses of 'Don't know/Not sure' have been excluded from the calculation of the mean.

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TABLE 8B:

Please indicate to what extent you agree or disagree with each of the following statements.

Hydro should invest in more generation to further reduce the impact of power supply interruptions during extreme events

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Completely agree	10	9	11	11	18	12	9	15	8	7	8	9	12	9	13	6	11
9	3	3	3	3	2	4	3	4	2	2	1	3	4	3	3	2	3
8	7	8	6	7	10	8	7	7	9	5	6	8	7	8	7	11	7
7	10	10	10	11	10	11	10	9	12	10	10	11	9	10	9	9	10
6	9	9	12	8	13	10	9	8	10	12	13	10	8	10	8	8	9
5	17	17	21	15	8	18	16	20	16	14	16	16	17	17	16	10	17
4	7	7	8	8	5	8	7	5	8	9	9	8	6	7	7	4	7
3	9	9	5	9	5	7	10	5	11	12	9	10	8	9	7	10	8
2	6	6	4	7	7	6	6	5	7	8	7	6	6	6	7	7	6
1 - Completely disagree	15	16	13	16	17	10	18	15	14	17	14	15	15	16	16	27	15
Don't know/Not sure	6	5	8	6	5	6	4	7	4	4	5	4	7	5	6	5	6
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	31	31	30	32	40	35	29	35	31	25	26	31	33	31	33	28	31
MID 2 BOX (% 5-6)	26	26	32	23	22	28	26	28	26	26	30	26	26	27	24	19	26
BOTTOM 4 BOX (% 1-4)	37	39	30	39	33	31	41	30	39	45	39	39	35	38	37	48	37
MEAN	5.1	5.1	5.4	5.1	5.6	5.6	4.9	5.5	5.0	4.7	4.9	5.1	5.3	5.1	5.2	4.4	5.2

Note: Responses of 'Don't know/Not sure' have been excluded from the calculation of the mean.

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TABLE 9:

Hydro has been operating back up generation in recent years – this can help reduce outages to approximately 5- 30 minutes (rather than several hours) if any of our main sources of generation suddenly become unavailable or trips offline. Customers may experience this type of outage 1-2 times per year. This approach provides better reliability for customers but is costly for Hydro and therefore for customers.

Please move the slider to a position that best describes your point of view.

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - I am willing to accept a greater increase in my electricity rate, if it means I'll have shorter outages	2	2	2	3	3	2	2	2	2	2	2	2	2	2	3	5	2
9	1	1	2	1	0	1	1	1	1	1	0	1	1	1	1	1	1
8	2	2	2	1	2	1	2	1	2	2	1	1	3	2	1	2	2
7	3	3	3	4	5	2	4	2	3	5	2	3	4	3	3	3	3
6	5	6	5	6	10	5	6	5	6	5	3	5	6	6	5	5	5
5	12	12	11	12	17	11	12	10	13	12	12	12	11	12	12	11	12
4	8	9	6	8	5	8	9	9	8	8	6	8	9	9	6	10	8
3	10	11	11	9	12	10	10	10	9	12	10	10	12	10	12	3	10
2	12	13	12	12	10	13	12	11	12	14	14	11	13	12	15	12	12
1	18	17	17	19	13	21	17	19	19	15	17	17	20	18	16	20	18
0 - I prefer minimal increase on my electricity rate, and am willing to accept a risk of longer outages	26	25	29	25	23	26	25	29	27	23	32	29	19	26	25	27	26
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	8	7	9	9	10	7	9	7	8	10	6	7	9	7	9	12	8
MID 3 BOX (% 4-6)	25	27	22	26	32	24	27	24	26	26	21	26	27	26	23	26	25
BOTTOM 4 BOX (% 0-3)	67	66	69	66	58	69	64	69	66	64	73	67	64	67	68	62	67
MEAN	2.6	2.6	2.5	2.7	3.1	2.5	2.8	2.5	2.6	2.9	2.2	2.5	2.9	2.6	2.8	2.8	2.6

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TABLE 10:

Upgrading or adding to our supply of power (like adding equipment or back-up generation) is expensive. More investment, which can help ensure fewer outages, has a greater impact on the price of electricity for customers. Please select the alternative that best describes your preference.

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Hydro should plan to have some back up generation to partially reduce the impact of a sudden loss of power supply	59	58	62	58	40	58	59	59	59	60	65	62	53	60	53	60	59
Hydro should plan to have additional back up generation to moderately reduce the impact of a sudden loss of power supply	34	35	32	36	47	36	35	34	37	34	32	33	38	34	36	34	35
Hydro should plan to have enough back up generation to significantly reduce the impact of a sudden loss of power supply	6	6	5	6	13	6	6	8	4	6	3	5	9	6	11	6	6
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955

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TABLE 11:

In the previous question you said, [SHOW RESPONSE FROM Q10]. Given an outage caused by loss of supply could last approximately 4-8 hours, how many outages in a given year would you consider acceptable?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
0	12	12	10	11	18	9	11	13	10	9	7	9	12	12	10	10	12
1	22	25	22	18	13	23	22	20	22	26	16	23	24	23	13	20	22
2	37	37	39	38	30	38	38	36	40	36	39	39	38	37	37	35	37
3	17	14	19	20	20	18	17	20	18	15	21	17	18	17	22	14	17
4	6	5	5	8	8	6	6	6	6	7	8	7	5	5	10	9	6
5	3	3	3	3	8	3	3	2	4	4	4	4	1	3	5	4	3
More than 5	3	3	2	2	2	2	3	4	1	3	4	2	2	3	2	8	2
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955

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TABLE 11:

[AMONG THOSE WHO SAID 'HYDRO SHOULD HAVE SOME BACK UP GENERATION' IN Q10] In the previous question you said Hydro should plan to have some back up generation to partially reduce the impact of a sudden loss of power supply. Given an outage caused by loss of supply could last approximately 4-8 hours, how many outages in a given year would you consider acceptable?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
0	11	11	9	11	13	7	10	13	7	6	6	8	12	11	10	6	11
1	20	21	22	16	17	22	19	16	21	20	12	19	23	20	13	20	20
2	37	37	35	38	29	39	37	34	40	38	43	40	35	37	34	37	37
3	18	16	21	19	17	19	19	21	19	17	22	17	20	19	22	14	19
4	7	7	4	9	8	7	7	7	7	8	8	8	5	6	11	9	7
5	4	3	4	4	13	3	4	3	4	5	4	5	3	3	6	2	4
More than 5	4	5	3	2	4	3	4	5	2	5	5	3	2	4	4	12	3
WEIGHTED SAMPLE SIZE (#)	1225	606	224	357	26	506	591	361	361	257	218	413	415	1006	121	53	1156
UNWEIGHTED SAMPLE SIZE (#)	1221	697	161	325	24	502	588	344	361	271	224	421	395	1013	108	56	1149

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TABLE 11:

[AMONG THOSE WHO SAID 'HYDRO SHOULD HAVE ADDITIONAL BACK UP GENERATION' IN Q10] In the previous question you said Hydro should plan to have additional back up generation to moderately reduce the impact of a sudden loss of power supply. Given an outage caused by loss of supply could last approximately 4-8 hours, how many outages in a given year would you consider acceptable?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
0	11	12	8	10	18	11	9	9	13	9	7	9	11	12	7	16	11
1	27	31	22	22	14	26	26	28	22	32	24	28	27	29	13	15	27
2	40	39	47	38	36	39	43	40	41	37	35	38	44	39	44	34	40
3	15	12	14	21	18	17	15	18	16	13	19	17	14	14	21	17	15
4	5	3	6	7	11	4	5	4	6	5	9	5	3	4	11	9	5
5	2	2	1	2	4	2	2	0	3	3	5	3	0	1	5	9	1
More than 5	1	1	1	1	0	1	0	1	0	0	0	0	1	1	0	0	1
WEIGHTED SAMPLE SIZE (#)	713	365	115	218	31	309	354	208	227	143	109	222	301	577	83	30	679
UNWEIGHTED SAMPLE SIZE (#)	716	419	83	199	28	310	354	200	224	153	113	225	297	587	74	32	679

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TABLE 11:

[AMONG THOSE WHO SAID 'HYDRO SHOULD HAVE ENOUGH BACK UP GENERATION' IN Q10] In the previous question you said Hydro should plan to have enough back up generation to significantly reduce the impact of a sudden loss of power supply. Given an outage caused by loss of supply could last approximately 4-8 hours, how many outages in a given year would you consider acceptable?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
0	27	29	29	19	38	18	29	23	26	32	33	26	22	28	19	16	27
1	25	27	29	19	0	24	25	16	33	42	32	37	17	25	14	48	24
2	27	27	29	31	13	30	27	34	23	14	8	28	31	28	32	20	28
3	16	10	14	22	38	21	14	17	15	4	27	6	21	13	26	0	16
4	3	4	0	3	0	7	0	6	4	0	0	0	5	3	4	0	3
5	1	0	0	3	13	0	2	0	0	4	0	3	0	0	4	0	1
More than 5	2	3	0	3	0	0	3	4	0	3	0	0	3	3	0	16	2
WEIGHTED SAMPLE SIZE (#)	132	67	19	40	9	55	63	48	24	26	11	34	68	98	25	5	127
UNWEIGHTED SAMPLE SIZE (#)	133	77	14	36	8	54	64	48	26	27	11	35	68	102	22	6	127

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TABLE 12A:

Please indicate to what extent you agree or disagree with each of the following statements.

Customers should take an active role in managing their electricity consumption

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Completely agree	47	45	53	45	35	47	47	50	42	48	40	46	53	47	45	42	47
9	10	10	9	10	8	12	8	8	11	10	5	11	11	10	8	9	10
8	15	16	11	14	18	14	16	12	17	17	14	15	15	15	15	10	15
7	11	11	12	10	8	10	10	9	11	11	15	11	7	11	11	15	10
6	5	5	3	4	7	5	5	4	5	4	7	4	4	4	6	6	4
5	8	6	8	10	10	8	7	10	7	5	9	8	6	7	8	5	8
4	2	1	2	2	0	1	2	1	2	1	3	2	1	2	1	3	1
3	1	2	0	1	3	2	1	1	1	1	2	1	1	1	1	2	1
2	1	1	0	1	2	0	1	1	0	0	1	0	1	1	0	0	1
1 - Completely disagree	3	3	2	3	8	1	3	3	3	2	3	2	2	3	4	8	3
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	81	82	85	79	70	83	82	79	81	86	75	82	87	83	78	76	82
MID 2 BOX (% 5-6)	12	12	11	14	17	13	11	15	12	9	16	12	9	11	15	11	12
BOTTOM 4 BOX (% 1-4)	6	7	4	7	13	4	7	6	7	5	9	5	4	6	8	13	6
MEAN	8.2	8.2	8.5	8.1	7.4	8.4	8.3	8.2	8.1	8.5	7.8	8.3	8.6	8.3	8.0	7.7	8.3

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TABLE 12B:

Please indicate to what extent you agree or disagree with each of the following statements.

