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September 3, 2014

The Board of Commissioners of Public Utilities
Prince Charles Building
120 Torbay Road, P.O. Box 21040
St. John's, Newfoundland & Labrador
A1A 5B2

Attention: Ms. Cheryl Blundon
Director Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: Newfoundland and Labrador Hydro - the Board's Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System

In a letter dated August 27, 2014 the Board requested that Hydro provide the dates on which the activities noted below would be completed, and to provide copies of the related materials as soon as they are completed:

a) The Customer Expectations Research results referenced in PUB-NLH-194: This research was completed as scheduled in July. A copy of the full report produced for Hydro and Newfoundland Power by Market Quest Opinion (MQO) is attached.

b) The Customer Service Strategy referenced in PUB-NLH-202: Hydro expects this strategy to be finalized by September 30, 2014, consistent with the schedule indicated in this RFI response. A copy will be provided to the Board at that time.

c) The meeting minutes, notes, action items, and lessons learned from the joint utilities meeting scheduled for September, 2014: This meeting is scheduled for September 18, 2014 and a copy of the meeting outcomes will be provided to the Board by September 30, 2014.

d) The final Severe Weather Preparedness Protocol as referred to in the Integrated Action Plan as #76 and the Protection and Control Systems Reports dated June 16, 2014: This protocol will be revised by Hydro's Asset Owners Technical Council on September 17, 2014 and a copy of the finalized document will be provided to the Board by October 1, 2014 as indicated in Hydro's latest IAP update on August 22.

We trust the foregoing is satisfactory. If you have any questions or comments, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Geoffrey P. Young
Senior Legal Counsel

GPY/cp

cc: Gerard Hayes – Newfoundland Power
Paul Coxworthy – Stewart McKelvey Stirling Scales
Thomas Johnson – Consumer Advocate
Danny Dumaresque
ecc: Roberta Frampton Benefiel – Grand Riverkeeper Labrador

Outage Communications

Final Report – Focus Groups and Surveys

July 2014

NEWFOUNDLAND POWER
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MQO RESEARCH RECHERCHE

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Study Overview

The following three-phase research program was initiated as a joint project between Newfoundland Power and Newfoundland Labrador Hydro: with the desired outcome being to collaboratively build comprehensive and highly effective outage communications plans and protocols. The first phase of this project involved a series of six focus groups held across Newfoundland with customers of NP or NLH. These were used to explore the topics of outage communications and related experiences during planned outages, unplanned outages and rotating outages as well as several other related topics. These discussions added a valuable depth of understanding to the exercise, and also ensured that the subsequent surveys were designed to quantify and further enlighten on the most relevant points.

The second and third phases were quantitative / survey-based in nature. In phase two, a province-wide residential telephone survey of 730 residential customers was undertaken. While in the phase three exercise, an online business survey was conducted by leveraging the support and assistance of key business organizations across the province. Both of these surveys were used to quantify and confirm the initial insights gathered from the focus groups so that communication plans and strategies could be better developed/refined to meet the present and future needs of residential and business customers.

Executive Summary

Through the course of this project, MQO gathered and analysed input from a broad cross section of residential and commercial customers of Newfoundland Power and Newfoundland and Labrador Hydro. The overarching goal of the project was to gain a clearer understanding of customer outage-related information needs of customers across the province during power outages. The project was also intended to gain a better understanding of customer related needs and expectations related to requests for conservation. Following is a summary of the key findings of this study, along with a series of related conclusions and recommendations.

Residential Customers: Key Findings

Planned outages

In general customers seem to understand and appreciate that planned outages are a part of operating and maintaining an efficient energy system. For this reason, they are generally tolerant of planned outages when they occur. However, they also fully expect that the utility is mindful of the disruption that these outages cause for customers and as a result are careful to plan them at times and in a manner that minimizes the disruption they create.

- **Notification Period:** It appears a combined total of 85% of NL households would be satisfied to receive 1-2 day's notice in advance of planned outages.
    - Higher incomes / university graduates (typically living in an urban setting) are twice as likely as the norm to prefer 3-4 day's notice (15-16% versus 8% overall).

- **Methods of Notification:** The most familiar/prevalent method of notification preferred by customers continues to be mass media: radio (77%)
    - The second most consistent method noted was a direct method: automated phone messages
        - This was acknowledged as desirable even more often than the traditional mailbox /door knob message
            - Residential customers are generally satisfied with the current information provided by the utilities in direct notifications/door knockers
        - Today, utility websites and call centers also appear to be effective methods of communication with customers during planned outages.
            - Of particular note in this area was the level of cross-access between utilities.
                - 27-29% of NP customers also indicated they might access the NLH website or contact center.
                - 30% of NLH customers also indicated they might access the NP website or call center.
        - At 49% acknowledgement, Facebook has become a mainstream method of planned outage notification

- **Type/Frequency of Updates:** The most pressing question for most people (and the one they wanted the most frequent updates on) was "how long the power will be out".
    - A third of customers prefer hourly updates on this topic, while two thirds would be satisfied with updates "a few times a day"
    - Hydro customers appear to have lower expectations with respect to frequency of updates during planned outages.

- Cause and geographic extent of the outage appear to be "nice to know but don't need to know" topics for most, with little updating expected.

PLANNED OUTAGES: CONCLUSIONS/RECOMMENDATIONS

People understand that planned outages have to occur from time to time, but when people can see that the timing and duration has been thought through carefully on the part of the utility, it goes a long way reducing customer's angst over the inconvenience.

Even though many people refer to the tried and proven methods of informing people of outages, many methods were referenced in the study. This suggests that multiple methods of advisories should be considered to ensure everyone affected is aware of the upcoming outage. Multiple methods, when noticed by customers, also indicate diligence on the part of the utility (showing concern for their customers). In terms of information provided, it appears that the current content is well received.

One medium that warrants additional consideration is the use of automated phone messaging. In the study, this method generally emerged as a high interest method of communicating. Since it is not currently available there is some concern if respondents had a clear and consistent understanding of what the term meant. Further assessment may be beneficial overall (what it could entail and how it might work)

Facebook is now at a level of saturation that could move it to be considered a mainstream vehicle for planned outage notifications.

Regardless if the outage remains on schedule or not, regular updates are helpful (either to reassure of "power-back" times or to keep people informed of changes in a timely way).

The frequency of updates may be more circumstantial in nature. If the return time is short and obvious, minimal updating may be needed. For longer outages where things remain on schedule, 2-3 times a day may suffice. If there is more uncertainty, hourly updates may be prudent. The premise is that the more clearly people know what's happening, the less they will be concerned, and the better they can make decisions.

Extra information may never be a bad thing in this case, but sticking to the main points of concern should be the core focus of planned outage communications.

Unplanned Outages

In the case of unplanned outages, there is generally no notification period and as a result customers often feel they are suddenly thrust into a situation of uncertainty and disruption. Compounded by the fact that outages most often occur during storms or severe conditions, these events leave customers in what could be considered a very vulnerable position. As a result it is understandable that during an unplanned outage people are focused primarily on one question: "How long will the power be out / when will it come back on?" And while there may be a desire from the

media for more information to pass onto listeners/readers, all other information seems secondary to this overarching desire: to have the power back.

- **Critical information:** There are two critical pieces of information that people want during an unplanned outage: First, they want to know "how long the power will be out" and, second, they want regular updates on the first question.
    - Most other related topics are clearly important enough to warrant media coverage: Different people are more or less interested in each of the topics (the cause of the outage, the extent of damage, geographic extent, location of warming centers). However, none of these questions should override the critical question concerning getting the power back.
    - During an unplanned outage there is limited interest from the public in understanding "who is responsible"
- **Power-back estimate:** An hour appears to be an acceptable time period for most people to wait before they hear "when the power will come back."
    - Any longer than an hour (for the first advisory) will leave over half the affected customers (60%) dissatisfied.
- **Update Frequency:** For most customers, receiving updates every hour seems to be a reasonable timeframe:
    - Customers are generally less concerned with updates when they know the power will be back in fairly short order (2-3 hours or less). However, when outages go beyond that shorter window, frequent updates become more important and meaningful in the customers decision-making process.
    - It is reasonable to state that updates are most critical when the power-back time estimates change. If the time remains the same, the updates are an important reassurance. If they change, the new times may become critical for decision making in the household.
- **Information Sources:** "First response" to this question was used to determine customer's most important choice in their search for information. It is important to note that there were a range of first choice answers, reinforcing the importance of comprehensive outreach in the communication plan. It is also important to note that there were significant variances in answers from NP vs NLH customers:
    - NP: The NP website and radio are the two most frequent preferences overall (21% and 25%)
        - The NP call center is the third most frequent preference at 16%.
        - Facebook is preferred by 11%.
    - NLH: The NLH call center is the top choice for NLH customers:
        - Radio is also popular, but less so than with NP customers.
        - The third choice for outage information for NLH customers is to call a friend or relative.
    - NLH Labrador: In Labrador customers are most likely to call the NLH call center, then others prefer to use Facebook followed by a group that is more inclined to call friends or relatives to gain information. Very few in Labrador turn to the radio first.
    - Overall, most customers around the province (70%) only depend on one or two sources for their information. Yet the list of different sources used is quite long.
    - When combining all sources referenced, radio remains the most prevalent source across the province.
        - For NP customers, the NP website has become a "combined" top source overall, followed by the NP call center.
        - For NLH the call center is considered a "combined" lead source for customers, as is their customers tendency to call friend and relatives.
- **Preparedness for Unplanned Outages**
    - 62% of all customers feel they are reasonably well prepared, while only 12% consider themselves not very well prepared for an unplanned outage:

- In general, those who feel less prepared are less likely to have alternate heat, are more likely to have electricity as their main source of heat, and live in urban areas.

UNPLANNED OUTAGES: CONCLUSIONS/RECOMMENDATIONS

In terms of effective communications with customers during unplanned outages, an overriding priority should be to reach as many customers as possible, as soon as possible with a reasonably concise answer to the single most important question they all have "When will the power be back on?"

All other related topics and information (cause, scope, extent of damage etc.) may be helpful to various audiences, but the single most important question that occupies customers minds (and the one that all other topics should support in one way or another) remains: "when will the power be back on?"

Through unplanned outages, customers believe that all efforts should be placed on doing whatever is necessary to get the power back on. As a result, discussions around topics like "who is responsible" can be interpreted as avoiding blame when people are suffering through cold houses, no hot food, no hot water etc. As a result, care should be taken in the perspective of other topics.

The target for providing the first update to "time to power back" should be an hour or less. Providing additional updates for short outages (<3 hours) are not considered too important, but when outages go longer, regular updates are critical to enable family planning (i.e. warmth, food, bathing children)

In terms of mediums to let people know "when the power will be back", It is critical that as many customers be alerted as possible. To accomplish this, as wide a range of methods as is reasonable should be considered (many sources were used, and most people only look in 1-2 places)

- *As utilities websites are becoming very popular (indicating they are effective), efforts should continue to "push" even more people to these sites (knowing they are effective and timely)*
- *The role of Facebook may be even more prominent in the future and should be considered this way. Since many people contact friends and relatives for information (particularly NLH customers), and many of those friends and relatives have Facebook accounts, there is an opportunity for synergy in these communications.*

While customers indicate that hourly updates are appropriate, it is important to consider in communication planning that not all customers see or hear all updates. As a result, a multiplier (more frequent releases) should be considered to ensure that people are exposed to updates every hour (I,e, on radio).

Since only 27% of households consider themselves "well prepared" in the event of an unplanned outage, advanced communication on this topic in early fall and throughout the storm periods would be seen as a positive effort by utilities.

- *Customers universally follow the local weather reports to better anticipate storms/outages etc. This may represent a useful partnership for utilities (to deliver the message of outage preparedness).*

Rotating Power Outages

While rotating outages is a relatively unfamiliar phenomenon for most (and something not everyone across the province has experienced in the recent past), it appears to have been quickly accepted by most as a logical method to deal with situations of insufficient power in the system.

- **Advanced Notice:** 59% of customers across the province feel 3-4 hours advanced notice would be reasonable before a rotating outage affects them:
    - Having said this, 39% indicate a day or more.
- **Prevailing Attitudes:** The majority of customers across the province agree that rotating outages is a reasonable way to deal with these situations:
    - Customers would rather be alerted to a possible rotating outage, whether it happens or not.
        - However, half the province acknowledges that they will be frustrated when the outage does not occur.
    - The majority of households indicate that they would increase the heat in their homes in advance of a rotating outage to offset the anticipated hardship:
        - This mindset was stronger with NLH customers and strongest in Labrador.
        - People don't see this as doing anything wrong but rather just using the time available to get prepared.
- Energy Conservation: Virtually everyone believes they are helping to conserve energy when asked by the utilities (to avoid a rotating outage):
    - In fact the vast majority get upset when others don't help out.
    - While the majority agrees that they turn off lights as a energy saving measure, approximately half the population indicate they don't turn down the heat or unplug electronic or appliances.
    - Given the motherhood nature of responses to these questions, actual compliance on each of these points may well be lower than indicated.

ROTATING OUTAGES: CONCLUSIONS/RECOMMENDATIONS

People have quickly become familiar with the concept and purpose of rotating outages. They expect 3-4 hours advanced notice, and they prefer to know of a possible outage (even if it doesn't occur). As a result, if there is a possibility an outage may occur (even if it is based on cold projections in the near future it is better to advise people of the possibility.

One of the biggest challenges identified in this report is public compliance in energy conservation to help avoid rotating outages: The notion that customers think they are cutting back electricity use to avoid an outage, when in fact they could either do more, or are actually contributing to the problem by turning up their heat to pre-warm their homes.

- *Creative messaging solutions may be required well in advance to instill the "real story" in customers before the request to conserve actually occurs. It appears that 2-4 hours before an outage is too late on the conservation front as people go into preservation mode to better prepare for the event.*
- *The "real story" has two key components: 1/ there are more things people need to do besides turning off lights 2/ Using the time before an outage to prepare (extra cooking/ extra heat) may cause the blackout to occur.*

Reporting Outages

People (85%) seem to be willing to report outages, but for a variety of reasons, for most people it often does not come to that:

- On a residential level, customers tend to go through a series of consistent steps before deciding it's appropriate to call about an outage:
    - People look out the window, call friends and relatives, check for available information (utility website, news sites etc.).
    - After a series of steps, and then often after waiting a little longer to see if the power comes back (or if they see a truck on the problem), then people will consider reporting the outage.

Improved Reliability

In general, half of the province believes that we need improved reliability from our electrical supply. Conversely, half feel our system is fine as it is:

- Urban dwellers are more likely to believe we need a better system.
- Overall (with yes's and no's combined), only 16% of customers across the province indicated they would be willing to pay more for a more reliable system.

Demographics

- 87% of households across the province have high speed internet access.
- 63% of customers have a smart phone.
- Three quarters have a Facebook account.
- 24% have a Twitter account:
    - This number jumps to 40% for those with higher incomes and higher educations.
- 60% of customers have a way to heat their home if the power goes out:
    - 43% of these people have a wood stove.
    - 25% have a generator.

Following is a summary of the key findings of this study, along with overall conclusions and recommendations.

OTHER CONCLUSIONS/RECOMMENDATIONS

Reporting outages: If the utilities would prefer that more people report outages as soon as they occur, then this message needs to be communicated as a regular part of the outage communication plan. Customers' tendencies are to wait as long as possible before reporting in the hope that others will, or that the problem will be fixed quickly. If reporting quickly is helpful to NP and NLH, then customers need to be re-educated to that mindset.

Demographics: Given the high level of high-speed Internet access and the proliferation of smart phones, web based communications and social media engagement will continue to rise. The more the utilities get ahead of these emerging communications methodologies, the better prepared they will be to meet the information needs of their customers in the future.

Based on a synthesis of all information gathered in the residential portion of the study, it is abundantly clear that ***simple, focused, frequent and far reaching*** *can be the mantra of outage communications for NP and NLH going forward.*

> *Simple: In all of the scenarios reviewed, people consistently need to know "when the power will be back on". When detailed news releases were read to focus group participants, they struggled to find that core message and often got lost in the detail. Keeping it simple helps.*
>
> *Focused: Outages are about your customers and their well-being. They are times of stress, uncertainly, discomfort and distraction (from the regular routine). The more efforts focus on resolving the outages (and communicating the efforts to resolve them), the more relieved customers will be.*
>
> *Frequent: When the power is out, there's not much to do but look for updates on when it will end. Plus, frequent updates really do seem to help in families planning efforts (when do I decide to go to a warming center? Do I need to check on other family and friends? Where can I get a hot meal?*
>
> *Far reaching: not everyone sees every update but people find these in many different places. As a result thorough and far reach communications methods help ensure everyone affected is included in the messaging.*

Business Customers: Key Findings

Because of relatively small sample sizes on the business customer side and to avoid repetition, key conclusions and recommendations are included in the following summary.

Planned outages

There are really two critical pieces of information that business customers need when planned outages are being considered. The first is when it will happen and the second is how long the power will be off. Since business customers are making decisions based on this information that might impact shifts and supplies, providing very accurate information is also critical and in fact, being a little cautious in estimates is recommended. In this way, their power will be back on either when they told or a little earlier rather than even a little later.

- **Notification Period:** A total of 75% of business customers are satisfied with 3 – 4 days' notice and half are actually satisfied with less. Since these are planned outages though, more notice rather than less is prudent and the aim should be to satisfy as many customers as possible.
    - Over 90% of NP customers are happy with 3 – 4 days' notice.
    - NLH customers expect more notice – almost half would like a week or more. .

    - **Methods of Notification:** For the initial notification of a planned outage, radio and automated phone messages are the most frequently mentioned ways with over 50% each. Social media via Facebook and twitter were mentioned by 26% and 20% respectively. However, these overall figures do mask several differences between NP and NLH business customers:
        - NP business customers are more accepting of hearing about planned outages through the media or news.
        - Expecting less direct contact continues with NP customers being more likely to use their provider's web site or call centre.
        - NLH customers are much more likely to expect a personal phone call.