I would like to better understand my electricity usage any time of day, in real time

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Completely agree	47	46	53	43	40	49	46	50	44	46	52	46	47	47	42	43	47
9	10	10	10	9	13	11	9	10	9	10	7	11	11	9	11	7	10
8	12	14	10	12	12	12	14	10	15	15	12	13	12	13	12	12	12
7	9	9	5	10	10	9	8	7	9	10	10	10	7	9	8	13	8
6	5	4	5	5	7	5	4	5	4	4	4	5	5	4	7	4	5
5	9	8	9	11	7	8	10	10	9	7	7	8	10	9	10	4	9
4	2	1	3	2	0	1	2	1	3	1	2	1	2	2	3	2	2
3	2	2	1	2	2	1	2	2	1	3	1	2	1	1	2	3	1
2	1	2	0	2	7	1	2	1	1	1	1	2	1	1	2	3	1
1 - Completely disagree	4	4	3	3	3	2	4	4	5	3	2	3	4	4	3	9	4
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	77	79	79	75	75	80	77	77	77	81	82	79	77	78	72	74	78
MID 2 BOX (% 5-6)	14	12	14	17	13	13	14	15	13	11	11	13	15	13	17	8	14
BOTTOM 4 BOX (% 1-4)	9	9	7	9	12	7	9	8	9	8	7	8	8	9	10	17	8
MEAN	8.0	8.1	8.3	7.9	7.8	8.3	8.0	8.2	8.0	8.2	8.3	8.1	8.1	8.1	7.9	7.5	8.1

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TABLE 13A:

[IF BUSINESS OWNER/ OPERATOR IN Q2] Please indicate the extent to which you agree or disagree with the following statement(s) on various options that could be available.

There should be more customer rate options for business owners, so I can better manage my monthly cost of electricity.

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Completely agree	45	46	30	41	0	36	48	47	52	40	56	43	28	41	59	50	46
9	8	7	10	12	0	22	6	10	10	8	10	11	9	9	0	0	10
8	8	6	20	6	0	12	8	10	4	12	7	9	15	10	0	0	9
7	12	13	10	12	0	20	14	27	13	12	9	18	18	15	18	0	14
6	3	3	10	0	0	0	2	0	0	3	0	0	9	1	0	0	1
5	8	9	0	12	0	0	8	6	0	8	5	5	12	6	23	0	7
4	1	0	0	6	0	6	0	0	5	0	6	0	0	2	0	0	2
3	5	4	10	6	0	0	4	0	9	3	0	7	0	4	0	0	4
2	2	1	10	0	0	5	3	0	7	3	7	2	0	4	0	0	3
1 - Completely disagree	7	9	0	6	0	0	8	0	0	11	0	5	9	7	0	50	5
WEIGHTED SAMPLE SIZE (#)	94	58	14	19	0	19	49	14	20	34	19	38	9	63	5	2	73
UNWEIGHTED SAMPLE SIZE (#)	97	67	10	17	0	19	51	14	21	35	19	40	10	66	5	2	75
TOP 4 BOX (% 7-10)	73	73	70	71	.	90	76	94	79	72	83	81	70	76	77	50	79
MID 2 BOX (% 5-6)	11	12	10	12	.	0	9	6	0	11	5	5	21	7	23	0	8
BOTTOM 4 BOX (% 1-4)	16	15	20	18	.	10	14	0	21	17	13	14	9	17	0	50	14
MEAN	7.6	7.6	7.3	7.5	.	8.2	7.7	8.6	7.9	7.4	8.3	7.8	7.3	7.5	8.3	5.5	7.9

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TABLE 13B:

Please indicate the extent to which you agree or disagree with the following statement(s) on various options that could be available.

There should be more customer rate options so I can better manage my monthly cost of electricity

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Completely agree	41	40	43	41	32	44	39	45	39	40	40	39	45	41	38	36	41
9	9	9	10	9	15	10	9	9	10	8	10	10	9	9	11	6	9
8	13	14	11	12	8	13	13	11	15	15	11	16	13	13	11	10	13
7	10	12	10	8	10	9	11	8	11	13	14	9	10	11	10	14	10
6	6	6	7	7	3	7	5	6	6	7	8	6	5	6	5	2	6
5	9	8	8	11	15	9	9	10	9	8	9	9	8	9	12	15	9
4	2	2	2	2	0	1	2	2	1	1	1	2	2	2	1	2	2
3	2	2	1	1	0	2	2	1	2	3	3	2	1	2	1	2	2
2	1	1	1	1	7	1	1	1	1	1	1	1	2	1	2	1	1
1 - Completely disagree	7	7	7	8	10	4	8	7	6	4	4	7	6	7	9	12	7
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	73	75	75	70	65	76	73	73	75	76	75	72	76	74	70	66	73
MID 2 BOX (% 5-6)	15	14	14	18	18	16	14	17	15	14	16	15	14	15	17	17	15
BOTTOM 4 BOX (% 1-4)	12	12	11	12	17	8	13	11	10	10	9	13	10	11	13	17	11
MEAN	7.7	7.7	7.8	7.6	7.1	8.0	7.6	7.8	7.7	7.8	7.8	7.6	7.9	7.7	7.5	7.1	7.7

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TABLE 14:

[IF SCORE OF 5-10 IN Q13A (BUSINESS) OR Q13B (RESIDENT)] What kinds of customer rate options (or business customer options) would you like to see offered by NL Hydro?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Peak/Off-peak rates/Time of day usage rates	24	31	21	16	0	23	26	20	27	29	19	26	29	26	8	45	23
Rates based on consumption/Higher rates for people who use more power	8	10	7	6	10	6	10	8	8	8	4	9	9	8	8	4	8
Lower rates/Lower rate options	3	3	5	4	0	4	2	6	1	3	1	3	3	3	5	0	4
Lower rates/Credit for alternate power generation (wind, solar)	3	4	2	2	10	2	3	1	3	3	1	3	3	3	4	0	3
Provide a way to track usage	3	4	2	1	0	3	2	2	2	7	7	5	0	3	0	9	3
Lower rates for seniors/low income customers	2	2	0	3	10	3	1	2	1	3	6	1	1	2	2	9	2
Other	11	9	18	12	0	9	13	13	12	6	9	10	13	12	7	4	12
Don't know	53	46	51	60	80	56	50	54	52	52	57	54	48	50	69	46	53
WEIGHTED SAMPLE SIZE (#)	503	236	85	164	11	225	239	162	142	100	84	165	190	409	60	20	477
UNWEIGHTED SAMPLE SIZE (#)	500	271	61	149	10	222	237	155	140	105	86	165	185	413	53	22	472

Note: Random 500 responses selected for coding.

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TABLE 15:

Hydro has a net metering program which allows customers to generate their own electricity and offset their electricity costs. Were you aware that this program is available for customers?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Yes	30	34	31	23	18	20	38	21	33	40	35	33	26	33	21	67	29
No	70	66	69	77	82	80	62	79	67	60	65	67	74	67	79	33	71
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955

TABLE 16:

[NOT ASKED IF ONLY BUSINESS OWNER / OPERATOR IN Q2] With the information you have now, how interested would you be in signing up for Time of Use Rates (that is shifting your usage outside peak morning and evening times), if you knew it could reduce your electricity bill?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
10 - Extremely interested	34	34	37	34	32	38	33	33	35	38	31	36	38	35	27	33	34
9	7	7	7	5	5	7	7	6	8	7	5	6	8	7	4	7	7
8	12	13	9	13	10	14	12	10	13	15	12	14	12	13	10	15	12
7	10	12	10	7	8	9	11	10	11	11	14	11	8	11	9	13	10
6	7	6	9	8	8	8	7	9	7	6	9	6	7	7	10	1	8
5	10	8	11	14	5	11	10	13	8	6	8	9	12	10	14	10	11
4	2	1	1	3	3	2	2	3	1	1	3	2	2	2	0	2	2
3	3	3	3	3	5	3	3	3	2	3	3	2	3	3	2	3	3
2	2	2	2	1	2	2	2	2	1	2	3	2	1	2	2	3	2
1 - Not at all interested	13	13	11	13	22	8	14	12	13	10	12	12	10	12	18	16	13
WEIGHTED SAMPLE SIZE (#)	2051	1026	356	612	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2050	1179	256	558	60	866	1006	592	611	451	348	681	760	1702	204	94	1955
TOP 4 BOX (% 7-10)	63	67	62	59	55	68	63	59	68	71	62	68	66	65	51	67	63
MID 2 BOX (% 5-6)	18	15	20	21	13	18	16	22	14	13	16	15	19	17	24	11	18
BOTTOM 4 BOX (% 1-4)	19	19	18	19	32	14	20	20	18	16	21	17	16	18	26	21	19
MEAN	7.0	7.1	7.1	6.9	6.3	7.4	6.9	6.8	7.1	7.4	6.8	7.2	7.3	7.1	6.3	6.9	7.0

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TABLE 17:

How can NL Hydro improve how it engages with you (and its business customers)?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Better communication/Keep customers informed	9	11	8	5	0	8	8	8	9	7	5	11	10	10	2	6	8
Email	8	8	7	8	17	9	8	9	8	8	8	7	11	7	10	7	8
Lower rates/Stop overcharging/increasing rates	8	8	5	8	0	10	6	7	8	3	9	8	5	8	4	0	8
Be more transparent/honest	5	6	7	2	0	3	5	4	5	4	5	7	3	6	2	6	5
Surveys	3	5	0	3	6	3	4	1	3	13	9	4	0	3	4	13	3
Information on power consumption/reducing power consumption	3	5	0	2	0	3	4	2	4	1	2	4	3	3	0	0	3
Stop paying management high wages/bonuses	3	4	2	2	0	2	3	2	3	4	4	3	3	3	0	0	3
Social media	2	4	0	2	0	4	1	3	1	3	4	2	3	3	1	0	2
Better manage resources/spending/Stop wasting money	2	2	0	2	6	1	3	0	2	3	0	3	1	2	2	6	2
More TV/Radio advertising	1	2	0	2	0	3	0	1	1	3	1	2	1	2	0	0	2
Communicate through text messages	1	2	0	1	6	2	1	1	2	1	2	2	1	1	2	0	1
Provide information/updates with the bill	1	1	0	3	6	2	0	1	1	0	0	1	2	0	6	0	1
Get input from customers/Listen to the customers	1	2	0	0	0	1	2	1	2	2	3	1	2	1	0	0	1
Mail brochures/newsletters	1	1	0	2	0	1	1	3	1	0	3	0	1	1	0	0	1
Use/Create a mobile app	1	2	0	0	0	0	1	1	1	0	1	1	1	1	0	0	1
Other	10	11	13	8	22	7	11	8	8	11	9	11	9	10	8	6	10
Don't know	51	42	62	60	44	53	52	58	51	49	53	48	54	50	62	56	51
WEIGHTED SAMPLE SIZE (#)	499	250	85	146	20	210	232	138	162	87	88	165	170	394	59	15	481
UNWEIGHTED SAMPLE SIZE (#)	500	287	61	133	18	209	231	130	166	94	90	170	163	400	53	16	480

Note: Random 500 responses selected for coding.