- **Opportunities to Involve Business Customers:** Almost two-thirds of business customers indicate it is important for them to have a say as to when a planned outage takes place. Particularly when there are a small number of business customers in a particular area, it may be quite realistic to involve them by giving them a small number of alternatives from which to choose.

Unplanned Outages

During an unplanned outage, business customers are almost completely focused on how long the power will be off. They need to decide whether it makes sense for their employees to stay (if the outage is expected to be short) and they need to make other important decisions about their business and customers.

Critical information: Even more notable than was the case with residential customers, virtually all (98% gave an 8+ as a rating) business customers want to know how long the power will be off.

- Most of the other information that is considered important to business customers during an unplanned outage can be considered to have direct bearing on how long the power will be off – are crews already on site? What corrective action is being taken? How extensive is the outage?
- Business customers also show great interest (91% 8+) in when the next update will happen.

- **Power-back estimate:** Business customers are not as patient as residential customers for the initial estimate of when the power will be back on. Fully one-third expects it in half an hour and an additional 46% in an hour.
    - If it takes longer than an hour, 8 out of 10 business customers are not going to be impressed.

- **Update Frequency:** Like residential customers, for most business customers, receiving updates every hour seems to be a reasonable timeframe:
    - With business customers, they expect more frequent updates for outages that are expected to be shorter. Presumably, they need the more frequent information to make decisions, but when they know from the outset the outage will be longer, they make their decision and are not as anxious to have updates.
    - NLH customers expect slightly more frequent updates than their NP counterparts.

- **Information Sources:** When asked for their preferred way to get information about unplanned outages, there was a decided emphasis on more personal methods – telephone automated messages and text messages were both mentioned by 20% +.

        - When asked what they use today there were numerous sources mentioned with radio at 53%, the NP website at 44% and several other methods including Facebook at 30% and twitter at 22%.
        - The difference between what people use today and what they prefer to use does suggest a need to provide different and more personal options for business customers.

- **Preparedness for Unplanned Outages**
    - Approximately half of business customers suggest they have a business contingency or emergency preparedness plan in case of severe weather and the other half do not. This does indicate an opportunity to partner to encourage more readiness.

Rotating Power Outages

Notice: Most business customers (83%) say that a day or less notice is sufficient notice for a rotating power outage.

- Business customers do expect longer notice periods than do residential customers.
- NLH customers suggest longer notice periods than NP customers.

Conserving Electricity

While the majority (77%) of business customers do comply every time when asked to conserve electricity to avoid an outage, they are not as convinced they are making a difference when we compare them to residential customers.

In general, what businesses do when asked to conserve electricity can be considered the easier things like turning off light and heat/air conditioning. The one thing that does appear to make more effort and have more impact on the business operations is rescheduling work and this is done by 35% when requested to conserve energy and is rarely done as a standard business operations procedure.

Reporting Outages

Business customers are more likely than residential customers to say they would report an outage and they also indicated they would do so more quickly. This is in keeping with the heightened importance of outages for businesses.

Improved Reliability

There is greater interest in improved reliability from business customers, but less interest in paying more for it when compared to residential customers. Fully three quarters (75%) of businesses want improved reliability (vs 52% of residential customers) but only 21% of that group are willing to pay for it.

Phase I: Residential Focus Groups

Focus Group Results

Introduction

Six focus groups were conducted on behalf of Newfoundland Power (NP) and Newfoundland and Labrador Hydro (NLH) during the first week of June 2014. Sessions were held with customers from across the province as follows:

- June 4th – 2 Sessions St. John's.
- June 5th – 1 Session Sunnyside and 1 Session Clarenville.
- June 6th – 1 Session Triton and 1 Session Rocky Harbour.

A copy of the discussion guide used for the sessions is included as Appendix A. The discussion was designed to explore information requirements under different outage circumstances; planned outages to storms of normal durations to multi-day events with rotating outages. The topic of energy conservation was also included in the overall discussion.

Information Needs during Outages

What questions are people asking about?

Regardless of the type of outage, when the power goes off, people need information. This message was consistent and clear though all six groups. In fact, there were three very consistent core questions that surfaced through these discussions:

How long will the power be off? This is universally the most critical question that people need answered. In terms of "acceptable duration", participants indicated that up to approximately two hours was considered a reasonable and manageable inconvenience. Up to this length people are not overly concerned, as their homes will stay warm and they can manage with meals and water etc. If it's expected to be more than two hours, they may need to find alternate solutions to keep their homes warm, prepare food and possibly keep food from spoiling. At that point, they might even consider leaving their home to find a more comfortable solution until the power returns.

What caused it? Aside from the practical need to find out when the power will be restored, the experience of losing power to one's home can be a challenging experience. As a result, the conversations also indicated a clear level of concern about "what might be going on." Once people know what happened, they seemed to gain some comfort in the knowledge. It also provided important context for people to be able to act/react/plan. The cause of the outage was felt to provide additional insight into the possible duration and overall impact (i.e. would schools and or work likely to be closed, would hospitals be impacted, etc.).

How extensive is the outage? Building on the cause, this question also seemed to provide important context in the decision making process. Essentially, it was felt to be an important factor by many participants in deciding what actions to take. For example, if they feel there may be a need to go to another place for warmth or food, they can decide if there is somewhere outside the outage area that they can go. And once

again, it was noted that knowing the extent of the outage helps in accessing the number one question: how long is the outage likely to continue.

Assessing the Situation

People seem to understand that it takes time to assess the situation. As a result, in an outage, they don't expect a time estimate (to get the power back on) immediately. However, they do expect some information, even if that's just an acknowledgement that the situation is being assessed and that more news will be available at a specific time. On that basis, it was felt that providing an actual time estimate within an hour is reasonable. Once the situation has been assessed, people want a reasonably accurate "power back on" estimate and then regular updates on progress (this was particularly important if the original estimate is extended).

How Much Detail is Required?

In most planned and unplanned outages, the majority of participants tended to focus on the moment. They have no light, no heat, no hot water, and limited control of the situation, and they have to deal with this disruption in their daily routine while they try to keep themselves and their families warm and comfortable.

Concise and accurate is the objective here. As clearly as can be stated, people want to know when their power is going to be back on. Any information beyond this point can be marginally helpful (as it may provide additional context), but knowing when the power will be back on, and getting regular updates to support this need could be considered a primary communication goal. Beyond this, knowing when others will be restored or the number of poles that are down may add some perspective and a sense of progress, but in the moment, people really need to know how long they will be affected.

Sources of Information

Beyond the type of information people are looking for, understanding the sources people use to get their outage news is a key part of the communication process. And depending on the type of information people are looking for, it appears the source can change.

Sources of Information "In The Moment"

During outages, radio was most often considered the main source of information. It continues to be the most common source, and it seems to do so for one very specific reason: Because it can provide regular updates when the power is off. Many people in the groups talked about having battery-powered radios that they immediately turned to when they lost power. And there was a universal understanding that radio stations offer "on the spot" news updates that happen at regular intervals, regardless of the time of day or night. For customers, this helped answer the all-important question: when will the power be back on?

In addition to radio for the essential updates, there was an emerging trend noted in smaller numbers in all groups (including rural areas). Increasingly, with greater penetration of smart phones, more and more people feel they have other (and better) options that work when the power is off. Today, more and more people are turning to their provider's website and to social media for these updates (twitter and Facebook). And while the incidence was modest in the groups, those that used these sources seemed to turn to them even more frequently, as information seemed to

continuously trickle in. However, the themes were the same: When is the power going to be back? What caused it? What is the extent of the outage?

Other options mentioned included automated email messages and automated phone messages.

Television and Print

Conversely, television news broadcasts were considered less useful for those experiencing an outage for the obvious reason that most won't be able to turn their televisions on. This means that for most unplanned outages (where people were reacting in the moment) television was considered more useful to "hear the full story after the fact." Newspaper would be in a similar category; however a few people did mention the use of newspaper websites for more timely updates.

Sources of Information for Rotating Outages

In the case of rotating outages, the need for information changed in that people were tuning in to find out when the next outage might occur (and if there would be more). In this case, television and print played a greater role, since they were both available and provided good insight and detail on the "bigger picture" of what was happening.

However once the rotating outages occurred, radio and social media were more often used to check the duration.

Unplanned Outages

Throughout the groups, there was consensus that the most common cause of unplanned outages was weather related. Most often this was snow or ice storms, but could also be wind. As a result, the number one trigger that people watched for in advance of potential outages was the weather forecast. Storm advisories for many people represented a cue to go into outage preparedness mode: ensuring they have sufficient food and water, batteries (for flashlights and radios) and gas for generators (if they own one).

Customers rely on weather forecasts and their normal news sources for this information and did not see a role for NL Power or NL Hydro in the days immediately before a weather event/unplanned outage. However, when asked, participants indicated that reminding people to be prepared and providing information on where to get updates (company website, twitter etc.) could be seen as helping in the preparedness process.

Avoidable Outages

Outside of weather related outages, participants spoke on multiple occasions about the possibility of unplanned, yet avoidable outages. The most common (and least acceptable) cause being: failure to properly maintain power generation equipment. Largely driven by the events of January, participants demonstrated a complete lack of tolerance of this kind of outage, and often felt that, given the disruption these kinds of outages cause, they should not be tolerated. In fact in such cases, it was generally felt that a high level of accountability should be offered by the organization at fault.

Planned Outages

There was one key difference between planned and unplanned outages information requirements. Because it is planned, notice can be given beforehand and people expect consideration to be given to when the outage takes place (avoid winter and times in the morning when people are trying to get ready for work and school). Otherwise, they only want to know if they are affected, how long it will be, and the reason for the outage.

A printed copy of the standard planned outage notice was distributed in each session and participants felt it contained all of the information that people would need. A few days to a week's notice are appreciated for residential customers who simply want the opportunity to plan so that meals and daily routines are disrupted as little as possible.

Who Should Deliver The Message?

Understanding the potential for confusion in the overall roles of Newfoundland Power and Newfoundland Labrador Hydro, and further to this, confusion as to who may be responsible for outages (cause and repair), we discussed the question of who people want to hear from leading up to and during outages.

Universally, residential customers expect to hear from their main supplier in all communications. This was quite clear in all groups. The first four groups were conducted with NP customers. Within these groups, people expected any communications about power outages to come from NP. The one exception to this is when there is an extended outage and generation is the cause. In this case, NLH also communicating with them using public mediums (radio rather than emails and phone messages) seemed logical to respondents (in the interest of hearing what is happening first hand). In most typical outage circumstances all communication was expected to come from NP as they would be speaking with their own customers.

The final two groups were with NLH supplied customers; the same perspective was provided by these participants. NLH customers expect their communications on outages to come from Hydro. In this case they couldn't see any situation where they should also be hearing from NP.

Reporting Outages

Behaviour when an outage first occured was generally consistent across groups and is logical given the information that people want. The first thing most do is look out the window to see who else is "out", and the second thing that many do is to phone a friend or relative to see if the power is out there as well. Both of these activities are consistent with wanting to know how extensive the outage is and how long the power is likely to be off. It also helps people determine if they need to report the outage or not. If the outage is in a very small area, there is more likelihood the person will report it. The more extensive it is the more likely "the power company will already know" or "someone else will report it."

Most people will not report an outage right away. Instead, they say they will wait 15 minutes to 30 minutes (likely to see if it will come back quickly) and then, if the power is still out, they may report to ensure that their supplier is aware of and working on the issue. Generally this reporting is done by phone.

Requests to Conserve

During each of the sessions, a specific discussion was undertaken around the subject of energy conservation. While the topic was introduced in a general context, participants quickly gravitated to rotating outages and the events of January 2014 (and the role of conservation in those events). Despite efforts to include discussion on a general conservation level, all of the groups associated conservation with conserving to avoid rolling outages.

First and foremost, the vast majority of participants felt they would be willing to comply with a request to conserve electricity. They also seemed to generally know what to do; not use dryers and dishwashers, turn down the heat, turn off lights, etc. However, throughout the conversation, it became clearer that this was the "good conscience" response that was easy to say, but harder to live up to. From a communications point of view, this presents a daunting challenge: If people feel they are already complying (or are doing more than they really are), then who's listening to the message?

One counterintuitive trend that emerged from this discussion was that if people are given advance notice that there is a risk of an outage, they will often use more electricity than they would have prior to the announcement. For example, if there was a notice provided that the power might be turned off in two hours it was common for people to consider warming their house in advance (so it will be warmer as it cools) and they might do all their meal preparation in advance to ensure they have hot food for the family. In this sense they might inadvertently cause the outage to happen earlier. It was felt with some of the respondents that only giving a short pre-notice (i.e. 1-2 hours) might actually cause people to use more electricity as they scramble to prepare for it whereas a longer notice might reduce this negative impact.

What Happens if the Outage does not Occur?

It appears that warnings of outages (caused by insufficient supply) that do not occur, do not concern or annoy people as long as they are told after the fact why the outage did not happen or was no longer necessary. Specifically, it was felt that an acknowledgement that conservation efforts helped avoid the outage would reinforce the positive impact of conservation.

When is Conservation A Reasonable Request?

People indicated they are more willing to participate in conservation when they feel it was caused by something beyond the control of the energy supplier (storm has knocked out supply) and are less willing when they feel the reason is related to neglected maintenance or poor planning on their supplier's part. A typical perspective from these respondents was that they were personally quite prepared for outages with food, batteries etc. in place and so they felt their electricity supplier had at least an equal responsibility to make sure equipment is also in working condition.

Additionally, when people feel they are "doing their bit" to conserve energy, they get particularly annoyed when they see what they consider to be wasteful behaviour by businesses and neighbours around them. When they see an empty building "all lit up" at night they question the impact of their own efforts and why they are participating.

Specific Communications Examples

Two recorded examples of communications and one example from a radio interview were played/read in each session so that people could react to specific examples. The Sunnyside Update was one minute in length and the Energy Conservation Request was two. There were a number of consistent comments that should inform the content of future communications:

Short regular updates are key: Many people felt the one-minute update was too long and the two-minute was too long for most. It clearly appeared that long messages with multiple topics tended to lose people who struggled to keep all of the information straight.

Be as specific as you can: Providing broader information that people had trouble relating to their own situations was often felt to be distracting and confusing. Their primary concern is when their power will be back on, and anything that doesn't help clarify this is not all that helpful. So while it shows progress to say something like 10,000 customers on the Avalon have had power restored, peoples' real interest is when the power will be back on in their community or area. (On that note, it was considered acceptable to direct people to a website for detailed information on a community level as long as it was up to date).

Range is fine, vague is not: People know that suppliers don't know exactly when their power will be restored so some range of timing is acceptable, but vague references to time (like "some time this evening" or "hoping to be able to" rather than the more precise; by 6:00 or 6:30) should be avoided.

People want detail, but not technical detail: Most people indicated they don't really understand technical terms when listening to updates (i.e. how megawatts relate to capacity). As a result, the more technical the information in the update, the less people seemed to understand what was being said.

Other Opportunities for Communication

The notion of NL Power and NL Hydro communicating with their respective customers at the beginning of the winter season was met positively. It was generally felt that communication in the form of encouraging people to be prepared for possible outages by having flashlights or a battery-powered radio etc. would be a positive initiative. The general sentiment was this would show caring for customers.

Urban and Rural Differences

The main practical difference between urban and rural customers is that rural customers seem to be better prepared for an outage and seem to be more likely to have resources such as a woodstove or a generator to assist with heat and lights. As a result, they often appeared less adversely impacted by outages. In a few cases the more resourceful nature of many rural participants suggested a (short) outage was an adventure as much as an inconvenience.

The main emotional difference between urban and rural respondents (in the case of the January outages specifically) was that rural participants were more likely to express the sentiment of being ignored by decision makers. They were

also more likely to express anger over what was seen by them as negligence in maintaining equipment that caused the January capacity issues. The level of anger and the need to vent in the sessions about the rotating outages was strong. Words as strong as "feeling betrayed" were used to describe those emotions.

Acknowledging the Balance

By contrast, in Triton, where customers were supplied by NL Hydro, and people did not experience rotating outages, the comments about NL Hydro were quite positive. In that case, comments were comparable to comments about NL Power in areas served by that supplier.

Phase II: Residential Survey

Residential: Quantitative Survey Results

The residential survey was designed following the focus groups to help quantify and verify the insights coming from the group sessions. The residential survey is based on 730 completed interviews. These were conducted with a randomly selected sample of Newfoundlanders and Labradorians. Interviews were completed between June 30th and July 27th, 2014. Labrador was over-sampled so that there would be sufficient interviews completed in that area to look at its results separately. In total, 481 of the final interviews were completed with Newfoundland Power (NP) customers and 235 were with Newfoundland Labrador Hydro customers. The total sample of 730 gives an overall margin of sampling error of ± 4.3%.

A complete set of tables is included as Appendix B. These are presented as Banner Tables, which present cross-tabulated results against the main demographics included in the survey.

NOTE: At the start of each section in the quantitative survey results, a brief recap of relevant focus group content has been included. This has been done to ensure that both methods of research can easily be considered together (to further clarify the overall communications picture).

NOTE: when discussing combined responses from all audiences, Completions from NP and NLH markets have been weighted to reflect the total population of the province

Planned Outages:

Qualitative Recap

For the most part, customers see planned outages as something that can occur occasionally, and should be taken in stride. Generally in these situations people believe consideration should be given by the utility regarding when the outage takes place (avoid winter and times in the morning when people are trying to get ready for work and school). They expect to be given some notice in preparation for the outage (so that meals and daily routines are disrupted as little as possible), and aside from that, they want to know if they are affected, how long it will be out and the reason for the outage.

A printed copy of the standard planned outage notice was distributed in each session and participants felt it contained all of the information that people would need. Finally, it seemed in discussion that a few days to a week's notice were appreciated for residential customers who simply wanted the opportunity to plan.