NL HYDRO

Digital Engagement Study

TABLE 18:

As NL Hydro continues to plan for the future to continue to meet its mandate of providing safe, reliable and least cost electricity to the province, it's interested in getting continued feedback from consumers . Hydro is building a feedback panel, where you could have the opportunity to provide feedback via online surveys on various topics or issues. Would you be interested in joining Hydro's electricity feedback panel?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Yes	57	58	60	56	50	57	60	55	61	59	55	63	62	57	53	35	58
No	43	42	40	44	50	43	40	45	39	41	45	37	38	43	47	65	42
WEIGHTED SAMPLE SIZE (#)	2070	1038	358	615	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2070	1193	258	560	60	866	1006	592	611	451	348	681	760	1702	204	94	1955

TABLE Q20:

[IF NL RESIDENT IN Q2] In what year were you born? [CONVERTED TO AGE CATEGORIES]

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
18-24	2	2	2	1	0	1	3	3	3	1	11	0	0	1	1	1	2
25-34	17	20	10	17	24	16	17	13	23	21	89	0	0	16	17	35	16
35-44	18	21	11	16	22	19	17	12	17	28	0	48	0	18	17	27	17
45-54	20	20	17	21	20	22	18	15	16	28	0	52	0	20	21	28	19
55-64	24	22	30	24	22	24	23	26	24	18	0	0	54	24	25	9	24
65+	20	15	30	22	10	18	22	31	18	5	0	0	46	21	18	0	21
WEIGHTED SAMPLE SIZE (#)	1792	901	315	551	54	792	931	549	563	406	338	669	784	1477	203	77	1714
UNWEIGHTED SAMPLE SIZE (#)	1789	1036	227	502	49	789	930	527	563	429	348	681	760	1495	181	82	1707

Responses of 'Prefer not to answer' are excluded from this table.

NL HYDRO

Digital Engagement Study

TABLE 21:

[IF NL RESIDENT IN Q2] Do you currently own or rent your home?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Own	83	81	86	84	92	82	85	70	84	96	62	86	90	86	90	91	82
Rent	14	15	13	13	8	15	13	26	13	4	30	12	9	14	10	7	14
Neither, do not own or rent	3	3	2	3	0	3	3	4	3	1	7	2	1	0	0	2	3
WEIGHTED SAMPLE SIZE (#)	2050	1026	356	612	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2049	1179	256	558	60	866	1006	592	611	451	348	681	760	1702	204	94	1955

TABLE 22:

[IF OWN OR RENT IN Q21] Do you currently receive your power bill from Newfoundland Power or NL Hydro?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Newfoundland Power	87	98	87	70	2	86	87	84	89	89	85	87	88	100	0	90	87
NL Hydro	12	1	11	30	98	12	12	14	9	11	12	12	12	0	100	10	12
Do not receive a power bill	1	1	2	1	0	1	1	2	1	0	3	1	1	0	0	0	1
WEIGHTED SAMPLE SIZE (#)	1930	962	342	573	60	815	959	571	579	418	301	640	759	1680	228	86	1844
UNWEIGHTED SAMPLE SIZE (#)	1927	1106	246	522	55	811	955	546	578	441	309	651	734	1702	204	92	1835

Responses of 'Don't know/Not sure' are excluded from this table.

NL HYDRO

Digital Engagement Study

TABLE 23:

[IF NL RESIDENT IN Q2] Do you currently work for a utility?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Yes	4	6	1	4	7	2	6	0	4	10	8	6	1	5	4	100	0
No	96	94	99	96	93	98	94	100	96	90	92	94	99	95	96	0	100
WEIGHTED SAMPLE SIZE (#)	2050	1026	356	612	66	870	1008	616	611	427	338	669	784	1680	228	88	1962
UNWEIGHTED SAMPLE SIZE (#)	2049	1179	256	558	60	866	1006	592	611	451	348	681	760	1702	204	94	1955

TABLE 24:

[IF NL RESIDENT IN Q2] What is your gender identity?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Woman	46	46	47	46	55	100	0	54	44	37	42	50	44	46	47	24	47
Man	54	54	53	54	45	0	100	46	56	63	58	50	56	54	53	76	53
Transgender	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
WEIGHTED SAMPLE SIZE (#)	1882	931	332	585	58	870	1008	589	578	412	325	639	762	1543	213	78	1804
UNWEIGHTED SAMPLE SIZE (#)	1876	1070	239	533	53	866	1006	565	576	435	334	650	738	1559	190	83	1793

Responses of 'Prefer not to answer' are excluded from this table.

NL HYDRO

Digital Engagement Study

TABLE 25:

[IF NL RESIDENT IN Q2] Which of the following broad income categories best describes your total household income before taxes last year?

	OVERALL %	REGION				GENDER		HH INCOME			AGE			UTILITY		WORK FOR UTILITY	
		St. John's/ Avalon	East	West	Labrador	Woman	Man	L.T. \$50K	\$50- <\$100K	\$100K+	18-34	35-54	55+	NF Power	NL Hydro	Yes	No
Less than \$25,000	12	9	17	15	11	17	8	33	0	0	10	9	14	11	18	2	13
At least \$25,000, but less than \$50,000	25	20	36	26	11	27	23	67	0	0	17	17	35	24	27	3	26
At least \$50,000, but less than \$75,000	19	17	21	21	14	20	18	0	52	0	19	14	23	20	14	12	19
At least \$75,000, but less than \$100,000	18	20	15	17	16	15	20	0	48	0	26	20	13	18	16	23	18
\$100,000 or more	26	34	11	21	48	21	30	0	0	100	28	40	15	27	25	60	24
WEIGHTED SAMPLE SIZE (#)	1654	838	290	492	48	722	853	616	611	427	313	562	644	1370	179	70	1584
UNWEIGHTED SAMPLE SIZE (#)	1654	963	209	448	44	722	851	592	611	451	322	575	622	1388	159	74	1580

Responses of 'Prefer not to answer' are excluded from this table.



2018 Digital Engagement Initiative

Summary Report

October 2018



Background & Objectives

Newfoundland and Labrador Hydro (NL Hydro) is a provincial Crown corporation that is the primary generator of electricity for Newfoundland and Labrador (NL). In addition, the Company distributes electricity to rural communities in the province, as well as in Labrador. The Company is a subsidiary of Nalcor Energy.

The primary objective of this digital engagement initiative was to provide an opportunity for NL residents and businesses to become actively engaged in the conversation on electricity in the province. In particular, the online study provided an avenue for input and feedback on various topics related to the future NL's electricity system and:

- Assessed overall perceptions regarding the reliability of Hydro's current system among residents across Newfoundland & Labrador;
- Explored opinions regarding the appropriate balance between reliability and the cost of those investments for customers;
- Evaluated residents' interest in taking a more active role in managing their electricity consumption; and
- Assessed residents' level of interest in engagement with Hydro on a go forward basis.

To meet study objectives, NL Hydro and its agency of record (NATIONAL) commissioned Corporate Research Associates to implement a **Digital Engagement Study**. In particular, through various digital engagement strategies, residents were encouraged to visit a website and share their thoughts by reviewing short information videos and completing an online survey. In total, 2,070 surveys were completed between August 28 and September 20, 2018. When residents were unable to complete the survey online, the opportunity was provided to complete the study by phone. This study was not intended to provide results to which a margin of error can be applied (given that it is not a probability sample), but rather was conducted to actively engage residents in the discussion. That said, overall results were weighted by region to reflect the actual population distribution.

The following summary report presents an overview of the **2018 Digital Engagement Study** and includes an executive summary of results and an analysis of findings. For questions that include regional comparisons, results have been broken out by St. John's/Avalon, East and West. Note, while Labrador is included as part of West regional results, results from Labrador have also been presented separately, where relevant. Appended to this report is a copy of the questionnaire (Appendix A).

Survey Type	Online
Field Dates	August 28 – September 20, 2018
# of Completes	2,070
Average Survey Length	16 minutes





Executive Summary

Respondent Profile

Hydro's Current System

Reliability & Rates

Customer Options

Executive Summary

Results of the **2018 Digital Engagement Initiative** show that while there are some key differences across regions and customer type, respondents are generally content with the current state of Newfoundland and Labrador’s power system. Respondents consider their electricity service to be highly reliable, with a sizable minority reporting that their power reliability has improved since DarkNL. Furthermore, respondents are clearly cost-sensitive when it comes to energy upgrading, expressing willingness to accept a risk of longer outages, in favour of minimal rate increases.

Overall, the majority of respondents are comfortable with the level of reliability offered by the current power system, and as such, prefer additional investments be made cautiously. Indeed, while some think the Province needs a more reliable system than it has currently, when asked their preferred approach towards balancing investment and electricity cost, a clear majority of respondents are in favour of Hydro having some back up generation to partially reduce the impact of a sudden loss of power supply, as it would have a lower impact on electricity costs.

Interestingly, despite cost-sensitivity and apparent willingness to accept longer outages, results suggest respondents would be reluctant to accept an increased frequency of outages. On average, respondents reportedly experienced three outages in the past 12 months. However, regardless of their preferred balance of reliability and impact on electricity cost, few consider more than three outages to be acceptable.

Respondents readily acknowledge that consumers have a role to play in actively managing electricity consumption, and are keenly interested in learning more about their own electricity usage, in real-time. Moreover, the vast majority of respondents would like to have more customer rate options available. Despite interest however, respondents offer limited suggestions as to what options could be offered by Hydro, outside of Time-of-Use rates. That said, interest in Time-of-Use rates is strong, with the vast majority of respondents expressing some level of interest in signing up.

Overall, results reveal limited awareness of Hydro’s Net Metering program, suggesting that additional efforts may be required to build customer awareness, even among Hydro’s own customer base.

Finally, while respondents are unsure how Hydro can improve customer engagement, there is clear interest in engaging with the Utility. Indeed, the majority of respondents expressed interest in joining Hydro’s Electricity Feedback Panel.

** The infographic on the following page offers a one-page visual summary of key findings from the 2018 Digital Engagement Initiative.*

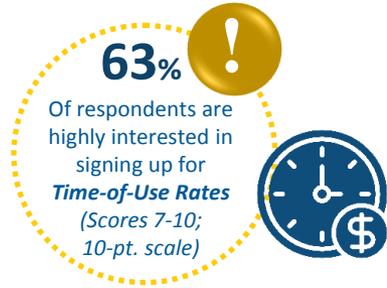
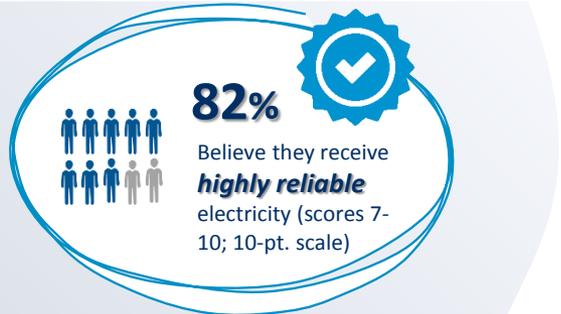
2018 Digital Engagement Study

Key Highlights

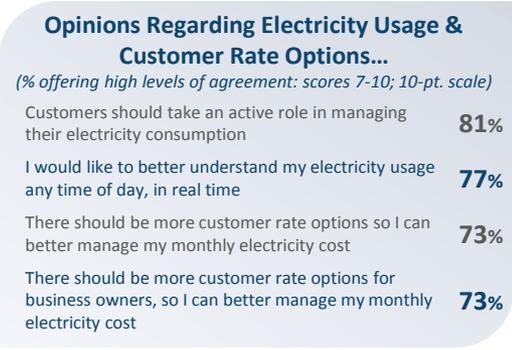
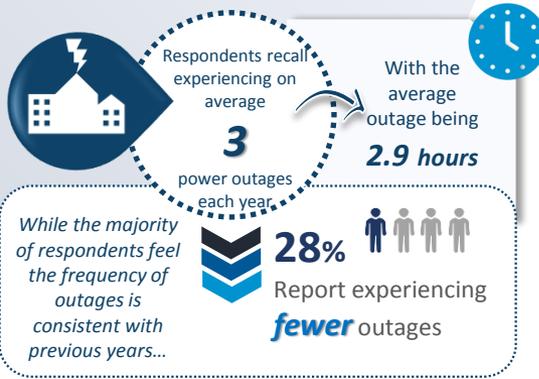
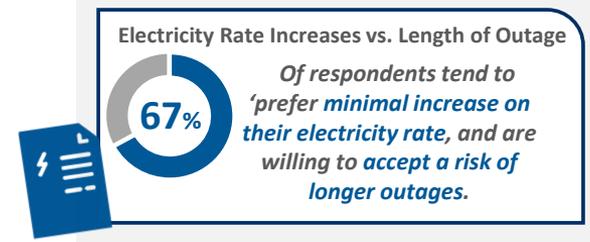