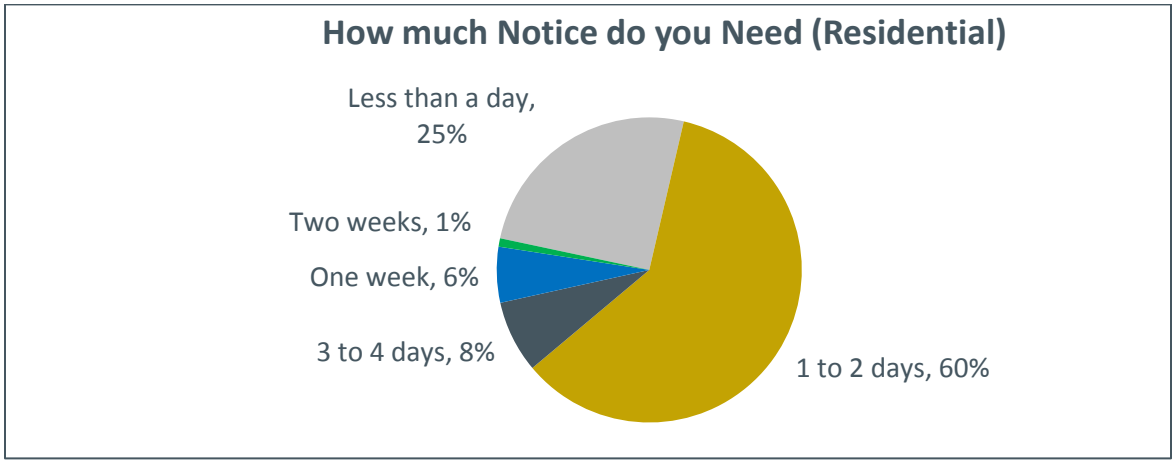
Quantitative Results

Within the residential survey phase of the project, respondents were asked specifically about the length of advanced notice for planned outages, preferred methods of receiving the notice, and desired frequency of updates.

Providing Advanced Notice

The most typical response to the desired length of advanced notice was 1-2 days (60%). An additional 25% of respondents felt that "less than a day's notice" would be sufficient. As a result, it appears a combined total of 85% of NL households would be satisfied to receive 1-2 day's notice in advance of planned outages.

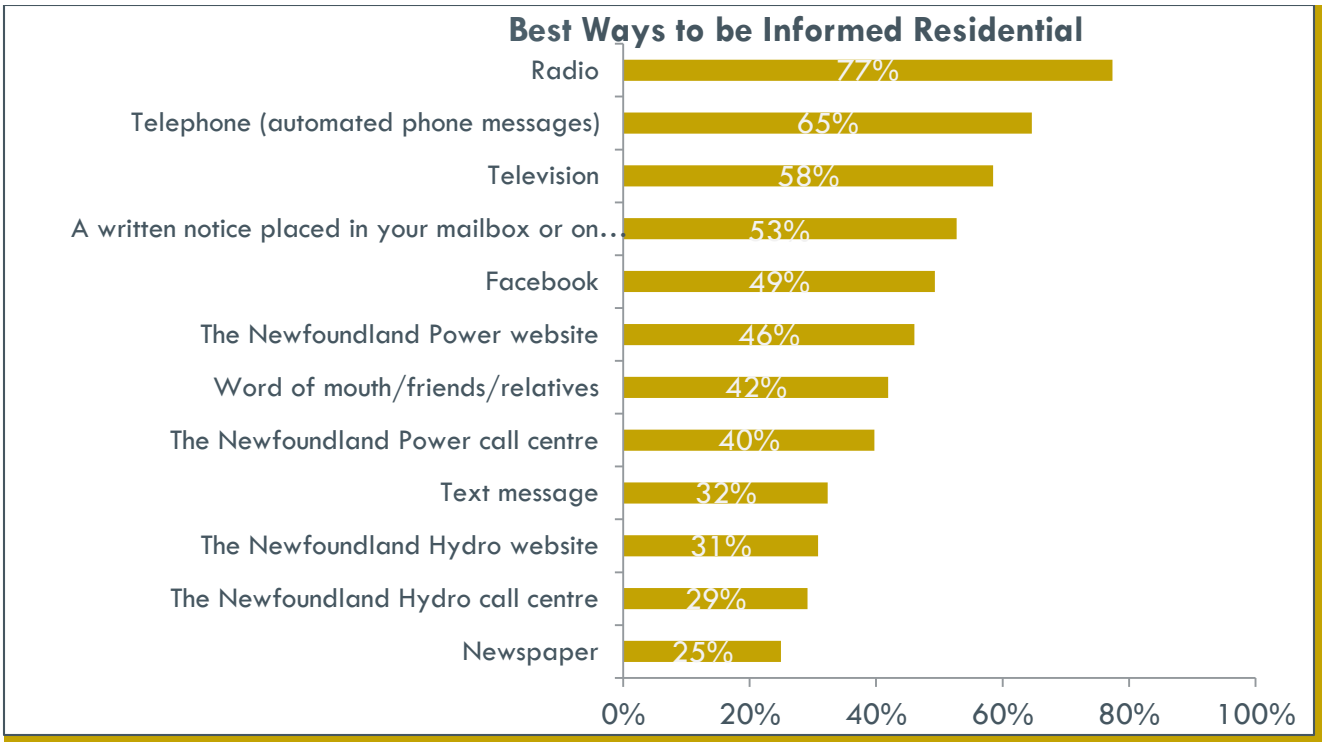
There were only minor differences across most demographics. As a result, these time frames should be considered generally reflective of all residential customers.



Preferred Methods of Being Informed

With so many methods of communication available, understanding the preferred methods for current customers can contribute to improved reach in advance of planned outages. For this subject, respondents were asked to select methods they would prefer to use from a lengthy list of options. From the 13 options provided, 43% selected only one option, 27% selected two and 30% selected three or more.

- The two dominant mass media methods included traditional radio and television options (suggesting that while new methods are emerging, traditional electronic media are still heavily relied on by the general public).
    - The most consistent group to choose radio (82-85%) was higher income university graduates living in urban areas.
- The two dominant direct methods (also quite strong) included one very familiar method: "a notice in your mailbox", and one that may be worth exploring in the future: "automated phone messages".
- From a social media perspective, the most frequently preferred method of receiving notices was through Facebook.
    - Facebook also crossed all demographics fairly evenly, indicating that it may be an effective tool for wide reach.
    - Facebook preference in Labrador was much higher than the norm, at 61%.
- And while emails and text messages were reported with preference as high as 32%, they still should be considered "emerging" in comparison to the more popular (and more traditional) methods (see above).
- Utility websites and call centers also appear to be effective methods of communication with customers for planned outages. One notable aspect of their use according to survey results is the level of cross-access between utility customers. This may have significant implication for coordinated communications in the future during outages.
    - 27-29% of NP customers indicated they might access the NLH website or contact center.
    - 30% of NLH customers indicated they might access the NP website or call center.
- Finally, while use of twitter across all markets is low relative to many other methods, higher income university graduates were twice as likely to monitor Twitter advisories (29-32%).


Best Ways to be Informed Residential
Radio
77%
Telephone (automated phone messages)
65%
Television
58%
A written notice placed in your mailbox or on...
53%
Facebook
49%
The Newfoundland Power website
46%
Word of mouth/friends/relatives
42%
The Newfoundland Power call centre
40%
Text message
32%
The Newfoundland Hydro website
31%
The Newfoundland Hydro call centre
29%
Newspaper
25%
0%
20%
40%
60%
80%
100%

Frequency of Updates:

From the focus group discussions, four "planned outage" topics were identified as needing updates. They included:

1. At what time the outage will happen.
2. How long the power will be off.
3. The cause or reason for the outage, and
4. The geographic extent of the outage.

In each of these cases, survey respondents were asked how frequently they wanted to be updated with the latest information (on that particular topic). NOTE: The results also provide an indication of the perceived importance/relevance of each topic: The more frequently people want updates, the more important the latest information is to them.

- The highest response for "hourly updates" was to the question "How long will the power be out?"
    - 34% wanted updates hourly while almost 2/3's (61%) wanted updates "a few times a day."
    - As in all outage types, this is the core question that people consistently need the latest information on.
- Next to duration, people specifically want to know when the power outage will, in fact, occur
    - 24% want the updates hourly and 26% said "a few times a day."
    - NOTE: This topic appears to require less updating as long as the customers are informed and the timing does not change.
- The final two topics (cause and geographic extent) appear to be less critical to customers with only 15% and 18% wanting hourly updates respectively.
    - This is not to say they are unimportant topics, just that they are not as critical for regular updates.
    - In fact, in the case of "learning the cause", 10% said that no update was needed at all.

Finally, NP and Hydro customer's priorities were also compared on these topics: Hydro customers appear to have lower expectations with respect to frequency of updates during planned outages. For example, 36% of NP customers want hourly updates for how long the power will be off compared to 21% of NLH customers. This difference though might be simply related to lifestyle and location (of residence). The customers with higher expectations tend to be employed, better educated, with higher incomes and in urban areas of the province, reflecting a faster paced lifestyle, with potentially greater disruption of busy schedules during outages.

Unplanned Outages:

Qualitative Recap

Discussions around unplanned outages identified one consistently important piece of information that is on the top of virtually every customers mind. In addition, they identified two supporting pieces that add context and assistance with planning. The critical piece is how long the power will be out / when their power will be restored. In addition, information on what caused the outage and how extensive it is allows people to assess how realistic the estimated power back on time actually is and helps with their planning. (For example, if they have to leave their home, can they easily reach a relative or friend's home? As another example, do they have to be concerned about a neighbour or elderly parent who may also be affected by the outage?)

In terms of sources of information, radio was the source mentioned most often, but there was also regular mention of websites, and the emerging use of smartphones to find information.

While social medial use in this case could be described as modest overall, people who used it seemed to use it very frequently.

Quantitative Results

Once again based on the insights from the focus groups, the unplanned outages section of the survey focused on a number of key communications topics (to more clearly define their provincial significance and scope). It started with understanding "what your residential customers need to know" and then explored desired update frequency and preferred methods of communications.

What your Residential Customers Need to Know:

Consistent with findings from the focus groups, the main information that people want is how long the power will be off. This is consistent across all demographics included in the survey – it is what everybody wants to know. Much of the remaining information that is considered important helps them to manage their personal situation until the power returns. Beyond that, other related topics may bring supporting value to some customers, but in the moment this is still largely viewed from the perspective of "painting a clearer picture of when the power will return."

To that end, we asked customers how important it would be to receive information on a series of related topics:

- How long the power will be off
- The cause or reason for the outage
- Who is responsible
- The extent of damage
- Updates on progress
- Locations of warming centers
- The geographic extent of the outage

These questions were all asked on a scale of 1-10 with a 10 being extremely important.

Critical Information

To identify the most critical information people need to know in the event of an unplanned outage, we first focused on 10 out of 10 responses: Responses that indicate critical importance.

- "How long the power will be off" was rated a 10 out of 10 by 72% of respondents.
- The second highest level of 10's from all questions was "being updated on progress" (51% 10 out of 10).
- All other topics resulted in 15% to 37% respondents indicating a 10-out-of-10 level of importance.

Very Important information

When including all customers who felt topics were "very important", scores of 8 or higher were combined. In this assessment it remains clear that first and foremost, customers need to know when the power will be back on (this includes the update process).

Beyond this, most of the other topics are clearly important enough to warrant communications coverage, with an average of half the province considering them very important.

The only topic that scored well below the others was "who is responsible" (27% 8-10). It appears that during an outage people don't believe it's the best time to dwell on responsibility. Customers would rather see more energy placed on their immediate problem: no power. In fact 19% felt that this topic was "not at all important", offering a score of 1 out of 10.

Additional observations on the importance of information:

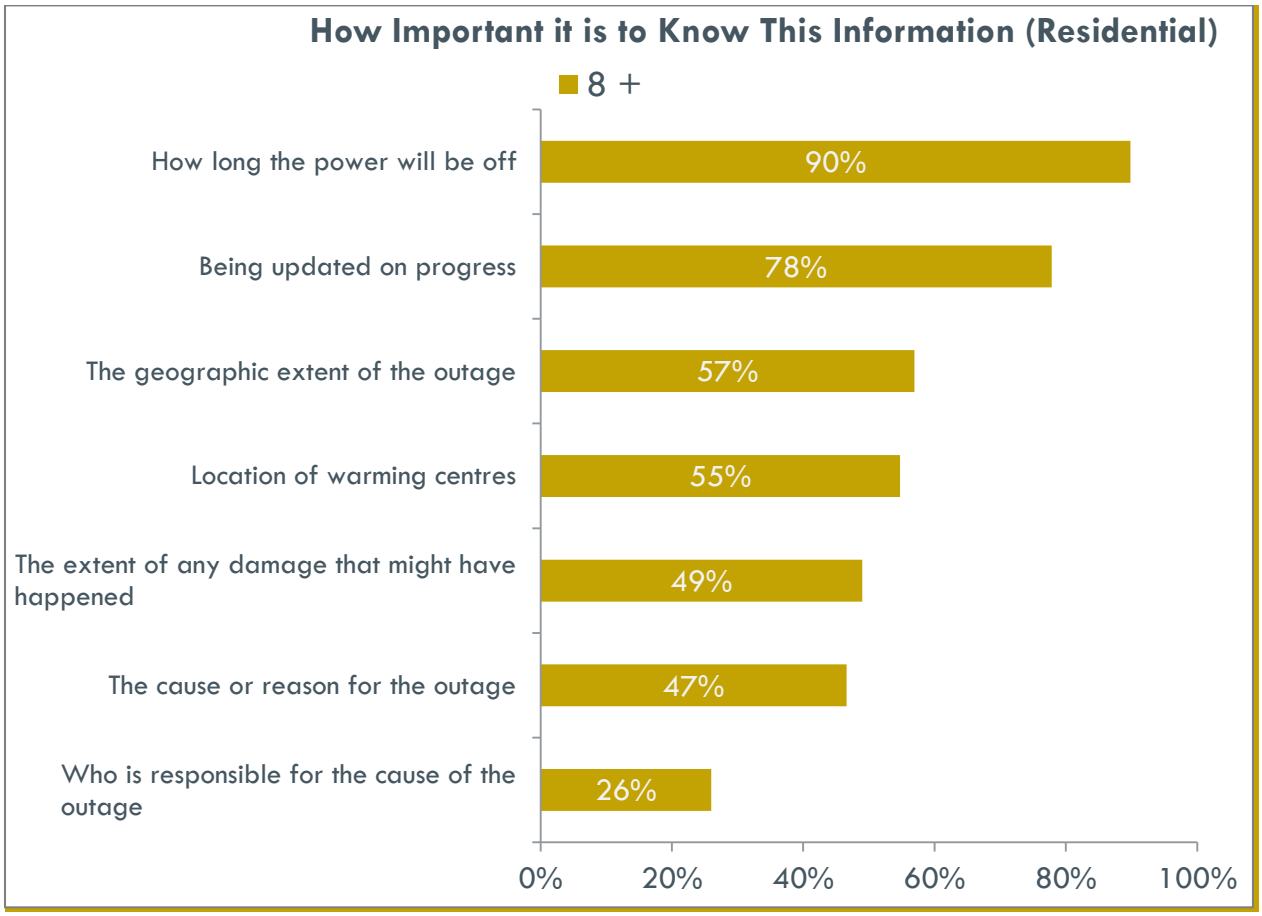
Geographic extent of outage: The geographic extent of the outage was given a rating of 8+ by 57% of residential customers. This information helps in two ways; first it allows people to determine how far they might have to go to get to somewhere with electricity (a family member for example and if a family member might need help) and it provides some direction on how long the outage is likely to last.

Who's at fault: Those who think it more important (26% 8+) to know who is responsible are more likely to be unemployed, have lower incomes and education levels and live in rural areas and Labrador.

Location of warming centres: there is a portion of the population that is very interested in the location of warming centers, and it includes a portion of people from many different demographics.

Consistency of opinion: Finally to determine levels of consensus on each of these key topics, we looked at the mean score values, and then in each case compared the range of variance from the mean. (The lower the variance, the more consistently customers think about that topic across the province). The results indicate highest consistency on the two core topics, and more varying viewpoints on the importance of others:

	Mean Value	Variance
How long the power will be off	9.2	.5
Being updated on progress	8.5	.5
The cause or reason for the outage	6.7	.7
Location of warming centers	7.1	.8
The extent of any damage	7.0	.8
The geographic extent of the outage	7.3	1.0
Who is responsible	5.1	1.3

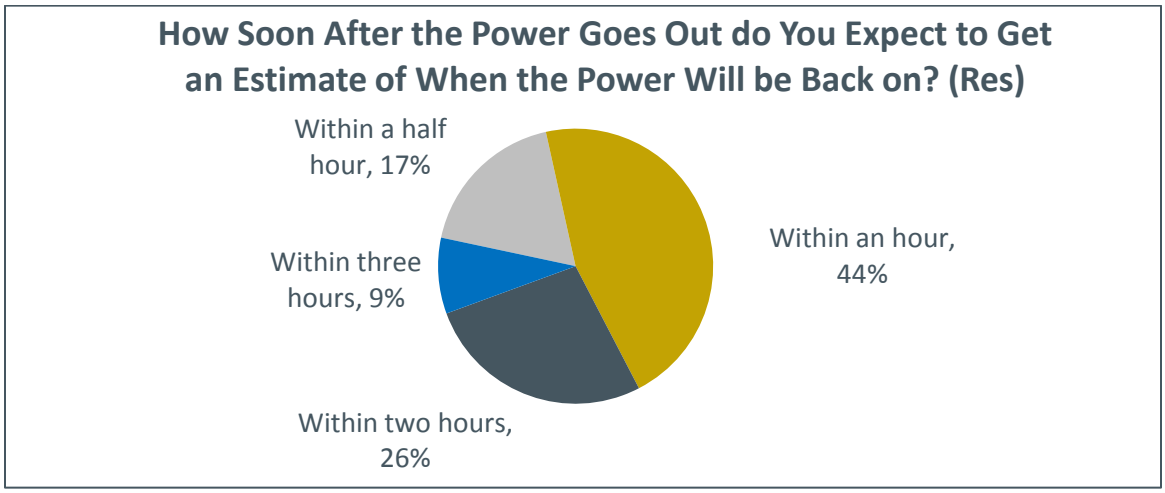


Update Frequency

Respondents were asked about how soon after an outage they needed to hear a "power back" estimate, and how often they would need to receive updates on that estimate.