Methodology: 2,070 online surveys with NL residents
Data Collection: August 28 – September 20, 2018

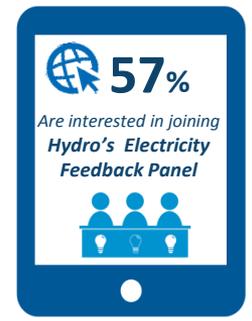
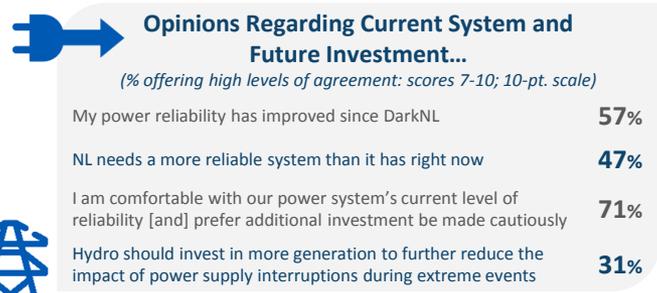
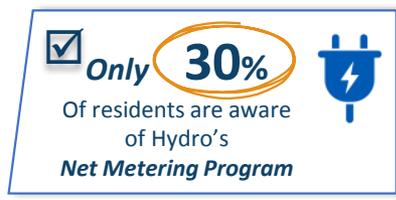
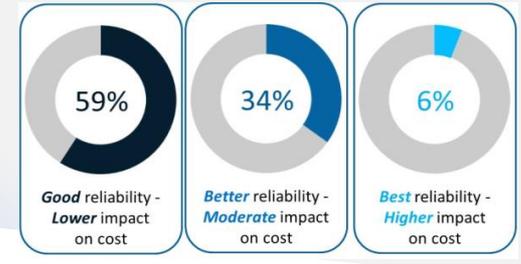
Current System



Looking to the Future...



Preferred Balance: Reliability vs. Impact on Cost





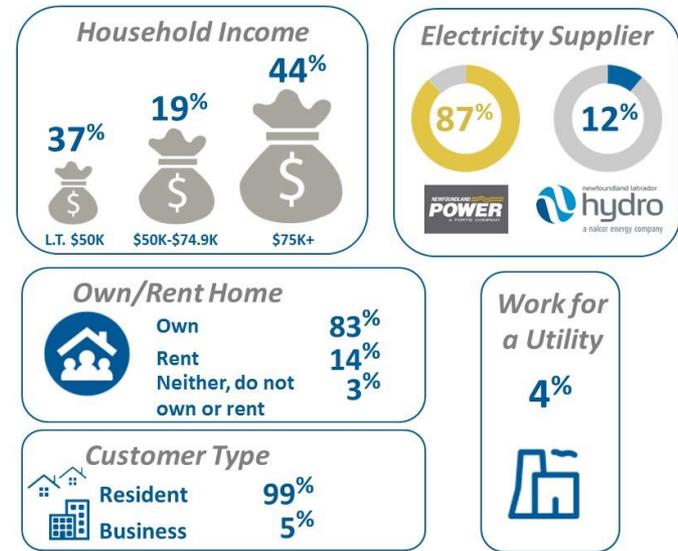
The following visual depicts the profile of overall survey respondents, including gender, age, household income, home ownership, regional breakdown, and customer type. A comparison to the NL population is also shown for key characteristics.

Respondent Profile

- The online study included a robust sample of **2,070** NL respondents. While quotas were not put in place given the mode of data collection (i.e. all residents were invited to visit the site), it is important to note that the actual breakdown of respondents is closely aligned with the true population distribution. As outlined in the following table, the vast majority of survey respondents reside in the eastern region, and most are customers of Newfoundland Power.
- Reflective of the actual demographics in the province, respondents are most likely to be 55 years of age or older. Moreover, the vast majority of respondents overall were home owners. Few businesses were included. (Tables 2, 20-25)

Demographic Characteristics

		2018 Digital Engagement Study (n=2,070)	Actual Population (n=428,955)
Gender		(% Among valid)	(n=1,876)
	Male	54%	48%
	Female	46%	52%
Age		(% Among valid)	(n=1,789)
	18 to 24	2%	9%
	25 to 34	17%	13%
	35 to 44	18%	15%
	45 to 54	20%	19%
	55 to 64	24%	20%
Region		(% Among valid)	(n=2,011)
	St. Johns /Avalon	59%	52%
	East	13%	18%
	West	28%	31%



Note: Respondents could select both resident & business
Among valid responses (n=1654-2070).

Q.20: [IF NL RESIDENT IN Q.2] In what year were you born? (Recoded into age categories)
Q.24: [IF NL RESIDENT IN Q.2] What is your gender identity?



At the start of the survey, respondents were presented with the first of three informational videos. This initial video provided a brief explanation of the survey's purpose, and overview of the current state of Hydro's electricity system. Note, each video was just over one minute in length.



Electricity Reliability

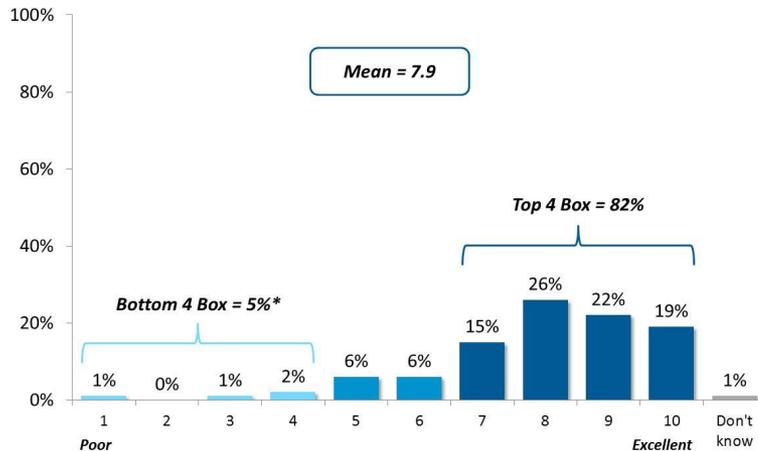
Overall, NL respondents consider their electricity service to be highly reliable.

After viewing the first video, to better understand perceptions regarding overall reliability of NL's electricity system, respondents were asked to rate the reliability of electricity they received using a 10-point scale, whereby '1' means *poor* and '10' means *excellent*.

- **More than eight in ten respondents report to receive highly reliable electricity service** (scores of 7-10), while just over one in ten rate give more **moderate** reliability scores (scores of 5-6). Conversely, only five percent of respondents consider their electricity reliability to be **poor** (scores 1-4).
- Across regions, those residing in Labrador are notably more likely to provide **moderate scores**, with the average score in Labrador being 6.4 (versus 7.9, overall). (Table 3)

Reliability of Electricity Received

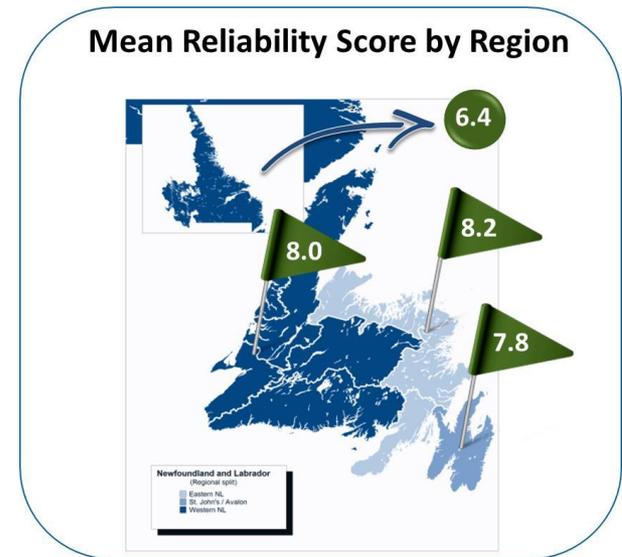
Rating on 10-pt Scale: 1=Poor, 10=Excellent



Q.3: How would you rate the reliability of electricity you receive? (n=2070)

*Due to rounding. Responses of 'Don't know' have been excluded from the calculation of the mean.

Mean Reliability Score by Region



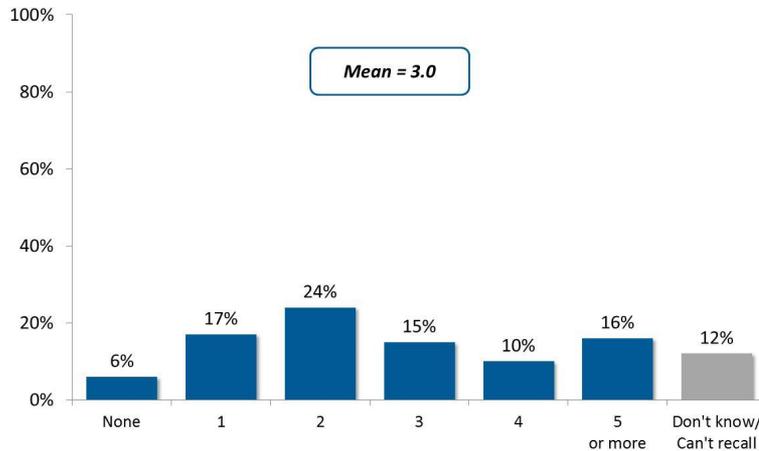
Number of Outages Experienced

On average, respondents report experiencing 3 outages a year.

Respondents were asked to indicate the approximate number of outages they experienced within the past 12 months.

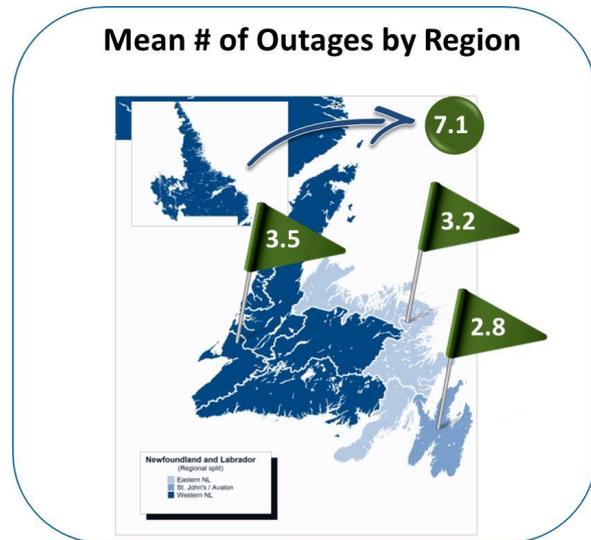
- While few (6%) report having experienced no outages in the past 12 months, more than one-half (56%) of respondents state they experienced one to three outages during this timeframe. At the same time, fewer than two in ten (16%) reportedly experienced five or more outages in the past year. Interestingly, one in ten respondents were unsure or unable to estimate the number of outages they experienced.
- Perhaps unsurprising given noted differences in perceptions related to electricity reliability, there are key differences regarding the frequency of outages based on region and customer type. Indeed, across regions, respondents living in Labrador were notably more likely than respondents overall to have experienced a high number of outages (5+ outages) in the last year (58% vs. 16%), with an average of 7.1 outages being experienced.
- Moreover, Hydro customers experienced a notably higher number of outages on average than NF Power customers (5.1 vs. 2.7 outages). (Table 4)

Number of Outages Experienced Within Past 12 Months



Q.4: Approximately how many outages have you experienced within the past 12 months? (n=2070)
 Responses of 'Don't know/Can't recall' have been excluded from the calculation of the mean.