Power-back estimate

Residential customers are reasonably patient when it comes to the initial estimate of when the power will be restored. Almost 50% of customers feel they would be satisfied to hear a "power back" time within an hour of the outage (44%). Only 17% felt they needed to hear faster than that (within a half hour). Combined, this suggests that taking over an hour would dissatisfy over 60% of the population. Finally, with an additional 26% indicating they want a "power back" estimate within two hours of the outage, going beyond two hours with information would leave almost 90% of the population less than satisfied.

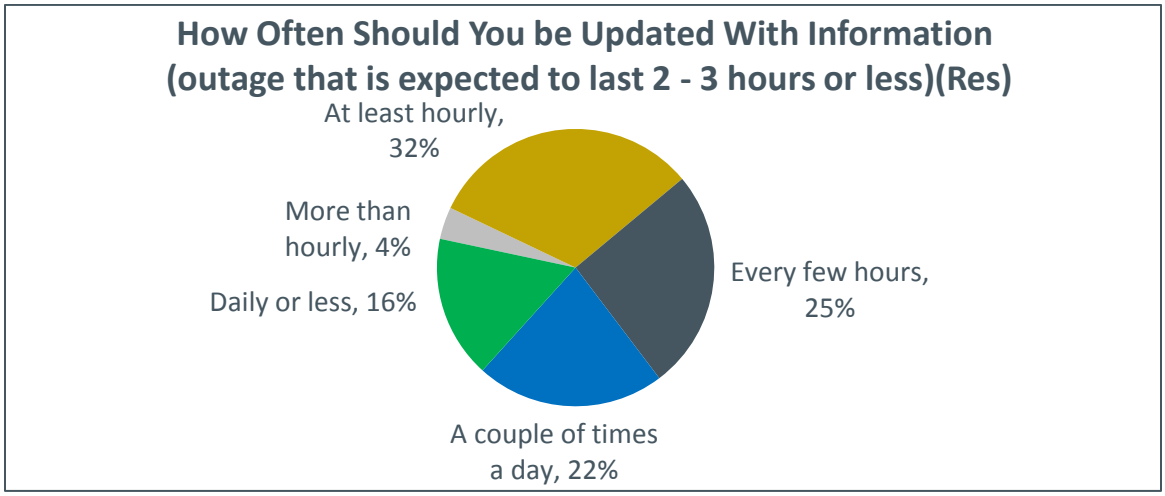


Frequency of updates

Customers were provided with two unplanned outage scenarios: 3 hours or less, and longer than 3 hours. They were then asked how often they would like updates in each case. Overall, (regardless of the length of the outage) only 4% felt they needed updates more frequently than ever hour. And in both cases, while the largest group preferred updates hourly (32-39%), there was still approximately 50% of respondents who were satisfied to hear updates "every few hours" or "a couple of times a day". These expectations also consistent across all demographics which suggests these expectations are universal throughout the province.

While the responses to the two questions were similar, it is important to note that respondents appeared more sensitive to frequent updates for longer outages. (70% wanted updates "hourly or every few hours" during longer outages, versus 57% for shorter outages). The observation in this case is that people are less concerned with updates when they know the power will be back in fairly short order (house won't get too cold, things won't be too disrupted). However, when outages go beyond that shorter window, frequent updates become more important and

meaningful in the customers decision-making process (do I need to find alternate heat, will my water pipes be at risk etc.).



Where do Residential Customers Turn to get their Outage Information Today?

All respondents were asked where they turn today for information during an outage. This was asked in an unaided manner to ensure the responses reflected unassisted thinking on the actions people would most likely take. Our analysis was viewed from three perspectives:

1. First response: Indicating the primary source people turn to for their information.
2. Volume of responses: Indicating how many different places people look and the likely cumulative impact of communicating through multiple vehicles.
3. Combined responses: this provides the total percentages that use each of the communications sources.

NOTE: Based on our analysis of the responses to this question, it appears that there are limited universal perspectives to be offered (reflecting all customers in the province). Instead, most responses very much reflect the realities of each of the local utility providers (NP or NLH)

First Response

First response answers provide a number of insights that can contribute to the development of well focused communications plans:

- In both utility areas, no single medium dominated the "first source" answers. Both markets identified four different sources used by 10% or more. In total 10 different mediums were identified in both markets.
    - This suggests that effective communications plans may require very wide ranging methods to maximize reach.

- Newfoundland Power:
    - While radio was the most frequent first answer provided (25%) it was marginally more prevalent than usage of the NP website (21%).
        - Radio is a significantly more frequent choice in urban vs rural markets.
    - In terms of controlled mediums, the NP website (21%) and the NP call center (16%) represented almost 40% of first stop information sources for NP customers.
        - Website usage jumps to 28-35% for university grads / higher income customers.
    - Facebook was the fourth most prevalent double-digit response (11%) while Twitter was selected first by 7%.
        - Twitter usage jumps to 15-18% (first answer) for university grads/higher income customers.
- Newfoundland Labrador Hydro:
    - The most frequent first answer for Hydro customers was the Hydro call center.
        - Only 6% references the Hydro website.
    - Radio is a popular first choice for NLH customers (29%), but much less so than the provincial norm (42%)
    - Hydro customers are also more likely to contact friends or relatives to get outage information (11% first choice). This method of information seeking is most prevalent in Labrador (16%).
        - Labrador appears to present a somewhat unique mix of preferred choices of communications, led by the NLH call center, then Facebook and calling friends/relatives.
        - Radio was only the first choice of 11% of Labrador residents.

Volume of Responses

Across the province, 70% of households indicate they only use one or two sources of information in getting updates on outages. In fact, 43% of households indicate they only use one method to get their information updates. In Hydro's case, the single source response was even higher at almost 50% of homes (47.3%). On the other hand, over twelve different sources were referenced in response to this question. This suggests that communications plans that include more methods of information dissemination will be more effective (will have greater overall reach).

Combined Responses

When combining multiple responses, radio is the most mentioned source for outage information today. Further to this, radio generally crosses all demographic segments in the study, but it is more commonly used in urban areas (55%) than in rural (36%) or Labrador (23%).

Beyond the universal use of radio across the province, other common combined responses between NP and NLH customers include:

- Facebook and telephone (automated message): Each of these sources are used by 20% of NP and Hydro customers respectively
- Television: Is sourced consistently across the province by 13-17% of households.
- Twitter: Twitter is used by 10% of both NP and NLH customers. The variances identified here were more related to demographic differences.
- Only 4% of all customers use newsprint for outage information.
- In reviewing verbatim responses, 11 respondents specifically referenced using local media websites for information. Most of these were radio sites (VOCM and or CBC)

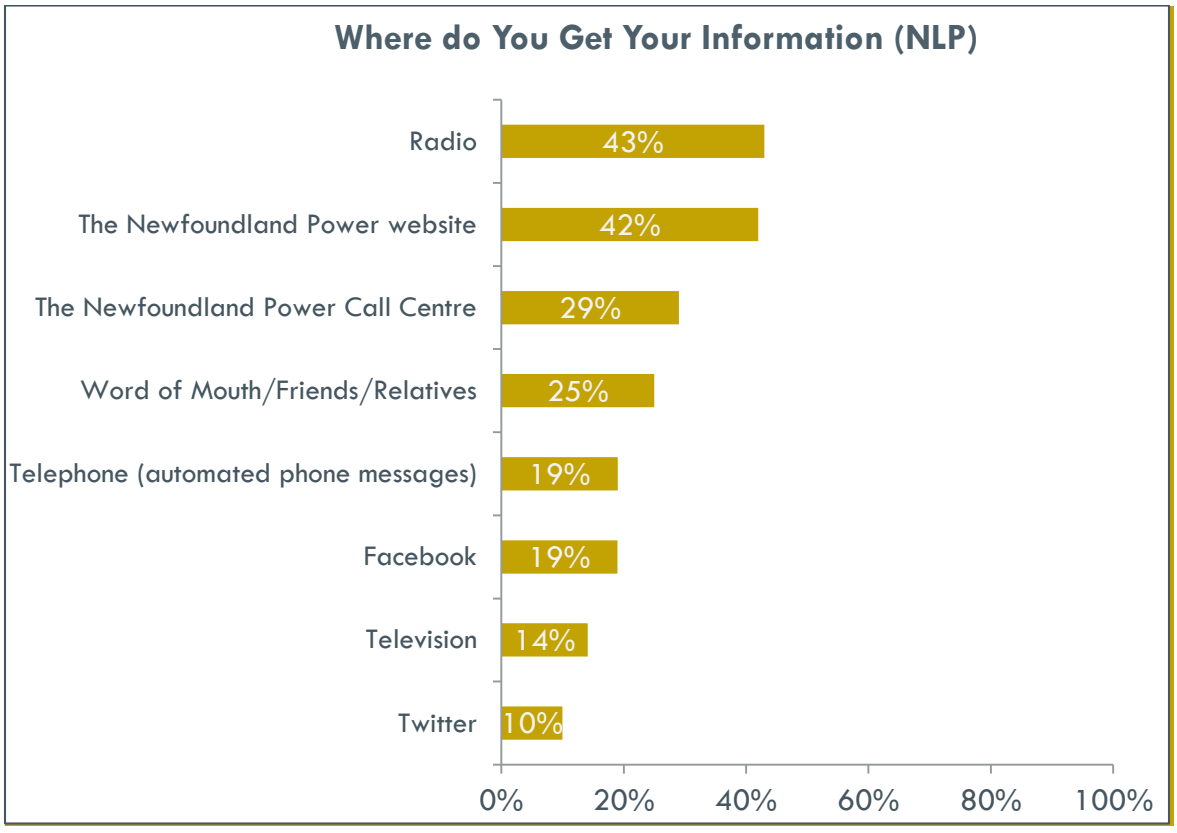
Beyond these sources, other mediums reflect the unique communications habits of NP versus NLH customers.

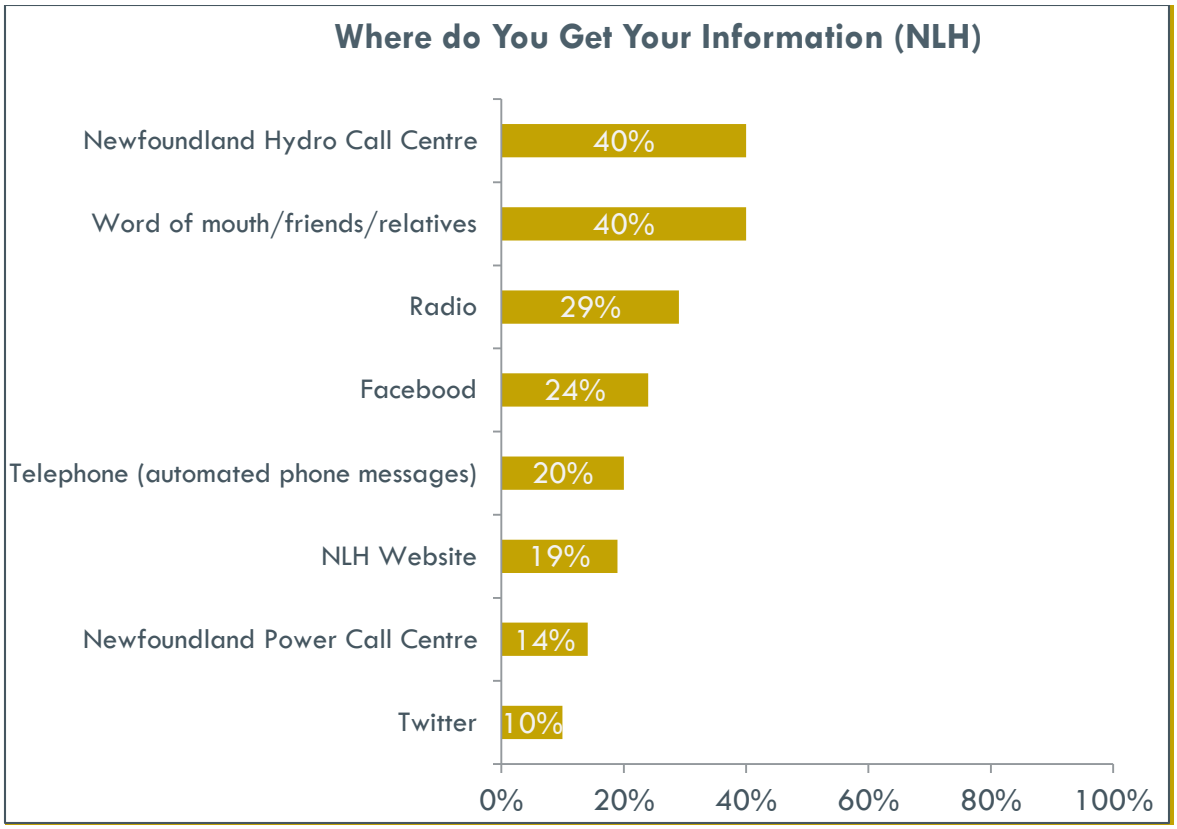
Newfoundland Power:

- NP's website is one of its two most important resources for communicating outage information. Both the website and radio are used by 42-43% of the customer base (reliance on both mediums climbs to over 50% in urban centers). In fact, with higher income / university grads the numbers for NP website use reaches as high as 60% and far outreaches radio (40-42%).
- The third most accessed resource for NP is now the NP call center, which is referenced as a source by 29% of its customers.

Newfoundland Labrador Hydro:

- For Hydro customers, their most consistent resource for information related to outages was the NLH call center, which was referenced by 40% of customers.
- Comparable to accessing the call center, 40% of NLH customers also indicated they rely on friends and family for their information and updates.
- By comparison to usage of the NP website, only 19% of NLH customers use the Hydro website for outage information





How Prepared are Customers for Unplanned Outages?

Finally, we asked customers how prepared they are to deal with an unplanned outage. The majority overall felt "reasonably well prepared" (62%), and only 12% overall consider themselves to be "not very well prepared" or "not at all prepared."

- Results indicate that NLH customers are far more likely to feel prepared in the event of an unplanned outage. Supporting this, they are also more likely to indicate that they have an alternate source of heat.
- In general, those who feel less prepared are less likely to have alternate heat, are more likely to have electricity as their main source of heat, and live in urban areas.

Rotating Power Outages

Qualitative Recap

The need for rotating outages was a concern for people in the focus groups because they had not experienced them before and the need for them made people realize they could not simply rely on always having enough electricity.

Even though rotating outages were an inconvenience people did accept them as a way to deal with shortages of supply. They preferred caution in the sense of being warned whenever rotating outages might occur. If an outage is subsequently not necessary, they suggested it was okay as long as they knew why it didn't happen (conservation efforts worked, etc.).

And while customers generally felt they were doing their part and weren't part of the problem, their limited ability to provide detail on what they did suggests they are saying the right thing but may not in fact always be doing it.

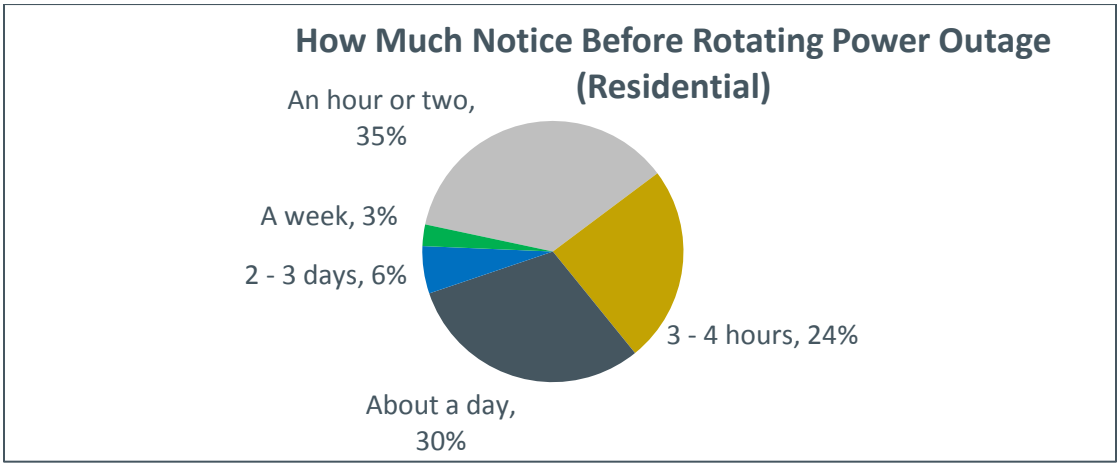
Quantitative Results

When investigating the topic of rotating power outages, the main topics explored included:

- Notice required in advance of rotating outages.
- Attitudes regarding rotating outages.
- Conservation efforts.

Advanced Notice

When asked how much notice they would expect in advance of a rotating power outage, 39% indicated a day or longer. 59% of all respondents indicated 3-4 hours would suffice. Expectations of lead times were reasonably consistent between NP and Hydro customers.



Prevailing Attitudes around Rotating Outages

To understand people's feelings around the concept of rotating outages to manage through insufficient power situations, four statements were provided to determine levels of agreement/disagreement.

1. Rotating outages is a reasonable way to deal with a situation where demand for electricity is more than the amount of electricity available.
2. When it comes to rotating outages, I would rather (Newfoundland Power/Newfoundland Labrador Hydro – recall from supplier question) be cautious and warn us whenever they think rotating outages might happen.
3. It is very frustrating when rotating outages are announced and then it doesn't happen.
4. If I was expecting an outage, I would try to get my home warmed up before it happened.

In general it appears that the current method of dealing with insufficient power is widely accepted across the province

- 83% agree that rotating outages is a reasonable solution (consistent with NP and NLH customers, and across urban, rural and Labrador market areas).
- This was very consistent across all markets and demographics.

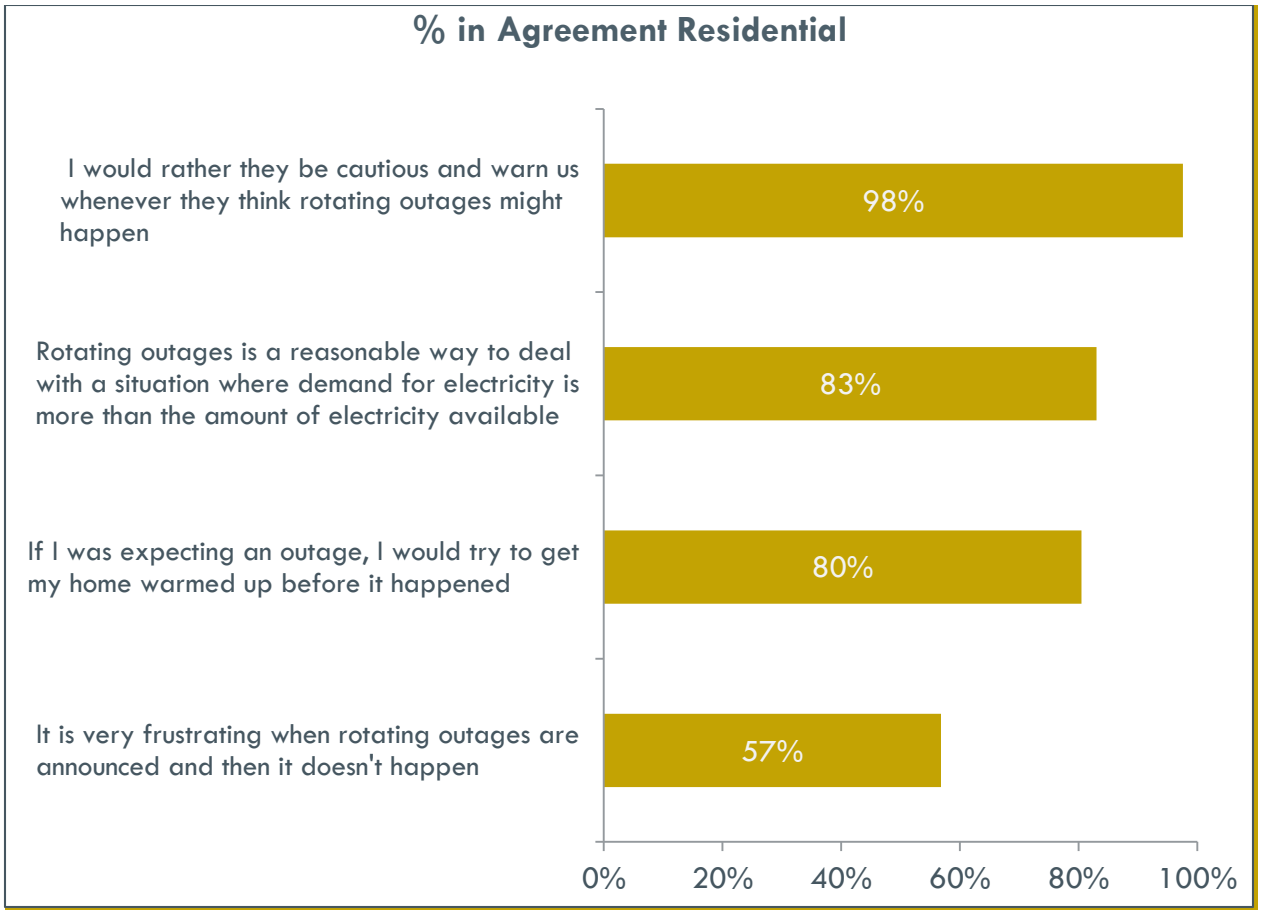
It is very clear that customers would rather be alerted to a possible rotating outage (whether it in fact happens or not)

- 98% agree with this statement
- 50% strongly agree
- Having stated this, 56% admit being frustrated when an announced outage does not occur.

Of greatest concern in this section of the survey is the fact that 80% of all households admitted that they would increase the heat in their homes in advance of a rotating outage to better brace for the outage.

- This feeling was strong across all markets, but was stronger with NLH customers (+10%), especially in Labrador (91%).

The interesting phenomenon seen in the focus groups (that people will take the notice time before a rotating outage to make sure they get things done) is strongly confirmed here. Eighty percent agreed they would try to warm their home before the outage. Based on the focus groups, people did not think they were doing anything wrong in the sense of contributing to the need for the outage; they were simply using that time to be prepared.

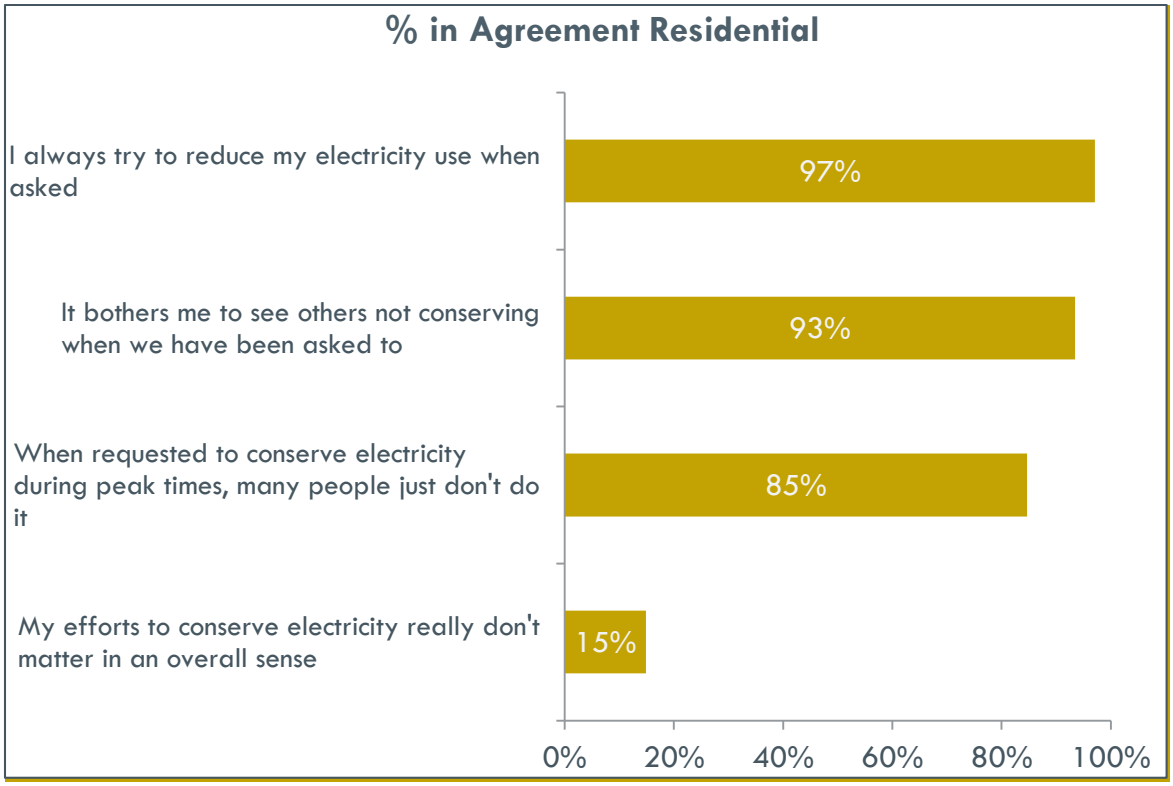

% in Agreement Residential
I would rather they be cautious and warn us whenever they think rotating outages might happen
98%
Rotating outages is a reasonable way to deal with a situation where demand for electricity is more than the amount of electricity available
83%
If I was expecting an outage, I would try to get my home warmed up before it happened
80%
It is very frustrating when rotating outages are announced and then it doesn't happen
57%
0%
20%
40%
60%
80%
100%

Rotating Outages: Energy Conservation

In spite of the fact that it may be common for people to increase their electricity consumption before a rotating outage; almost everyone believes they are complying with requests to reduce consumption. Fully 97% say they reduce use when asked. This compliance is consistent across income and education levels, geographic areas, those heating with electricity and those not and those with an alternate source of heat and those who do not.

Further to this, they also feel it is important to comply, since 84% disagreed with the negatively worded statement that their efforts don't matter in an overall sense. This indicates that they do in fact think the efforts are worthwhile.

Finally to reinforce their commitment to the concept, they (93%) indicate that it bothers them when others don't comply with this request.



In terms of diligence around conservation, 91% indicated they would practice any energy conservation measures whenever asked (to avoid these kinds of outages).

The specific things that people do to reduce electricity are turning off lights (78%), turning the heat down (56%), unplugging electronics and appliances (40%) and generally not doing household chores during the times they are asked to conserve. These results clearly demonstrate much room for improved participation and diligence across the province

- All of these actions were reasonably consistent across both utilities, through geographic regions and across other demographics.

The paradox is this case is that while many people admit to turning up heat in advance of rotating outages, and many people indicated only doing basic tasks (turning off lights), most people do not believe they are part of the problem. The concern from a communication perspective is that messaging around conservation may fall on deaf ears unless there is a way to help people realize they can and should do more in these cases.

Reporting Power Outages:

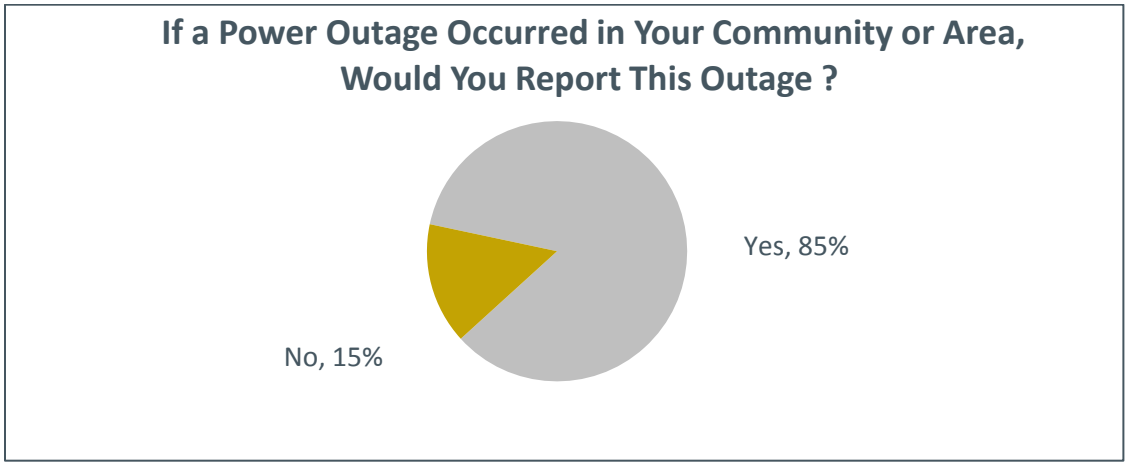
Qualitative Recap

People in the focus groups indicated they would not immediately report an outage. Instead, they would wait a few minutes and try to determine the extent of the outage and to see if it simply came back on. After a short wait of 15 minutes or so, people said they would report the outage, generally by phone.

Quantitative Results

A strong majority (85%) say they would report an outage in their area and mostly say they would report it immediately (37%) or certainly in less than an hour (47%). These levels are consistent across all of the demographic groups. In actual practice though, only 49% said they have reported an outage in the past. Those in Labrador are less likely to say they will report an outage right away and less likely to have actually reported one in the past.

The toll-free lines are the dominant way of advising of power outages for both NP (92%) and Hydro (82%) customers.



Improved Reliability:

Finally, to help understand customer's acceptance/satisfaction with the current electrical system in the province, respondents were specifically asked for their opinions on two questions:

1. Do you need improved reliability with your electrical utility supply? For example fewer outages?
2. Would you be willing to pay more for increased levels of reliability?

Approximately half (52%) of the residential customers believe they need improved reliability for electricity supply. This number increases to 61% in urban areas. In general NP customers are slightly more likely to hold this belief than NLH customers.

However, when asked if they would be willing to pay more for this improvement, only one third (31%) of this group said yes (16% of all households).

This number of people who would be willing to pay more (of those who feel they need improved reliability), rose to 37% in urban areas (44% for higher income households).

Technology use and Social Media:

Internet Access / Smart Phones

Fully 87% say they have high speed Internet at home making website access (when power is on) available to most customers. In fact, 63% have a smart phone that makes Internet access, texting, tweeting and other social media methods accessible to most customers even when the power is off. High speed Internet is basically universal with people who are better educated and have higher incomes and is more prevalent in urban areas. Penetration of smart phones is also very high in these better-educated and higher income groups.

Social Media Use

Three-quarters of residential customers have a Facebook account and 24% have a twitter account making the former a realistic way to broadly reach customers and even the latter an increasingly popular way to reach out.

Coping with Outages

Finally, in the focus groups it was evident that many people had taken some steps to ensure they could cope with a power outage and the survey has quantified this. Sixty percent say they have a way to heat their home when the power is off: Of these, 43% have a wood stove and 25% have a generator.

Phase III: Business Survey

Business Quantitative Survey Results

The business survey was developed with input from both NP and NLH employees, with a focus on commercial accounts. The survey was administered online by partnering with approximately twelve business and professional organizations (who agreed to distribute a survey link to their membership). The survey was distributed at the end of June and left up for fifteen days. A reminder was sent half way through the data collection process to encourage additional participation. In total, 91 completed surveys were returned and were included in this analysis.

A complete set of tables is included as Appendix E. These show the overall results and results for NP and NLH customers separately. While proportionately correct, the number of NLH customers is relatively small so caution should be exercised when considering specific NLH business customer responses.

Planned Outages:

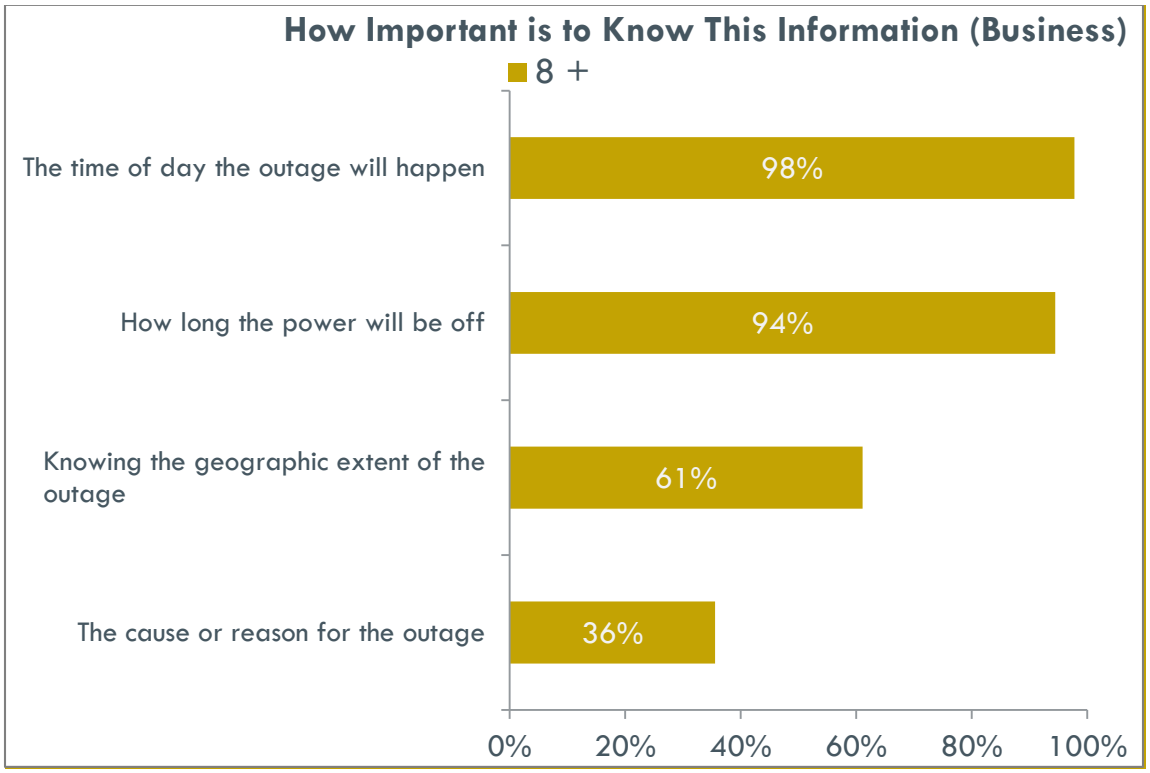
What Businesses really need to know?

Business customers were asked to rate the importance of several types of information in helping them deal with a planned power outage. Importance was rated on a 10-point scale with a 10 meaning the information is extremely important. Any rating of 8 or higher is considered to indicate a high level of importance and this is highlighted in the following graph.

The two key pieces of information for business customers dealing with a planned power outage are "when it will happen" and "how long the power will be out". When asked to rate how important each of these two pieces of information are, almost 100% gave a rating of 8 or higher on a 10-point scale. In fact, 89% and 84% respectively rated these two pieces of information as a 10 out of 10, suggesting critical importance. Almost no one gave a rating under 7 for either of these types of information.

The geographic extent of the outage is also important to many people as 47% rated it 10 out of 10, while 61% gave a rating of 8 or higher. This is not of universal interest however as 28% rated this type of information a 6 or lower.

And while some are very interested, the cause of the outage is relatively unimportant for many business customers with 52% scoring it a 6 or less.



Ways to Inform and Update Business Customers:

Business customers were given an extensive list of methods or vehicles that could be used to initially inform them of a planned power outage. They were asked to select the ones that would be best for them.

Overall the most frequently mentioned preferred options were "automated phone messages" at 57% and "radio" at 56%. Outside of radio (mass media), the other most frequent responses were more "direct" in nature. And they ranged from automated (text message 43%) to personal (personal phone call 45%).

On the social media front, one quarter of businesses (26%) see Facebook as a viable method of learning about planned outages (Compared to 49% of residential customers). Of interest, twitter preference by business (20%) was only marginally higher than twitter preference by residential customers (16%).