Mean # of Outages by Region

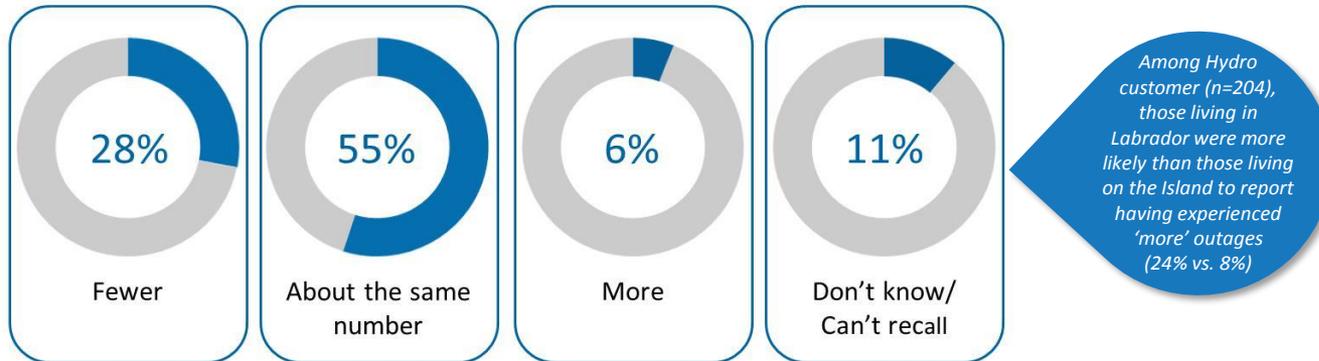


Number of Outages Experienced (cont.)

The prevalence of outages experienced is generally perceived to be consistent with previous years.

- When asked to compare the prevalence of outages experienced to previous years, more than one-half of respondents believe the number of outages was in keeping with the past, while more than one-quarter believe they actually experienced **fewer outages** this year. Few believe they experienced **more outages**.
- Across regions, those living in Labrador are more likely to have experienced **more** outages (22%) than those living elsewhere in the province.
- At the same time, NF Power customers are more likely than Hydro customers to report experiencing **fewer** outages this year (29% vs. 19%). (Table 5)

Outages Experienced Compared to Previous Years



Q.5: Was this fewer, about the same, or more outages than you experienced in previous years? (n=2070)

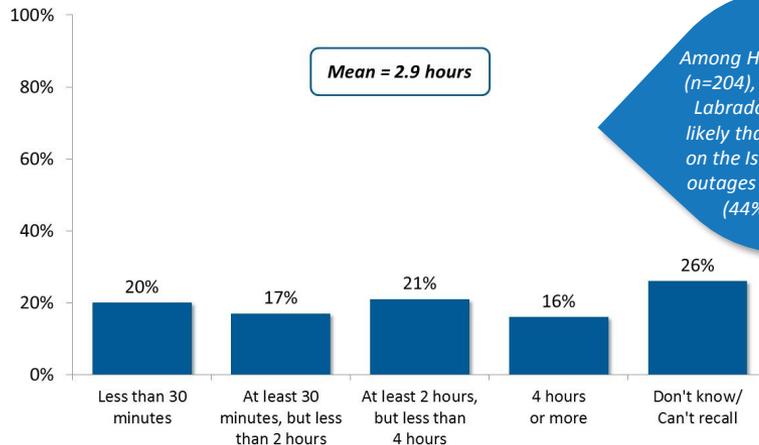
Duration of Outages

Duration of last outage varies notably.

Regardless of when their last outage was, all respondents were asked to approximate the duration of their last outage.

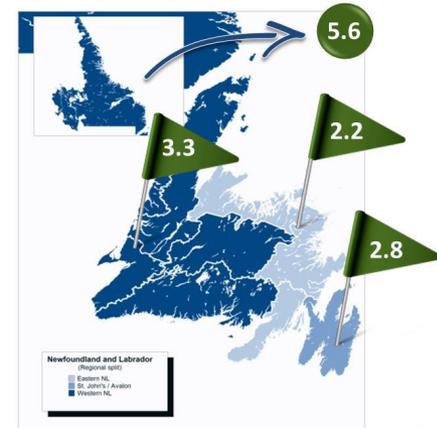
- Overall, the reported outage length varied notably, with the average overall reported length being **2.9 hours**. That said, it warrants mention that one-quarter of respondents were unable to estimate the length of their last outage.
- Two in ten respondents reported their last outage being **less than 30 minutes** in duration, while marginally fewer reported a slightly longer duration of **30 minutes to up to 2 hours**. Less than two in ten reported their last outage being **4 hours or more**.
- Across regions, Labradorians reported the longest outages, with the last outage lasting an average of **5.6 hours**. Moreover, across utilities, Hydro customers reported their last outage was notably longer than NF Power customers' (4.1 hours vs. 2.7 hours). (Table 6)

Length of Last Outage



Q.6: On average, how long was your last outage? (n=2070)
 Responses of more than 96 hours and 'Don't know/Can't recall' are excluded from the calculation of the mean.

Average Length of Outage by Region (in hours)



Perceptions of Electricity Reliability

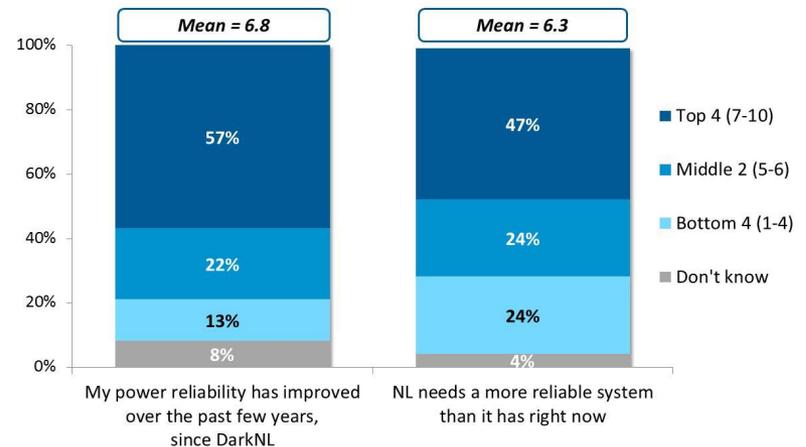
While there is a general perception that power reliability has improved since DarkNL, there are mixed opinions as to whether there is a need for a more reliable system.

In order to further gauge perceptions regarding reliability of NL's current power system, respondents were asked to rate their level of agreement on two separate statements, again using a 10-point scale, whereby '1' is *completely disagree*, and '10' is *completely agree*.

- More than one-half of respondents report high levels of agreement (scores 7-10) that their **power reliability has improved over the past few years, since DarkNL**, while just over one in ten disagree with this statement.
- At the same time, opinions are mixed as to whether **NL needs a more reliable system than it has right now**. Indeed, while just under one-half of respondents offer high levels of agreement that **NL needs a more reliable system than it has right now**, one-quarter do not agree that a more reliable system is warranted.
- Labrador respondents are least likely to offer high levels of agreement that their power reliability has improved in recent years (27%), and more likely to offer high agreement that the Province is in need of a more reliable system (65%).
- Interestingly, those employed within the Utilities sector are less likely to highly agree that NL needs a more reliable system (34% vs. 48%). (Tables 7a-b)

Opinion of Statements About Power Reliability

Rating on 10-pt Scale: 1=Completely Disagree, 10=Completely Agree



Q.7a-b: Please indicate to what extent you agree or disagree with each of the following statements. (n=2070)
 Responses of 'Don't know' have been excluded from the calculation of the mean.

Younger respondents are more likely to agree that a more reliable system is needed (18-34: 56% vs. 34-54, 55+: 46%)



Respondents were then asked to view a second video which noted Hydro's ongoing commitment to provide reliable electricity, the impact of weather on power supply, and Hydro's desire to consult with customers regarding the appropriate balance of costs related to investment and electricity rates.



Perceptions of Investment

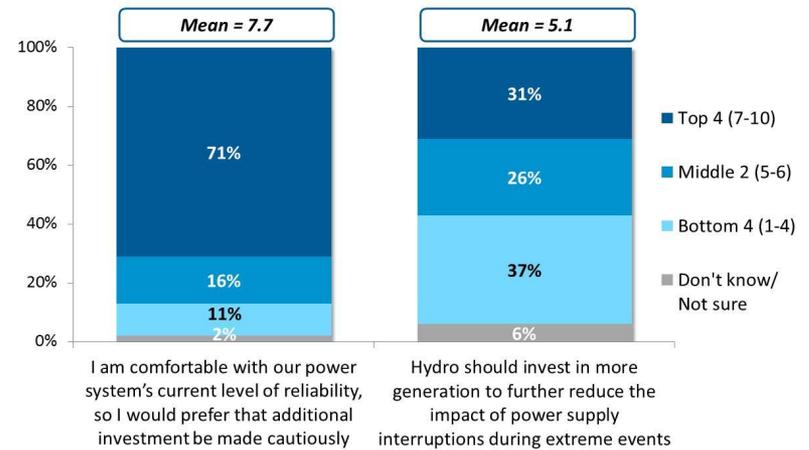
Respondents are generally comfortable with NL's current power system and are reluctant to support additional generation investments.

After gauging perceptions regarding the current state of NL's power system, respondents were then asked to rate their level of agreement concerning statements related to future investment, again using the same 10-point agreement scale.

- Overall, the majority of respondents offer high levels of agreement (scores 7-10) that they are **comfortable with NL's power system's current level of reliability, and as such, would prefer additional investment be made cautiously**. Conversely, only one in ten disagree (scores 1-4) with this statement.
- At the same time, nearly four in ten (37%) respondents disagree (scores 1-4) that **Hydro should invest in more generation to further reduce the impact of power supply interruptions during extreme events**, while fewer (31%) agree (scores 8-10) that such investment should be made.
- Findings are generally consistent across audience segments, although Labrador respondents are slightly less likely to agree that they are comfortable with the current system, and slightly more likely to agree that Hydro should invest more. (Tables 8A-B)

Opinion of Statements About Investment

Rating on 10-pt Scale: 1=Completely Disagree, 10=Completely Agree



Q.8a-b: Please indicate to what extent you agree or disagree with each of the following statements. (n=2070)
 Responses of 'Don't know/Not sure' have been excluded from the calculation of the mean.