There are several key differences between NP and NLH business customers when it comes to how they expect to be informed of a planned power outage:

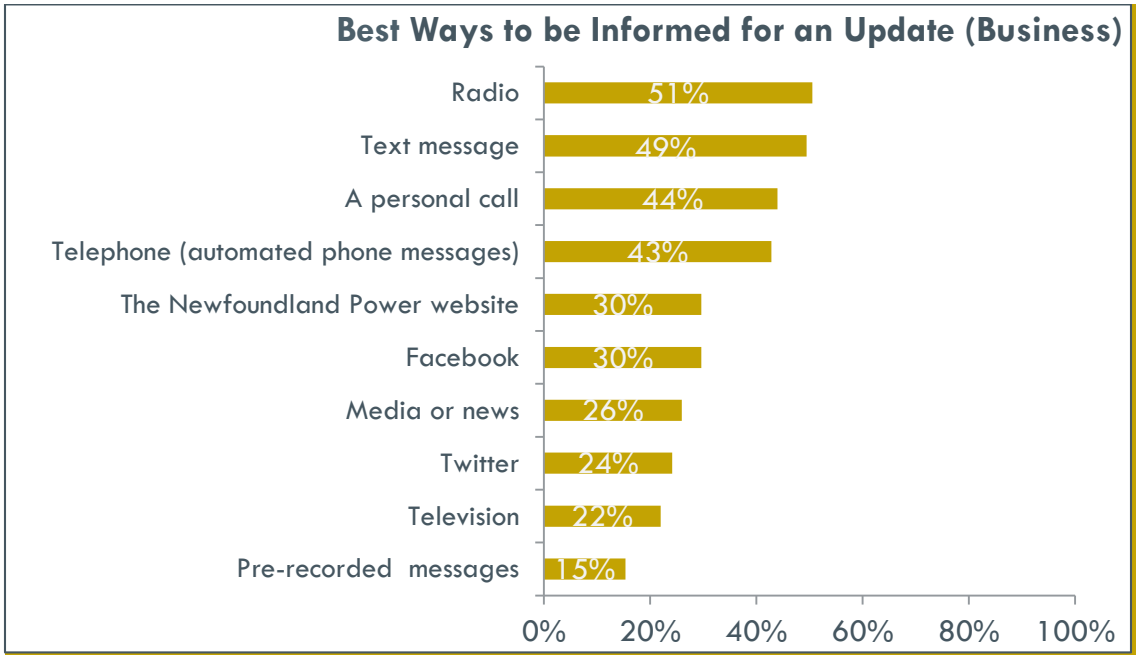
- NP customers are far more accepting of hearing about planned outages through the media/news (42% vs 12% for NLH customers).
- NLH customers most preferred method to be informed was through a "personal phone call" (59% vs 42% for NP customers).
- NLH customers are far less likely to use radio – 35% compared to 61% for NP.
- NP customers are far more likely to use their provider's web site or call center.

In general, business customers seem flexible in the methods used to inform them of planned outages. 25% of respondents indicated 3 different methods they would find acceptable, while over 50% selected four or more.

Once a planned outage is underway, we asked respondents the best way to provide updates if the outage lasted longer than expected. In this case we monitored how the choices changed from those in the original notification.

- The use of less time sensitive methods for updates dropped significantly
  - Newspaper use dropped 15%
  - Direct mail dropped 12%
  - Media or news dropped 11%
- In addition, automated phone messaging preference dropped by 15% (perhaps at the risk of missing a phone message or having the lack of power to receive it)
- Conversely, smart phone / instant access methods of updates increased slightly in use, including Twitter, Facebook, text messages, and NP and NLH websites

These results also indicate more narrowed choices for updates. While 75% offered 3 or more ways to receive the initial information about a planned outage, 55% offered three or less options to receive updates.



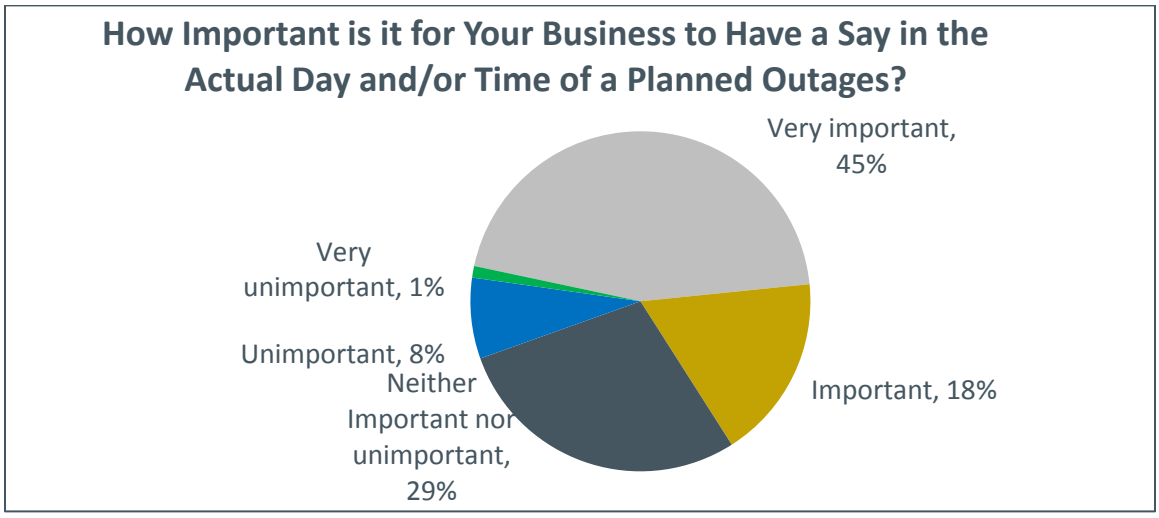
How Much Advance Notice do Business Customers Want?

85% of Business customers would be satisfied with 3-4 days notice. And in fact, 59% would feel 1-2 days is acceptable. In the case of NP customers 91% would be satisfied with 3-4 days notice (66% 1-2 days).

However, NLH business customers expect much greater advanced notice with only 53% indicating they'd be satisfied with 3-4 days notice (29% 1-2 days). While 48% indicated they'd needed a week or more to prepare.

The Importance of Including Business Customers in the Timing of Outages:

When asked how important it would be for businesses to have a say in the actual timing of a planned outage impacting them, a significant portion felt it was important (63%). In fact almost half (45%) responded by saying they considered this inclusion to be "very important". When compared, NP and NLH customers offered similar perspectives on this topic.



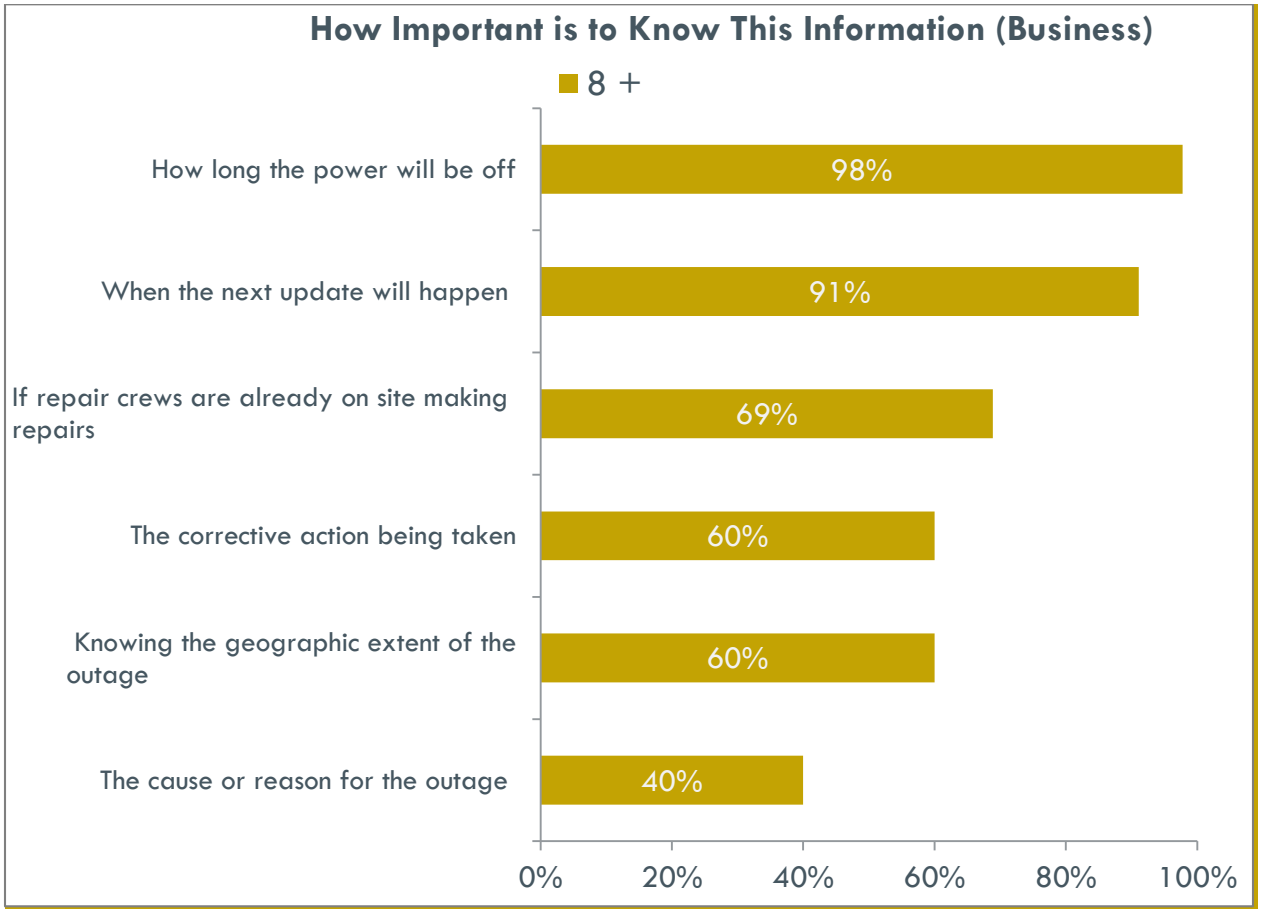
Unplanned Outages:

What Business Customers Need to Know

Similar to the questions asked for a planned outage, business customers were also asked how important different types of information would be during an unplanned outage. Again, a 10-point scale with 10 being extremely important was used and in this case two additional types of information were added – advising of corrective action being taken and if repair crews are already on site. Interestingly, for businesses, knowing that repair crews were on site and working on the problem proved to be important knowledge, as 69% (82% of NLH customers) rated knowing this information at 8 out of 10 or higher.

Business customers are even more focused than residential customers on the importance of knowing how long the power will be off (and on updates during the outage). In the case of businesses, power outages are more than an inconvenience and in many ways for them, its critical to know when power will be restored.

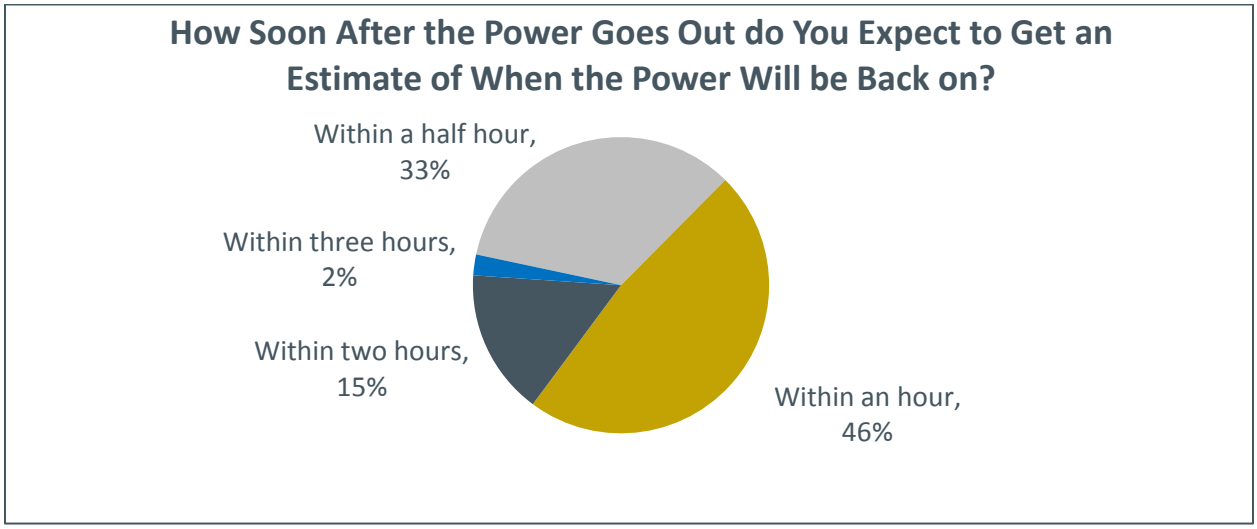
There are three other pieces of information that can be considered important, but not as critical as "when the power will be back on". These relate to the geographic extent of the outage and what is being done to correct the situation. This information likely helps businesses to determine how realistic the time estimates are. As with residential customers, the cause of the outage is relatively less important to business customers (47% rated this 6 or lower).



When is the First "Power Back On" Estimate Expected?

In keeping with the heightened sense of urgency around outages for businesses, their expectations of when they should first have an estimate of when the power will be restored is increased. One third expects an estimate within half an hour and an additional 50% of businesses expect to know within an hour. Anything beyond an hour was noted as acceptable by a minority (17%).

Almost all (95%) of NLH customers expect to know this information within an hour and while this is also true of most NP customers (76%) some NP customers are prepared to wait a little longer.

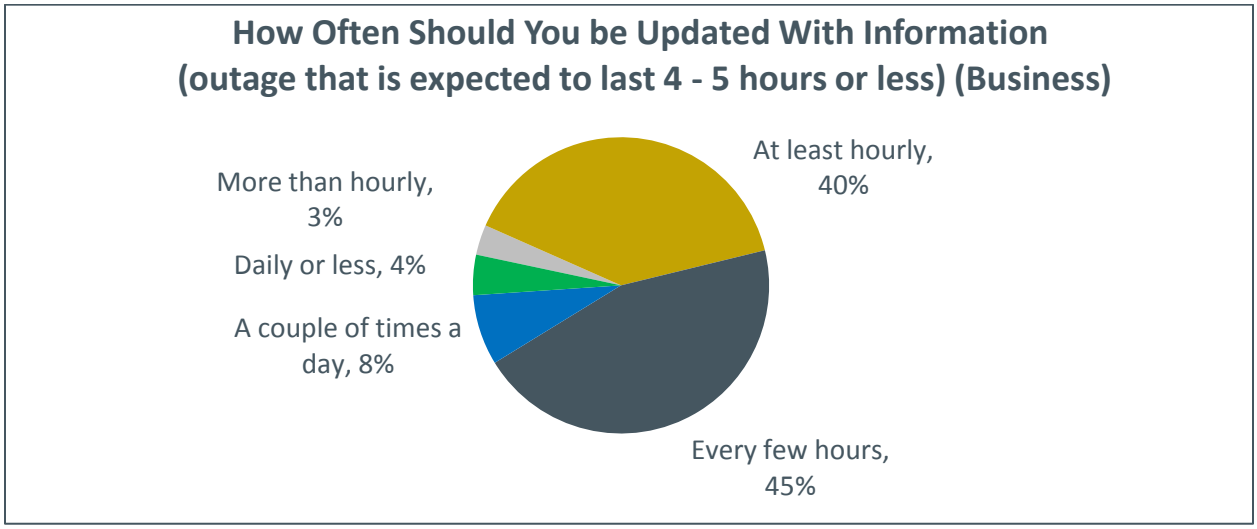


Updates

In exploring the desired frequency of updates for business customers, two scenarios were provided: the first was for an outage expected to last 4-5 hours and the second was for an outage expected to last 10-12 hours or longer.

The most significant insight from this exercise was in noting the differences in expectations between the two scenarios. In the shorter outages, 43% of customers expected hourly (or more frequent updates). However, when outages went longer, only 29% needed more frequent updates, and in fact 70% were okay with every few hours or less. The take away in this case is that business outages of 4-5 hours or less often leave managers with financial and staffing decisions such as: Can I still get a half shift in for the day? Should we keep staff here and see if the power comes back on? Can we still open for the afternoon? However, once the duration extends further, these questions begin to disappear and work/shifts often cannot resume until the next workday (hence less value in regular updates).

It is important to note that in both scenarios, NLH customers in the survey expected slightly more frequent updates than NP customers overall.



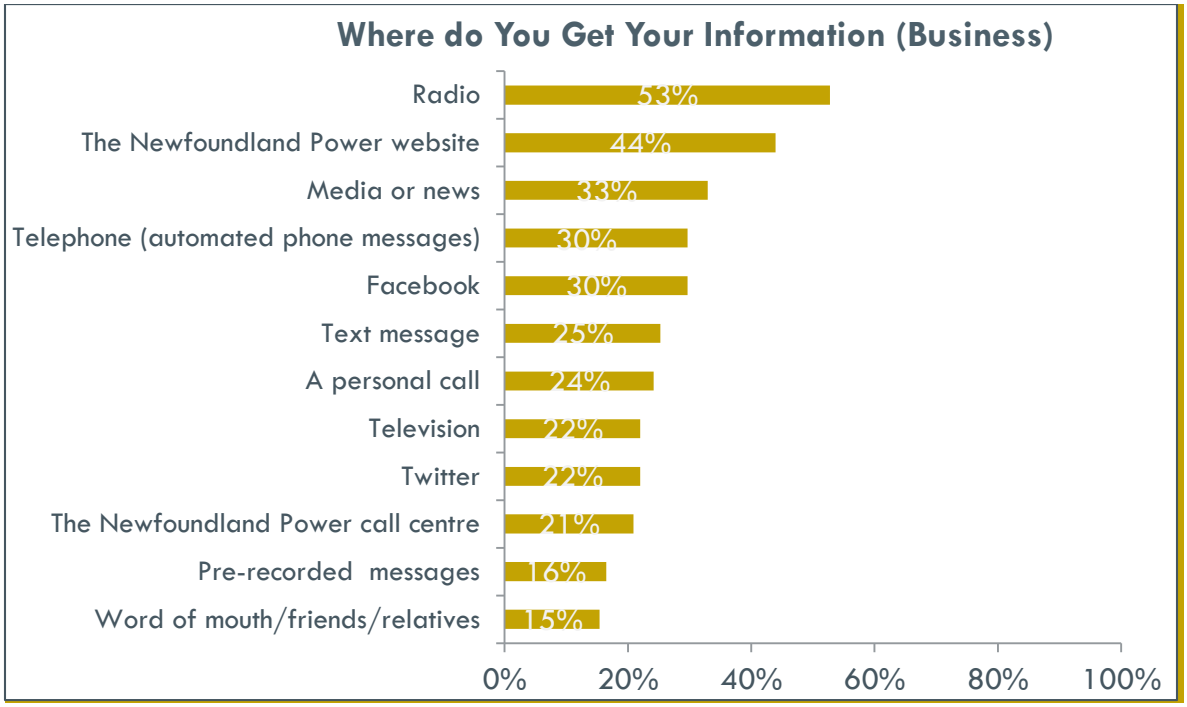
Where do Business Customers get their Outage Information Today?