Males and higher income earners (\$100K+) are slightly less likely to agree that investment is needed

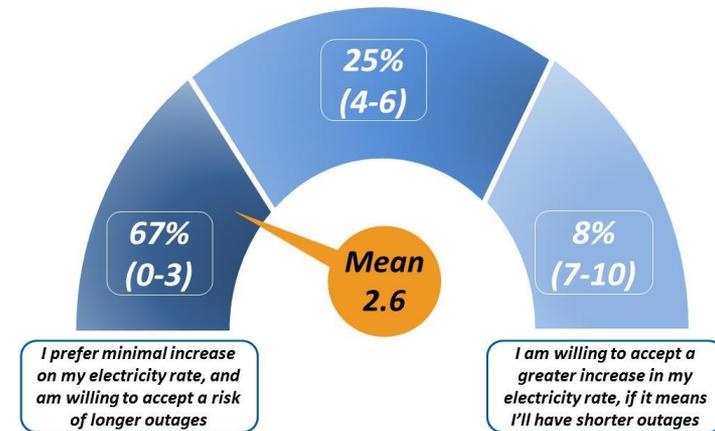
Electricity Rate Increases vs. Outage Duration

Overall, respondents are willing to accept a risk of longer outages, in favour of a minimal rate increase.

Respondents were presented with two opposing statements related to electricity rate increases and outage durations, and asked to position a slider between the two statements to indicate the position that best reflects their personal point of view. *Of note, while the slider was designed similar to an 11-point scale with a mid-point, the related scores (0-10) were not visible to respondents, and are only used in the graph to the right to provide a more precise visual of how opinions varied across respondents.*

- Overall, the vast majority of respondents prefer a **minimal increase on their electricity rates, and are willing to accept a risk of longer outages**. Indeed, two-thirds of respondents indicated that this statement best reflected their point of view (scores 0-3).
- Few (8%; scores 7-10) reported a **willingness to accept a greater increase in their electricity rate, if it means they'll have shorter outages**, while one-quarter of respondents did not feel highly committed to either statement (scores 4-6).
- Across regions, Labrador respondents are more likely to indicate that their point of view falls in between the two statements (scores 4-6: 32%), although the majority still report favouring a minimal increase, and are willing to accept the associated risk (scores 0-3: 58%). (Table 9)

Electricity Rate Increases vs. Length of Outages



Q.9: Please move the slider to a position that best describes your point of view. (n=2070)

Younger respondents are more likely to accept the risk of longer outages in favour of minimal rate increases (scores 0-3: 18-34: 73%, 35-54: 67%, 55+: 64%)

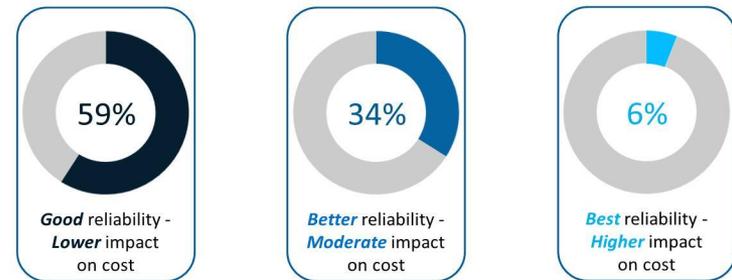
Desired Reliability & Impact on Electricity

There is a clear cost sensitivity when it comes to energy upgrading.

Following a statement regarding the general high cost of upgrading or adding to its supply of power, and the corresponding impact on the price of electricity, respondents were asked to select which of the three alternatives that best describes their preference

- Overall, most respondents favour an approach that involves ‘good reliability, with a lower impact on cost’. Indeed, six in ten respondents expressed preference for an investment plan that involves **good reliability, with a lower impact on electricity cost**.
- Just over one-third of respondents stated they prefer a plan that would provide **better reliability, with a moderate impact on electricity cost**. Across regions, Labrador respondents were most likely to favour ‘**better reliability, moderate impact on cost**’ (47%).
- Very few respondents are in favour of an investment strategy that, while offering the **best reliability**, would mean a **higher impact on electricity cost**. While those living in Labrador are more likely than respondents overall to prefer this type of approach (13% vs. 6%), it is still the preferred approach by only a minority of those respondents. (Table 10)

Preference: Reliability of Electricity vs. Impact on Cost



Q.10: Please select the alternative that best describes your preference. (n=2070)

- Good Reliability, Lower Impact on Electricity Cost:**
Hydro should plan to have some back up generation to partially reduce the impact of a sudden loss of power supply.
- Better Reliability, Moderate Impact on Electricity Cost:**
Hydro should plan to have additional back up generation to moderately reduce the impact of a sudden loss of power supply.
- Best Reliability, Higher Impact on Electricity Cost:**
Hydro should plan to have enough back up generation to significantly reduce the impact of a sudden loss of power supply.

While older respondents (55+) were more likely than their younger counterparts to express openness to paying more for greater reliability, the majority (53%) still favour ‘good reliability, lower impact on cost’.

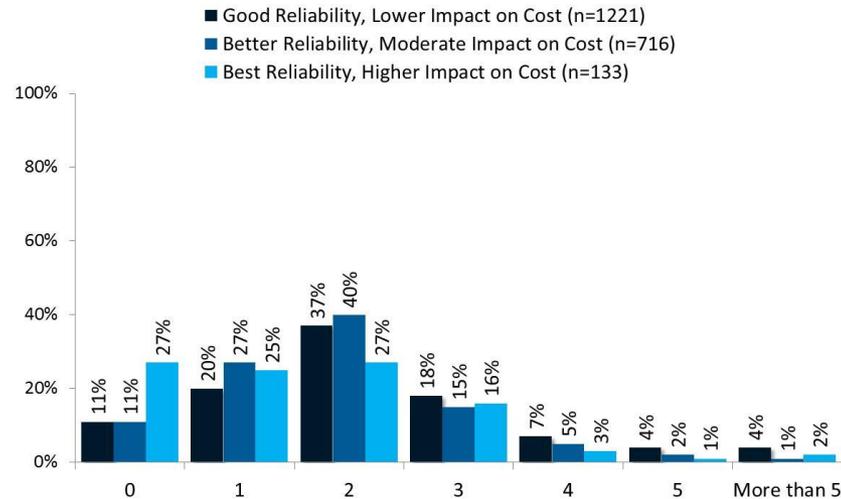
Acceptable Number of Outages

There is a decreased tolerance for outages among those favouring greater investment at a higher impact to cost.

Following respondents preferred selection, they were asked to indicate the number of outages in a given year they would consider acceptable.

- Results show a decreased tolerance for outages with better reliability. As may be expected, those in favour of an investment approach offering the **best reliability, but with a higher impact on cost** (n=133) are most likely to consider no amount of outages to be acceptable.
- That said, regardless of respondents' preferred approach, the majority of respondents deem one to two outages to be acceptable, and very few deem more than three outages a year to be acceptable. (Tables 11: Good Reliability, Lower Impact; Better Reliability, Moderate Impact; Best Reliability, Higher Impact)

Acceptable Number of Outages



Q.11: Given an outage caused by loss of supply could last approximately 4-8 hours, how many outages in a given year would you consider acceptable?



The third and final video shown to respondents noted Hydro's efforts to explore different options to help Newfoundlanders and Labradorians manage their future electricity costs (such as Time-of-Use rates), and asked for their opinions and suggestions on ways they can help customers manage the impact of rising electricity costs.



Electricity Usage

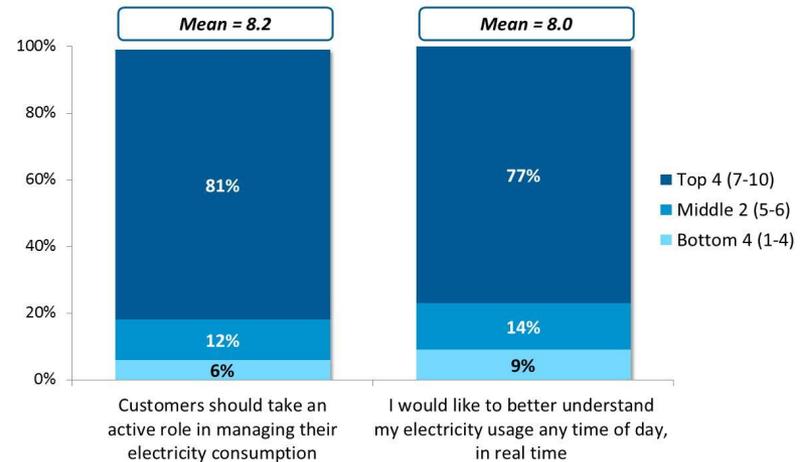
Respondents believe consumers should have an active role in managing their electricity consumption and have a clear desire for better understanding their electricity usage.

To better gauge consumer interest in various options aimed at giving customers more choice and control over their electricity consumption, and ultimately how much they pay for it, respondents were asked to rate their level of agreement to two statements, again using the same 10-point agreement scale.

- Eight in ten respondents highly agree (scores 7-10) that **customers should take an active role in managing their electricity consumption**. Conversely, few disagree with this statement. Of note, those living in Labrador provided a slightly lower score to this statement (average: 7.4).
- Respondents are keenly interested in learning more about their electricity usage, with just over three-quarters of respondents highly agreeing that they would like to **better understand their electricity usage any time of day, in real time**. (Tables 12A-B)

Opinion of Statements About Electricity Usage

Rating on 10-pt Scale: 1=Completely Disagree, 10=Completely Agree



Q.12a-b: Please indicate to what extent you agree or disagree with each of the following statements. (n=2070)

Agreement that customers should play an active role in managing electricity consumption increases with age and household income

Customer Rate Options

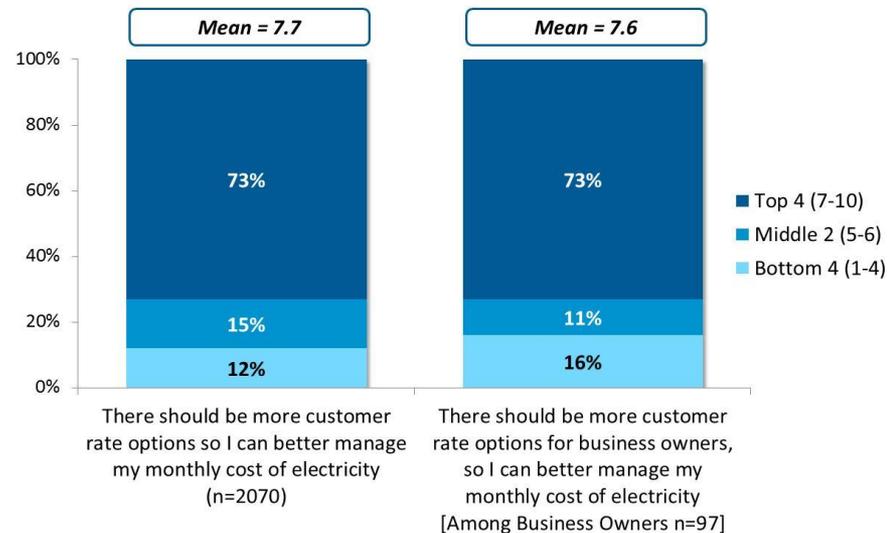
There is a clear interest in having more customer rate options.

Respondents were asked to rate their level of agreement regarding one or two statements concerning their interest in customer rate options, again using the same 10-point agreement scale.

- Overall, nearly three-quarters of respondents offer high levels of agreement (scores 7-10) that there should be **more customer rate options so they can better manage their monthly electricity costs**. Conversely, just over one in ten respondents disagree (scores 1-4) with this statement. Overall, interest is generally consistent across audience segments.
- Interest is also strong among NL business owners/operators (n=97). Indeed, as with respondents overall, nearly three-quarters of owners/operators highly agree that **there should be more customer rate options for business owners, so they can better manage their monthly electricity cost**. Again, only a minority disagree with this statement. (Tables 13A-B)

Opinion of Statements About Customer Rate Options

Rating on 10-pt Scale: 1=Completely Disagree, 10=Completely Agree



Q.13a-b: Please indicate the extent to which you agree or disagree with the following statement(s) on various options that could be available.

Customer Rate Options (cont.)

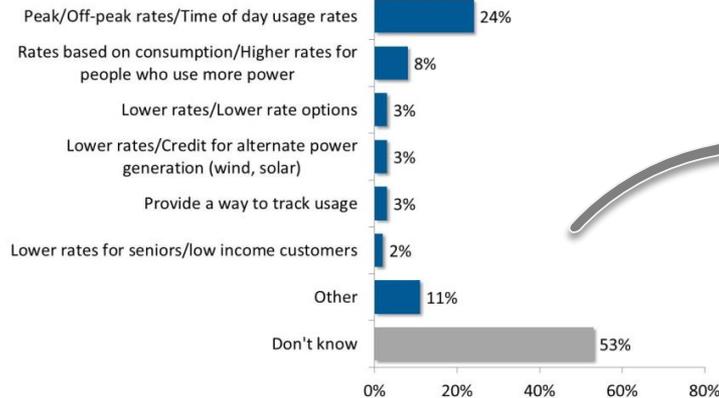
Despite apparent interest in having a more active role in managing their electricity usage, respondents offer limited suggestions as to customer rate options they would like to see offered by Hydro.

Those expressing some level of agreement (scores 5-10) with statements regarding customer rate options (as noted on the previous page), were then asked, unaided, what kinds of customer rate options (or business customer options) they would like to see offered by Hydro.

- Just over one-half of respondents were unable to offer any specific suggestions as to the customer rate options / business customer options they would like to see offered. Of the suggestions that were given, **Time-of-Day usage rates** was most popular, with one-quarter of respondents stating they would like to see this added to Hydro’s current offerings. At the same time, nearly one in ten suggested **rates based on consumption, with higher rates for higher users**. Few alternative suggestions were offered.
- As noted in the below map, those living in the St. John’s / Avalon region were most likely to offer some form of suggestion as to the kinds of customer rate options they would like to see added, and were most likely to suggest **Time-of-Day usage rates** (St. John’s / Avalon: 31% vs. East: 21%, West: 16%). (Table 14)

Customer Rate Options Would Like to See Offered

Among Business Owner/Operators or Residents Who Gave a Rating of 5–10 in Q.13A/Q.13B
Total Unaided Mentions



Q.14: [IF 5-10 IN Q.13A (BUSINESS) OR Q.13B (RESIDENT)] What kinds of customer rate options (or business customer options) would you like to see offered by NL Hydro? (n=500) Note: Random 500 responses selected for coding.



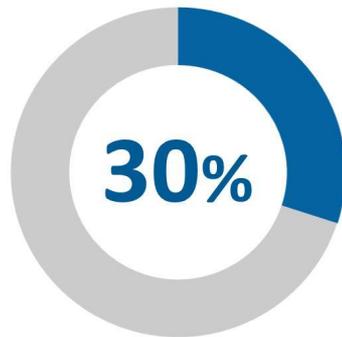
Net Metering Program

There is limited awareness of Hydro's Net Metering Program.

To gauge awareness of Hydro's Net Metering Program, respondents were asked, aided, whether they were aware of the program prior to the survey.

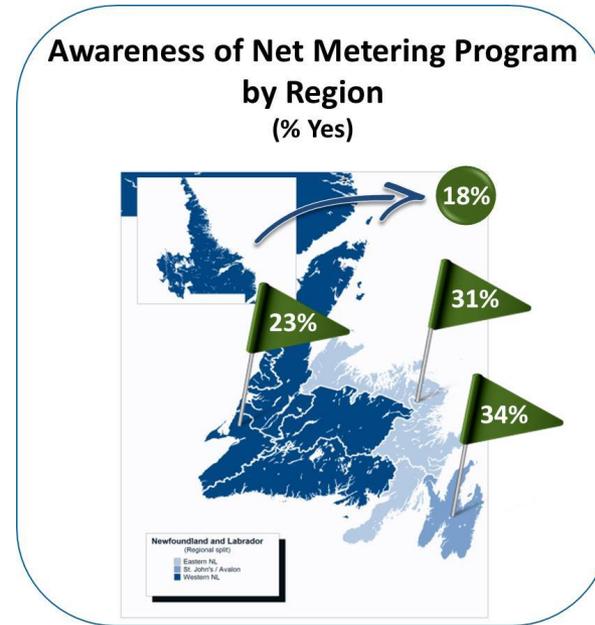
- Fewer than one-third of respondents were aware of the program. As noted in the below map, those residing in Labrador were least likely to be familiar with the program. This finding suggests additional efforts may be required to build customer awareness.
- Men, higher income earners (\$100K+), and those under the age of 55 were more likely than their respective counterparts to be familiar with the program.
- As would be expected, those working for a utility were more likely to be aware of the program (67%). (Table 15)

Aware of Metering Program
(% Yes)



Q.15: Hydro has a net metering program which allows customers to generate their own electricity and offset their electricity costs. Were you aware that this program is available for customers? (n=2070)

Awareness of Net Metering Program by Region
(% Yes)



Interest in Time-of-Use Rates

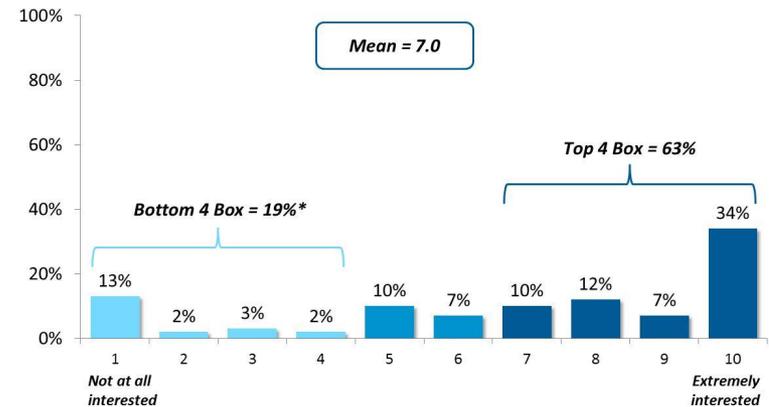
Interest in Time-of-Use Rates is generally strong.

After receiving a brief overview of Time-of-Use rates (as outlined in the video), respondents were asked to rate their level of interest in signing up for Time-of-Use rates and shifting their usage outside of peak morning and evening times in order to reduce their electricity bill. Again, respondents were asked to use a 10-point scale, whereby '1' means *not at all interested* and '10' means *extremely interested*.

- Results show respondents have a clear interest in signing up for Time-of-Use Rates, with nearly two-thirds expressing high levels of interest (scores 7-10). At the same time, just under two in ten express only moderate interest, while a similar portion are uninterested.
- Interest varies across regions, with those living in St. John's / Avalon being most likely to be highly interested (67%), while those living in Labrador are least likely to express this level of interest (55%).
- Of note, Hydro customers are less likely than NF Power customers to express a high level of interest in Time-of-Use rates (51% vs. 65%).
- Finally, it is interesting to note that those with household incomes of less than \$50,000 are less likely than more affluent respondents to be highly interested in shifting their usage in order to lower their electricity bill (<\$50K: 59% vs. \$50-100K: 68% and \$100K+: 71%). (Table 16)

Level of Interest in Signing Up for Time of Use Rates

Rating on 10-pt Scale: 1=Not at all Interested, 10=Extremely Interested

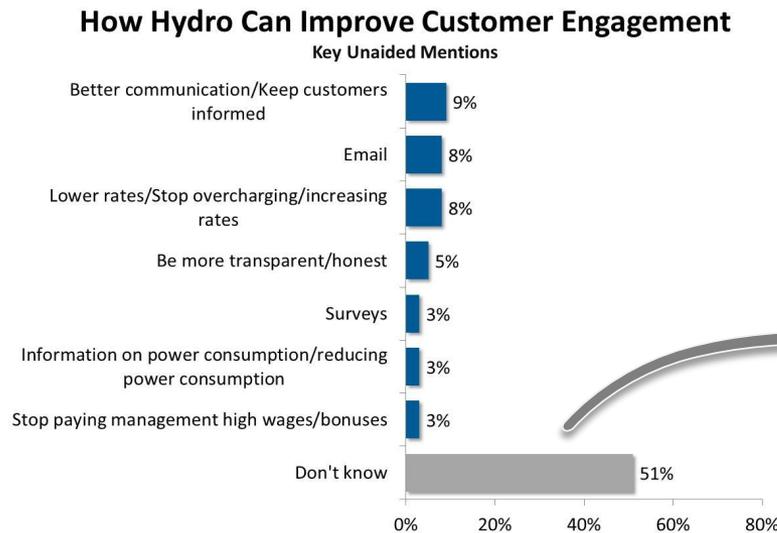


Q.16: [NOT ASKED IF ONLY BUSINESS OWNER/OPERATOR IN Q.2] With the information you have now, how interested would you be in signing up for Time of Use Rates (that is shifting your usage outside peak morning and evening times), if you knew it could reduce your electricity bill? (n=2050) *Due to rounding.

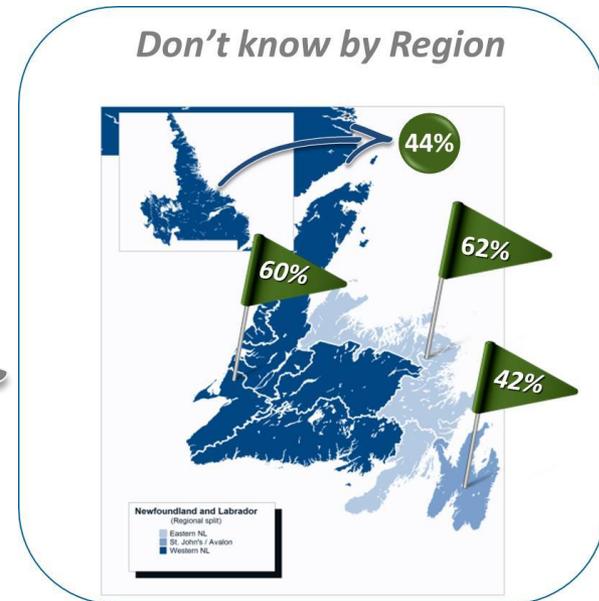
Suggestions on How to Improve Customer Engagement

Ways Hydro can improve customer engagement are not readily evident to respondents.

- When asked what Hydro could do to improve customer engagement one-half of respondents were able to provide a response. Of the suggestions that were given, **better communication/keeping customers informed**, **lower rates**, and **email communication** were each suggested by just under one in ten respondents, while fewer suggested **being more transparent**, **providing information on ways to reduce power consumption**, **surveys**, **stop paying management high wages/bonuses**, and **social media**.
- As noted in the below map, those living in the Western and Eastern regions are most likely to be uncertain as to how Hydro can improve customer engagement. (Table 17)



Q.17: How can NL Hydro improve how it engages with you (and its business customers)? (n=500)
 Note: Random 500 responses selected for coding.