Perhaps the most important answer to consider in this section is the "preferred" method of receiving information on an unplanned outage. In this case, respondents are asked to choose the one method they would prefer above others.

- The top two answers (offered by almost half the respondents) were methods that are not widely used today
  - Telephone (automated messages) 23% *.
  - Text message 20%.
- The third most frequent response (14%) was by NP customers who preferred to use the NP website.
- Radio in this scenario was mentioned 14% of the time as well (which could be considered low as a first choice for such a popular medium overall).

Since the two most frequent answers for top choice are not currently available, we then looked at other acceptable methods of information gathering. In this case respondents were asked where they get their information today.

- When asked for multiple responses, radio returns to the top of the list, mentioned by 53%, (suggesting it is widely being used, but not necessarily preferred).
- The NP website was rated second most frequently at 44% overall (used by 52% of NP customers).
- 41% of NLH customers referenced using the NLH website.
- Facebook was referenced by 30% (consistent across both utilities).
- 30% referenced using telephone (automated) and 25% mentioned text messages. Since neither of these are available as outbound methods used by the utilities today, some interpretation may be required (they may be calling into the automated system or they may be texting others to get information)
- NP and NLH call centers were referenced by 24 and 29% of their customers respectively (Note these numbers don't correspond with the table below as the table numbers reflect all business customers combined)



*NOTE: While it difficult to determine through the information reviewed, the results do indicate that there may be some confusion on the subject of automated calls as to whether people are referring to inbound (calls they may receive) or outbound (calls to an automated service of the supplier).

Preparedness for Potential Outage:

Business customers were asked if they made any preparations upon hearing a winter storm advisory and two thirds (66%) indicated they did. There was little difference between NP and NLH customers on this point.

A total of 43% (53% NLH and 37% NP) indicated their business has a business contingency or emergency preparedness plan in case of severe weather. Conversely, the fact that 52% indicated they don't have a plan indicates a communications/partnership opportunity for NP and NLH.

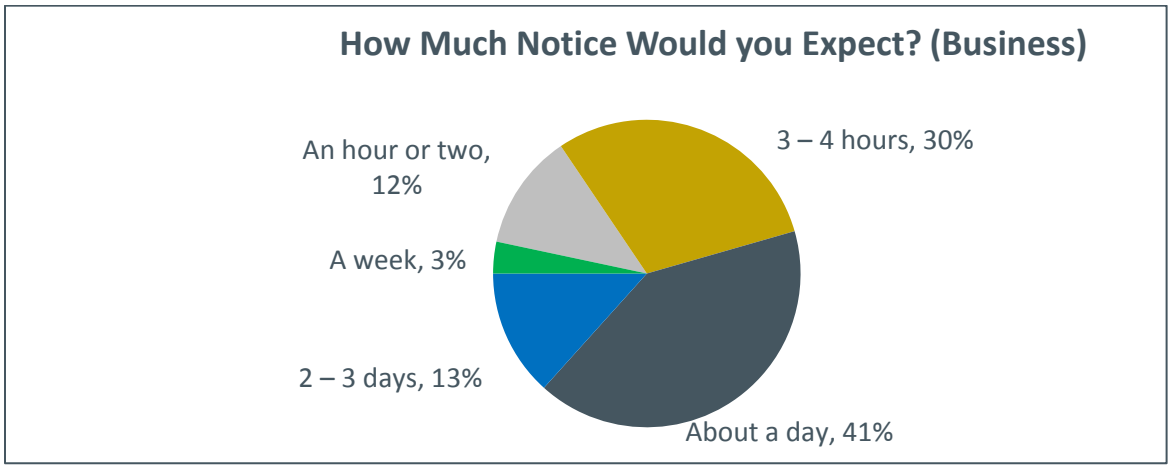
Rotating Power Outages:

How Much Notice before a Rotating Outage?

While business customers require 1-2 days notice (or more) in advance of a planned outage, they seem more tolerant of the challenges of a rotating outage. In the case of rotating outages, 83% indicated a day or less would be sufficient. 42% indicated 3-4 hours (or less).

While this is still significantly longer than the timeframe suggested by residential customers, it might be reasonable considering the greater demands of operating in a business environment.

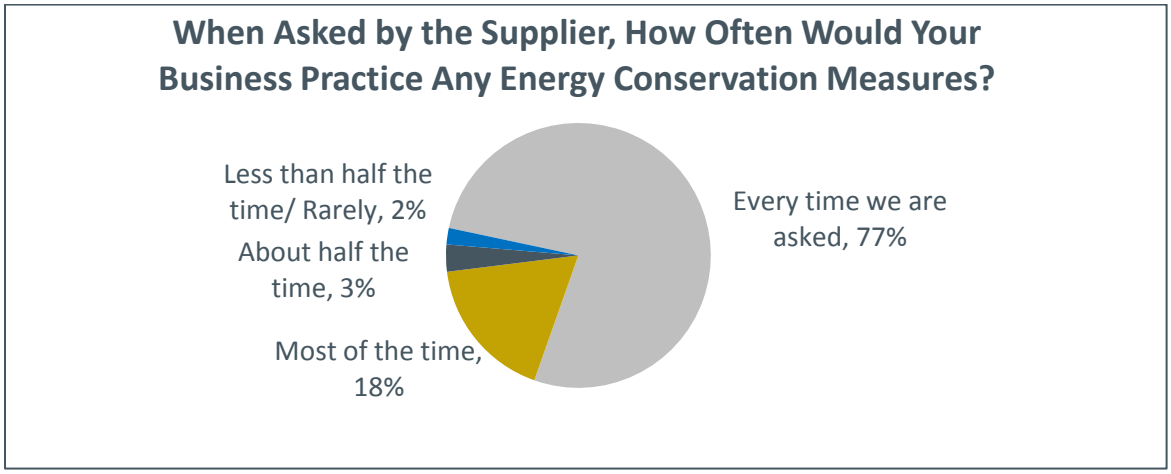
By comparison, NLH customers indicated a slightly longer notice period with 41% suggesting more than a day.



Do businesses Comply when Asked to Conserve Electricity?

Most business customers comply when asked to conserve electricity to avoid an outage. 77% say they comply every time they are asked, while a further 18% indicate they do so "most of the time." In the case of NLH customers most agreed they complied every time they were asked.

However, while they are more likely to indicate compliance than residential customers, business customers are not as convinced as residential customers that they are really making a difference when they practice energy conservation measures. Only 11% feel they are making a great deal of difference, 52% say some and 31% say only a little.

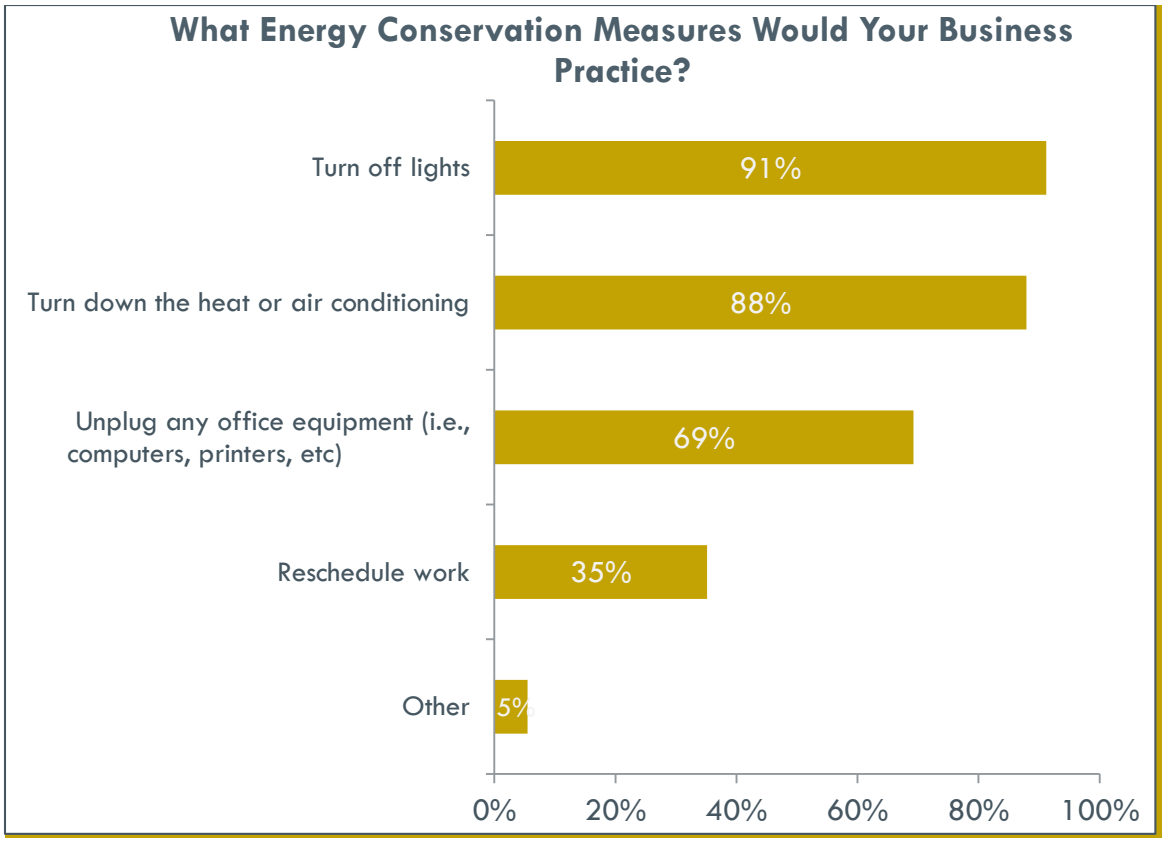


What Businesses do When Asked to Conserve?

Like residential customers, the actual practices that are implemented when businesses are asked to conserve are often the easy things to do. Turning off lights, as well as unplugging office equipment are quite similar to the activities noted by residential customers. However, it becomes more revealing when we compare answers to a follow-up question concerning which of these activities businesses followed as a standard practice.

The vast majority of respondents indicated they turn down the lights and turn down the heat/AC as a regular practice in their businesses. (Suggesting it's easier to comply during rotating outages). The one item that differed was unplugging equipment: 69% indicated they did this during rotating outages, while only 18% indicated they do it as a standard business practice.

Finally, while modest by comparison to the other responses, rescheduling work is an activity that suggests more effort on the part of the business and was mentioned by 35% (compared to only 3% as standard practice). And this is a conservation activity that would have potentially significant financial impacts on a business.



Reporting Power Outages:

Business customers indicate they are more than willing to report an outage (87% yes), and in fact 57% indicate that they have done so in the past.

When comparing business customers to residential customers, Business customers are more likely to have reported an outage (57% vs 49%) and are more likely to have done so immediately (48% vs 37%). Given the more significant impact on staff, customers and goods, this would be anticipated.

Both NP business customers and those of NLH are most likely to report using their suppliers toll free line (80-89%)

Improved Reliability:

There is more interest in improved reliability from the business community (versus with residential customers; again perhaps due to the more significant impacts of outages), but are less interest in paying for it. Three quarters (75%) of business customers say they need improved reliability, but only 21% of this group (16% of all businesses) say they are willing to pay for it.

Demographics:

The demographics confirm that the businesses that did participate in the survey cover a wide range of businesses in the province and that the research reached senior people in the respective businesses. Most were either owners or senior managers and directors of their organizations. Size of business based on sales ranged from businesses of $100,000 or less to businesses with revenues in excess of $50,000,000 with good representation in all categories. The sample was almost evenly split between men and women.

Appendix A: Focus Groups Discussion Guide

Appendix A Discussion Guide

Discussion Guide

Outage Communications

1. Introduction

- Let me first thank you for agreeing to participate. The session will last an hour and a half or a little bit more and that generally people enjoy themselves and find the process interesting.
- In a few minutes I will be taking you through different scenarios and I am looking for the information you need in each circumstance and how you would like to get that information. First, let me tell you a little bit about the room you are in.
- Explain the mirror (as appropriate)/presence of the client and the taping.
- Get a brief introduction from each participant that includes their first name and a little about themselves – the type of work they do and how long – that kind of thing. Also ask them to identify how they heat their home?

2. Disruptive Events

- I would like to start off really generally and get you all to think of a day when everything just went completely differently than you planned and I want you to think of what caused that. Just to put a few parameters around that – I am not meaning anything personal like someone walked out on you or that kind of thing.
- What did people think of? What are the emotions attached to the various disruptions mentioned? Is there fear, annoyance, anger?
- Probe for the various types. The objective is to see where power outages fit and how often they are mentioned? Also probe for clarity – is it the outage or the weather event or the fact that people can't do what they want to do?
- Are power outages relatively minor or more serious in the whole scheme of things that happen to you and your family?
- What could you do to make this better? Who or what other organizations could also make these outage situations better for you? What could they do? Probe for information, but also activities like warming centres?
- If it is winter and you know that a storm is coming, what are you thinking about and what are you concerned about? Is it that the power might go out? Is it that people might have trouble getting home? What do you do? Are people prepared all the time or really not very much?

- Would you say you are monitoring the situation very closely? If you are, who are you relying on for information? Who is reliable and trusted?
- You all have a sheet of paper in front of you and I would like you to jot your first name on the top and I would also like you to think of the number of power outages that you have had over the past year and jot that number down too. For power outages I would like you to include major ones and more minor ones and just write the total number down.
- Get an idea of how many people have said and understand what the range is.
- Is this an expected number or a reasonable number? Is it reasonable to expect that almost anything, including your electricity, will not be working a certain number of times each year? Do you think that 100% reliability or very close to 100% is reasonably achievable or even expected?
- What are the circumstances or situations that make an outage more or less acceptable or understandable? Probe for weather conditions, length of outage, time of year.

3. Scenarios

- Unless the earlier conversation suggests a need to add something to this portion, we would discuss three types of outages – planned, unplanned winter outage lasting less than a day and major storm multi day outages including rolling outages. In each case we will probe for how people are feeling? What their major concerns are and what NL Power, Hydro and others including media can and should do?

- A planned outage in the winter that is necessary to do some maintenance in your area. What information would you want to be told? How much time before the actual outage? Do you need to know why? How should that information actually be communicated? How should the message be sent to make sure that most people get it? How much updating?

- Let me play (or read) an example of how this might be communicated. Once it is presented; how good a job does this do? Does it have the information you need? What is the sense that you get – is the tone correct? How are you feeling having heard this? What would improve it? Is this the right source of information? How else should I present this information so that people get it? Should I be leaving automated phone messages as an example, social media, twitter? What should I have on our own website? Do people understand that both Newfoundland Labrador Hydro and Newfoundland Power are involved in this? Should I be hearing from both? Should I be hearing from my main supplier only?

- My next one is not a planned outage. Imagine there is a winter storm coming that is expected to last a day and will probably be enough to take buses off the road and have the RCMP warn people to stay off roads. Before the storm actually comes is there anything that needs to be done or communicated from a power perspective? What are you thinking about and doing 2 – 3 days before the storm? The day before the storm? The day of the storm?

- Let me again play you or read an example that deals with this situation. How good a job does this one do? Explore positive and negative comments. How could this one be improved? When it is an unplanned outage? Who should be communicating with you?

4. Prolonged Outage

- Now I would like you to think of a situation where there is a prolonged period of outages. Similar to what some of you experienced this past January. Take me through what is on your mind in this case – on the first day of the storm? On subsequent days? What information do you need at each stage? How should you get this information? Is there more of a need for updates? Who should the communications come from? What is the role of NL Power, Hydro, the media. Is there anyone else that you need to hear from?
- When there is a more major event similar to what happened in January, is there any need for communications once the whole thing is over and everything is back to normal. Who should this come from and where should it be?
- Again play a communications example and evaluate.

5. Conserving

- If there is a need to conserve electricity in that there is not enough electricity for everyone at particular times, what do you need to know? How long before it is likely to happen do you need to know? Again, how should you be advised and who is actually advising you?
- If you are asked to conserve the electricity that you are using, do you know what to do? What would you do first? Do you feel you are making a difference?
- For those of you who experienced rolling outages, what was that like? Did you do anything to prepare? How soon before do you need to know about these? How best to get this message to you?

6. Reporting Outages

- Imagine that you are sitting at home and the power suddenly goes off. First of all, what would you do? How many would call to report the outage? How long would you wait? Would you call or would you want to let them know some other way? What do I want to know in this case?

7. Conclusion

- Thank participants and answer any of their questions. We really appreciate your time today. Also a reminder to keep the conversation today confidential.

Appendix B

Residential Questionnaire

Customer Service Research: Outage Communication and Conservation

Residential Telephone Survey - Draft Questionnaire

MRIA Registration Number:

SAMPLING PLAN

Sample Size: 800 (sample 600 randomly plus 200 oversample in Hydro-served areas)

Survey Population and Sample Source: General population survey - a random sample of Newfoundland and Labrador residents who are 18 years of age or older.

Methodology: This research will utilize a telephone methodology.

INTRODUCTION

Hello, my name is _____ from MQO Research, a professional research firm in Newfoundland and Labrador. We are calling on behalf of Newfoundland Power and Newfoundland Labrador Hydro and we are asking about power outages.