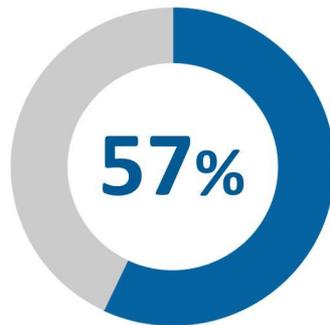


Interest in Joining Hydro's Electricity Feedback Panel

Respondents are generally interested in engaging with the Utility in the future.

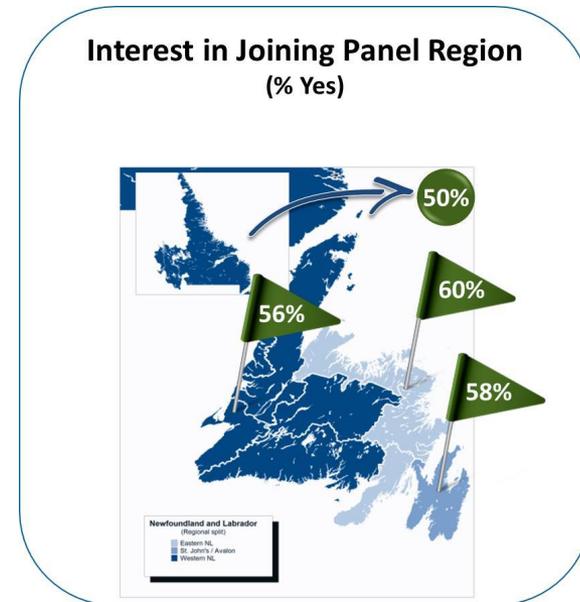
- More than one-half (57% - n=2,070) expressed interest in joining Hydro's electricity feedback panel, and providing feedback via online on various topics or issues.
- Respondents 35 years of age and older are slightly more likely than their younger counterparts to be interest in becoming a panel member (35-54: 63% and 55+: 62% vs. 18-34: 55%).
- Those working within the Utility sector are least likely to want to join the panel (35%).
- Finally, as shown in the regional map, interest in joining the panel is strong across the province. (Table 18)

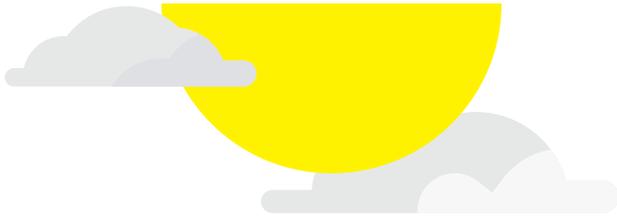
Interested in Joining Hydro's Electricity Feedback Panel
(% Yes)



Q.18: As NL Hydro continues to plan for the future to continue to meet its mandate of providing safe, reliable and least cost electricity to the province, it's interested in getting continued feedback from consumers. Hydro is building a feedback panel, where you could have the opportunity to provide feedback via online surveys on various topics or issues. Would you be interested in joining Hydro's electricity feedback panel? (n=2070)

Interest in Joining Panel Region
(% Yes)





ELECTRICITY FEEDBACK NL

WHAT WE HEARD.



CUSTOMER & STAKEHOLDER ENGAGEMENT

METHODOLOGY & SCOPE

The intent of the engagement was to start a dialogue regarding electricity in the province with our customers and stakeholders—and the conversation is far from over. We used practices consistent with engagement activities used by other utilities across Canada.

Our approach used public engagement principles and an opt-in approach, allowing all residents in the province to join the conversation and, therefore, quotas for data collection were not put in place. However, it should be noted, the actual breakdown of respondents closely aligns with the true population distribution in the province.

A two-pronged approach for customer engagement was implemented—digital engagement with residential and small commercial customers along with one-on-one consultation with key stakeholders including: the Consumer Advocate, Industrial Customers, and Newfoundland Power.

CUSTOMER ENGAGEMENT

Our customer engagement offered two participation opportunities—a digital engagement along with an option to join a longer-term customer panel. Input was gathered from 2,070 provincial electricity customers in August and September of 2018.

Through our customer engagement initiative, expectations for reliability, cost, customer options, and rate design were gathered and will be used to inform our recommendations.

We value the importance of seeking customer input for consideration and decision making purposes. Customer input, along with analysis and evidence, help us make informed decisions about the future of electricity in our province.

ENGAGEMENT TYPE	ONLINE
DATES	AUG 28 – SEPT 20, 2018
NUMBER OF COMPLETES	2,070
AVERAGE ENGAGEMENT LENGTH	16 MINUTES

WHAT WE HEARD

Reliability:

We asked customers how they feel about the current reliability of their power supply as analysis is happening now to determine the amount and type of investments we make for the future of energy in our province.

While the engagement results showed differences among regions and customer type, overall respondents indicated they believe NL’s power system to be reliable. However, they do not want an increased frequency of outages.

Any proposed plan for future investment will meet reliability standards, good utility practice, and Hydro’s commitment to continue to meet customer’s expectations.



Balance between reliability and cost:

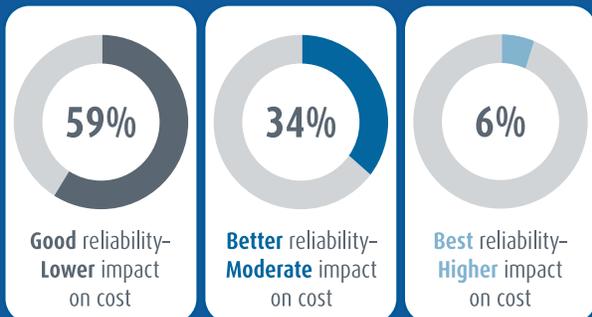
Electricity rates are a concern for Newfoundlanders and Labradorians, which is why we asked for input to determine the right balance between reliability and the cost of those investments for customers.

Customers demonstrated they are cost-sensitive and would prefer investments in the system be made cautiously. Overall, most respondents favour an approach that involves good reliability with a lower impact on cost.

Very few respondents were in favour of an investment strategy that, while offering the best reliability, would mean a higher impact on electricity costs.

With the majority of customers noting a preference for cautious investment, it’s our responsibility to ensure that any recommended resource plan ultimately balances cost with reliability.

PREFERRED BALANCE: RELIABILITY VS. IMPACT ON COST



OPINIONS REGARDING CURRENT SYSTEM AND FUTURE INVESTMENT

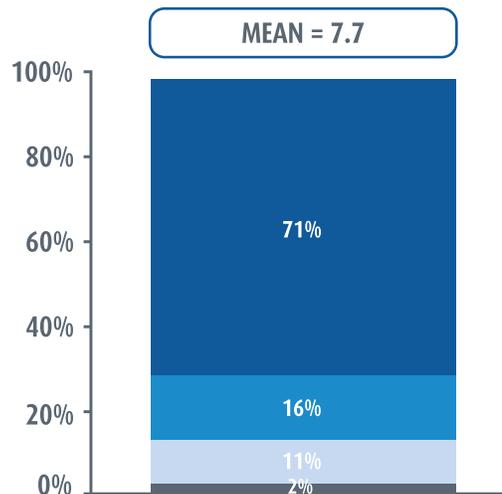
(% offering high levels of agreement: scores 7-10; 10-pt. scale)

My power reliability has improved since DarkNL.	57%
NL needs a more reliable system than it has right now.	47%
I am comfortable with our power system's current level of reliability and prefer additional investment be made cautiously.	71%
Hydro should invest in more generation to further reduce the impact of power supply interruptions during extreme events.	31%

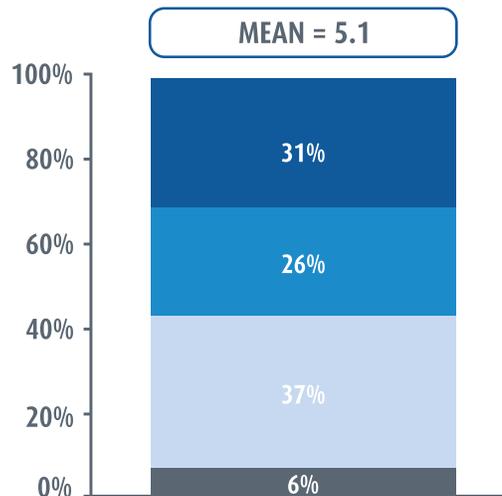


OPINION OF STATEMENTS ABOUT INVESTMENT

Rating on 10-pt Scale: 1=Completely Disagree, 10=Completely Agree



I am comfortable with our power system's current level of reliability, so I would prefer that additional investments be made cautiously.



Hydro should invest in more generation to further reduce the impact of power supply interruptions during extreme events.



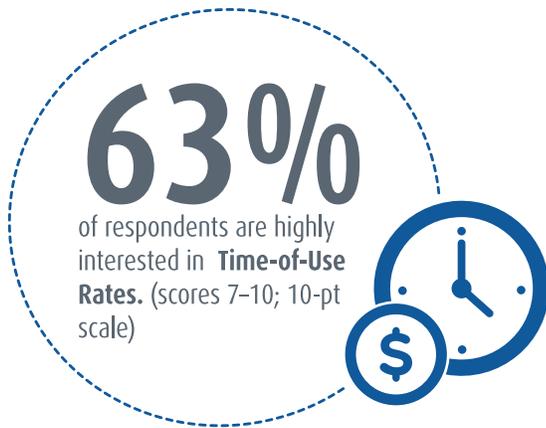
Q. 8a-b: Please indicate to what extent you agree or disagree with each other of the following statements. (n=2070)

Responses of 'Don't know/Not sure' have been excluded from the calculation of the mean.

CUSTOMER OPTIONS

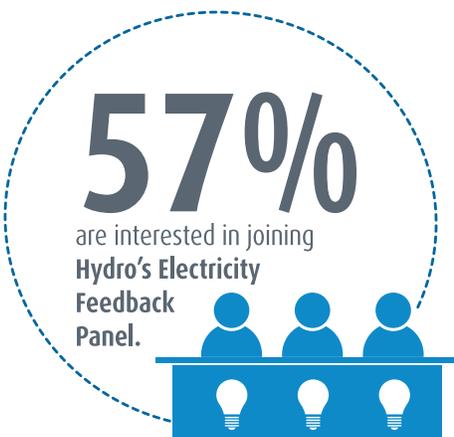
Respondents readily acknowledge that customers have a role to play in actively managing electricity consumption and are keenly interested in learning more about their own electricity usage.

Moreover, the vast majority of respondents would like Hydro to explore more customer rate options and demonstrate a high level of interest in Time-of-Use Rates.



CONTINUED ENGAGEMENT

There is clear interest in continued engagement with Hydro. Although many respondents were unsure of how Hydro could do a better job of this, the majority of respondents did express interest in joining Hydro's Electricity Feedback Panel. To date, we have approximately 630 electricity customers registered to the panel.



NEWFOUNDLAND POWER

Hydro met with Newfoundland Power executive and engaged staff throughout the course of its study to provide opportunities for input and questions. Various departments also provided assistance in the development of modelling assumptions and study components.

INDUSTRIAL CUSTOMERS

Hydro met with each of its industrial customers to give an overview of the study and provide an opportunity for input, questions, and feedback. Overall, industrial customers generally agreed with the proposed approach for study execution, with many commenting on the comprehensiveness of the presented project scope.

CONSUMER ADVOCATE

The Consumer Advocate remarked on the inclusion of Customer Demand Management as a resource option as a positive step forward, noting that customers continue to be concerned about future electricity costs and would likely benefit from additional flexibility and options.