May I please speak to someone in your household who is 18 years of age or older?

IF NOT AVAILABLE, ARRANGE FOR A CALLBACK.

IF YES, REPEAT INTRODUCTION AND ADD: Please be assured that we are not selling or promoting any products or services but are simply interested in your opinions. This survey will take approximately 10 minutes to complete depending on your responses. Do you have a few minutes to answer the questions?

Yes.....01 **Thank & Continue**

No.....02

IF NO: *Is there a more convenient time for me to call back?* **ARRANGE A CALLBACK OR THANK AND TERMINATE.**

IF RESPONDENT AGREES TO CONTINUE, ADD: *This call may be monitored for quality purposes.*

If a respondent questions the validity of the survey, the call or our organization please state: MQO Research has been conducting research studies in Canada and abroad for 30 years. We are a Member of the Canadian Marketing Research Intelligence Association (MRIA) which is responsible for regulating marketing research practices in Canada. MQO adheres strictly to all guidelines of professionalism and privacy as outlined by the MRIA. This study is registered with the Association. If you would like to contact the MRIA to verify the legitimacy of this research study or our company please call 1-888-602-6742, ext. 8728 and reference survey number: XXX.

If a respondent questions the confidentiality of the information that they are providing please state the following: As a member of the Marketing Research and Intelligence Association (MRIA) we adhere to strict standards of privacy and confidentiality. Our data is presented in aggregate form. Information will never be released to our client or any other third party in a manner that could be used in an attempt to disclose your identity.

SCREENING QUESTIONS

S1. Gender: **BY OBSERVATION**

Male 01

Female.....02

S2. Into which of the following broad categories does your age fall? **[READ CHOICES 01-06]**

18 – 24.....01

25 – 34.....02

35 – 44.....03

45 – 54.....04

55 – 64.....05

65 or older.....06

Refused (VOL) 98

S3. Who supplies your home with electricity? Or who do you receive your bill from? **[READ AND ROTATE CHOICES 01 AND 02]**

Newfoundland Power (NP).....01

Newfoundland and Labrador Hydro (NLH) 02

Refused (VOL) 98

Don't know/Not sure (VOL).....99

SECTION #1 – PLANNED OUTAGES

The first section of this survey is about planned power outages. Planned outages are occasionally needed to perform preventative maintenance on the system.

Q1. How often do you think residential customers should be provided with updates on the following information over the duration of a planned power outage? Would you say hourly, a few times a day, daily, every few days, weekly or updates not needed? **[READ ITEMS A to D; ROTATE ITEMS]**

ROTATE STATEMENTS	Hourly	A few times a day	Daily	Every few days	Weekly	Updates not needed	Refused	Don't know
a. At what time the outage will happen	○	○	○	○	○	○	○	○

b. How long the power will be off	○	○	○	○	○	○	○	○
c. The cause or reason for the outage	○	○	○	○	○	○	○	○
d. Knowing the geographic extent of the outage	○	○	○	○	○	○	○	○

Q2a. The following is a list of possible ways (recall supplier from S4) could inform you about a planned power outage. I'll read through the list and you can tell me which one or ones would be best for you. You can select more than one if you like. READ LIST

Twitter 01

Facebook 02

Radio 03

Telephone (automated phone messages) 04

Text message 05

Television 06

Newspaper 07

The Newfoundland Power website 08

The Newfoundland Power call centre 09

The Newfoundland Hydro website 10

The Newfoundland Hydro call centre 11

Word of mouth/friends/relatives 12

A written notice placed in your mailbox or on your door 13

Another source (please specify) _____

Refused (VOL) 98

Don't know (VOL) 99

Q3. In the event of a planned power outage, how much advance notice would you need to make any necessary preparations? **[READ CHOICES 01-06; SELECT ONE ONLY]**

Less than a day 01

1 to 2 days 02

3 to 4 days 03

One week 04

Two weeks 05

More than two weeks 06

Refused (VOL) 98

Don't know (VOL) 99

SECTION #2 – UNPLANNED OUTAGES

The next section of this survey is about unplanned power outages. Unplanned outages are often triggered by severe weather conditions. So, when answering these next questions, please imagine that an unplanned power outage has occurred as a result of a winter storm, high winds or other severe weather.

This question is about the types of information you need during an unplanned power outage.

Q4. Using a scale of 1 to 10, where 1 is '*not at all important*' and 10 is '*extremely important*', how important would it be for you to know the following information quickly during an unplanned power outage? **[READ ITEMS A to C; ROTATE ITEMS]**

a) How long the power will be off
b) The cause or reason for the outage
c) Who is responsible for the cause of the outage
d) The extent of any damage that might have happened
e) Being updated on progress

f) Location of warming centres
g) The geographic extent of the outage

Q5. We'd like to understand how often you need to be updated with different types of information. First, think about an outage that is expected to last 2 - 3 hours or less. How often should you be updated with information like:

Progress updates and how much longer the power will be off:

More than hourly 01

At least hourly 02

Every few hours 03

A couple of times a day 04

Daily or less 05

Not Sure/Don't Know 09

Q6. And what if the power is expected to be off for more than 3 hours? Now how often should you be updated on the following types of information?

Progress updates and how much longer the power will be off:

More than hourly 01

At least hourly 02

Every few hours 03

A couple of times a day 04

Daily or less often 05

Not Sure/Don't Know 09

7. How soon after the power goes out do you expect your electricity company to provide you with an estimate of when the power will be back on? READ Choice

Within a half hour..... 01

Within an hour 02

Within two hours..... 03

Within three hours 04

Or is some other amount of time reasonable? _____

Not Sure/Don't Know 09

8. This question is about the ways you get information about power outages now. If there was a power outage, where would you go to get information about the outage today? DO NOT READ AND CODE AS MANY CHOICES AS NECESSARY. Record First Answer in column one and then all others in column two.

a) Twitter
b) Facebook
c) Radio
d) Telephone (automated phone messages)
e) Text message
f) Television
g) Newspaper
h) The Newfoundland Power website
i) The Newfoundland Labrador Hydro website
j) The Newfoundland Power call centre
k) The Newfoundland Labrador Hydro call centre
l) Word of mouth/friends/relatives
m) Other _____

Q10. How well prepared are you to deal with an unplanned power outage? READ CHOICS

Very well prepared 01

Reasonably well prepared 02

Not very well prepared 03

Not at all prepared 04

Refused (VOL) 98

Don't know/Not sure (VOL) 99

Section 3

Rotating Power Outages

At times there may be a situation when the demand for electricity is greater than the supply. Last winter when this happened you may have experienced or heard of rotating power outages where the power would be off for an hour or more and then back on as the power company tried to manage or share the electricity that was available.

Q 11. How much notice would you expect before a rotating power outage? Do not read, and select closest response

An hour or two 01

3 – 4 hours 02

About a day 03

2 – 3 days 04

A week 05

Other _____

Not Sure/Don't Know 09

Q12. I am going to read several statements and I would like you to tell me how strongly you agree or disagree with each (choices are strongly agree, agree, neutral, disagree, strongly disagree and don't know)

a. If I was expecting an outage, I would try to get my home warmed up before it happened.
b. It is very frustrating when rotating outages are announced and then it doesn't happen.
c. Rotating outages is a reasonable way to deal with a situation where demand for electricity is more than the amount of electricity available.
d. When it comes to rotating outages, I would rather (Newfoundland Power/Newfoundland Labrador Hydro – recall from supplier question) be cautious and warn us whenever they think rotating outages might happen.

SECTION #4 – CONSERVATION

During certain weather conditions, Newfoundland Power and/or Newfoundland and Labrador Hydro may request that their consumers try to conserve energy, especially during "peak times". This request will often be made in order to avoid an outage caused by more energy demand than supply.

Q13. I am going to read several statements and I would like you to tell me how strongly you agree or disagree with each (choices are strongly agree, agree, neutral, disagree, strongly disagree and don't know)

a. I always try to reduce my electricity use when asked.
b. When requested to conserve electricity during peak times, many people just don't do it.
c. My efforts to conserve electricity really don't matter in an overall sense.
d. It bothers me to see others not conserving when we have been asked to.

Q14. When asked by <***recall answer from S4***>, how often would you practice any energy conservation measures to help potentially avoid an outage caused by more demand than supply?

Every time we are asked 01

Most of the time..... 02

About half the time 03

Less than half the time 04

Rarely..... 05

Never 06

Q15. What energy conservation measures would you practice? Would you…? **[DO NOT READ CHOICES SELECT ALL THAT APPLY]**

Turn off lights	01
Turn down the heat	02
Unplug appliances/computers/televisions	03
Wash clothes/dishes in off peak times	04
Other (please specify)	05
Nothing	06
Refused (VOL)	98
Don't know/Not sure (VOL)	99

SECTION #5 – REPORTING OUTAGES

Q16. If a power outage occurred in your community or area, would you report this outage to <***recall answer from S4***>?

Yes	01	
No	02	**Go to Q18**
Refused (VOL)	98	**Go to Q18**
Don't know/Not sure (VOL)	99	**Go to Q18**

Q17. How long would you wait before you report a power outage to <***recall answer from S4***>? **[READ CHOICES 01-06; SELECT ONE ONLY]**

I would report it immediately	01

Less than 1 hour 02

Within 1 to 6 hours..... 03

Within 6 to 12 hours..... 04

Within 12 to 24 hours..... 05

More than one day..... 06

Refused (VOL)..... 98

Don't know/Not sure (VOL)..... 99

Q18. Have you ever reported a power outage to <***recall answer from S4***>?

Yes	01	
No	02	**Go to SECTION 6**
Refused (VOL).....	98	**Go to SECTION 6**
Don't know/Not sure (VOL).....	99	**Go to SECTION 6**

Q19. Which of the following methods did you use to report an outage? **[READ CHOICES; SELECT ALL THAT APPLY; ROTATE CHOICES 01-04]**

Newfoundland Power website 01

Newfoundland Power toll-free line 02

Newfoundland Labrador Hydro website 03

Newfoundland Labrador Hydro toll-free line 04

Other (please specify) 05

Refused (VOL) 98

Don't know/Can't remember (VOL) 99

Section 6 Confidence in the Electrical System in Newfoundland and Labrador

Q 20. Do you need improved reliability with your electrical utility supply? For example fewer outages?

Yes 01

No ..... 02 GO TO SECTION 7

Not Sure/Don't Know 09

Not Sure/Don't Know 09

Q 21. Would you be willing to pay more for increased levels of reliability?

Yes 01

No ..... 02 GO TO SECTION 7

Not Sure/Don't Know 09

SECTION #7: DEMOGRAPHICS

We now have a few final questions to ask. These questions will ONLY BE used to help us analyze the results. Please be assured that your responses will be kept strictly confidential.

D1. Which of the following ***best describes*** your current employment status? Are you…? **[READ CHOICES]**

Employed by a company or organization 01

Self-employed 02

Unemployed and looking for work 03

Unemployed and not looking for work 04

Retired 05

A student 06

Refused (VOL) 98

D2. Which of the following categories ***best describes*** the highest level of education you have completed? **[READ CHOICES]**

Less than high school.....01

Graduated high school 02

Some trade/technical college 03

Graduated trade/technical college 04

Some University.....05

Graduated University 06

Refused (VOL) 98

D3. Which of the following categories best corresponds to your **annual household income** before taxes and deductions? **[READ CHOICES]**

Under $25,000 per year 01

$25,000-$50,000 per year.....02

$50,000-$74,000 per year 03

$75,000-$100,000 per year 04

Over $100,000 per year.....05

Refused (VOL)..... 98

Don't know (VOL) 99

D4. Please tell us which of the following you have at home? Yes/No choices

High Speed Internet.....01

A smart phone that you can access the internet from.....02

A facebook account 03

A twitter account..... 04

D5. What is the primary source of heat in your home **[DO NOT READ CHOICES]**

Electricity 01

Oil 02

Wood.....03

Propane.....04

Other _____

Refused (VOL) 98

D6. Do you have a way to heat your home when the power is off? Yes/No Choices

D7. If Yes: How do you heat your home when the power is off? Yes/No choices

Wood Stove 01

Generator 02

Other _____

That's the end of the survey. Thanks very much for your time and cooperation.

Appendix C

Residential Tables

Appendix D

Business Questionnaire

Customer Service Research: Outage Communication and Conservation

Business Online Survey - Draft Questionnaire

MRIA Registration Number:

SAMPLING PLAN

Sample Size: 100-150

Survey Population and Sample Source: A random sample of businesses throughout Newfoundland and Labrador. The client will assist MQO with identifying appropriate respondents.

Methodology: This research will utilize an online methodology.

SCREEN 1 - EMAIL INVITATION

Today we are conducting a survey about the information that business people need when dealing with planned and unplanned power outages. We would very much appreciate your time and participation.

This survey will take approximately 10 minutes to complete, depending upon your responses. **We appreciate that your time is valuable so if you complete the survey, you will be entered into three charitable draws of $250, $150 and $100 to be donated in your name to the charity of your choice.**

Please note that the deadline for completing this survey is _____.

Please be assured that your responses will be kept strictly confidential.

MQO Research has been conducting research studies in Canada and abroad for 30 years. We are a Member of the Canadian Marketing Research Intelligence Association (MRIA) which is responsible for regulating marketing research practices in Canada. MQO adheres strictly to all guidelines of professionalism and privacy as outlined by the MRIA. This study is registered with the Association. If you

would like to contact the MRIA to verify the legitimacy of this research study or our company please call 1-888-602-6742, ext. 8728 and reference survey number: XXX.

In the event that you require technical assistance in completing the survey, please reply to this e-mail and the survey administrator will assist you.

When you are ready to begin, please click on the link below:

<INSERT LINK HERE>

Thank you in advance for your participation.

SCREEN 2 – WELCOME PAGE

You are free to choose to participate in this survey and free to discontinue your participation at any time. Just a reminder – the deadline for completing this survey is _____.

Q1. Who supplies electricity to your business? Who do you receive a bill for electricity from?

- ☐ Newfoundland Power (NP)
- ☐ Newfoundland and Labrador Hydro (NLH)
- ☐ Don't know/Not sure

SECTION #1 – PLANNED OUTAGES

The first section of this survey is about planned power outages. Planned outages are occasionally needed to perform preventative maintenance on the system.

Q2. Using a scale of 1 to 10, where 1 is '*not at all important*' and 10 is '*extremely important*', how important would it be for your business to know the following information in advance of a planned power outage? Scale 1 – 10 and Don't Know.

a) The time of day the outage will happen
b) How long the power will be off
c) The cause or reason for the outage
d) Knowing the geographic extent of the outage

Q3. The following is a list of possible ways (recall supplier from Q1) could inform you about a planned power outage. Please select the one or ones that would be best for you. PLEASE SELECT AS MANY AS APPLY

a) Twitter
b) Facebook
c) Radio
d) Telephone (automated phone messages)
e) Text message
f) Television
g) Newspaper
h) The Newfoundland Power website
i) The Newfoundland Power call centre
j) The Newfoundland Labrador Hydro website
k) The Newfoundland Labrador Hydro call centre
l) Word of mouth/friends/relatives
m) Media or news
n) Pre-recorded messages
o) Direct Mail
p) A personal Call

Q4. If the planned outage lasted longer than expected and there was a need to provide an update, which of the following would be the best way to provide that update? **PLEASE SELECT AS MANY AS APPLY**

☐ Twitter
☐ Facebook
☐ Radio
☐ Telephone (automated phone messages)
☐ Text message
☐ Television
☐ Newspaper
☐ The Newfoundland Power website
☐ The Newfoundland Power call centre

- ☐ The Newfoundland Labrador Hydro website
- ☐ The Newfoundland Labrador Hydro call centre
- ☐ Word of mouth/friends/relatives
- ☐ Media or news
- ☐ Pre-recorded messages
- ☐ Direct Mail
- ☐ A personal call
- ☐ Another source (please specify in the box)
- ☐ Don't know

Q5. In the event of a planned power outage, how much advance notice would your business need? **SELECT ONE ONLY**

- ☐ Less than a day
- ☐ 1 to 2 days
- ☐ 3 to 4 days
- ☐ One week
- ☐ Two weeks
- ☐ More than two weeks
- ☐ Don't know

Q6. How important is it for your business to have a say in the actual day and/or time of a planned outages?

- ☐ Very Important
- ☐ Important
- ☐ Neither Important nor unimportant
- ☐ unimportant
- ☐ Very Unimportant

SECTION #2 – UNPLANNED OUTAGES

The next section of this survey is about unplanned power outages. Unplanned outages are often triggered by severe weather conditions. So, when answering these next questions, please imagine that

an unplanned power outage has occurred as a result of a winter storm, high winds or other severe weather.

Q7. Using a scale of 1 to 10, where 1 is '*not at all important*' and 10 is '*extremely important*', how important would it be for your business to know the following information during an unplanned power outage? Scale is 1 – 10 with Don't Know

h) How long the power will be off
i) The cause or reason for the outage
j) Knowing the geographic extent of the outage
k) The corrective action being taken
l) When the next update will happen
m) If repair crews are already on site making repairs

Q8a. We'd like to understand how often you need to be updated with different types of information. First, think about an outage that is expected to last 4 – 5 hours or less. How often should you be updated with information such as:

Progress updates and how much longer the power will be off:

More than hourly 01

At least hourly 02

Every few hours 03

A couple of times a day 04

Daily or less 05

Not Sure/Don't Know 09

Q8b. And what if the power is expected to be off for 10 or 12 hours or longer? Now how often should you be updated on the following types of information?

Progress updates and how much longer the power will be off:

More than hourly 01

At least hourly 02

Every few hours 03

A couple of times a day 04

Daily or less often 05

Not Sure/Don't Know 09

9. How soon after the power goes out do you expect your electricity company to provide you with an estimate of when the power will be back on?

Within a half hour 01

Within an hour 02

Within two hours 03

Within three hours 04

Or is some other amount of time reasonable? _____

Not Sure/Don't Know 09

10. This question is about the ways you get information about power outages now. If there was a power outage, where would you go to get information about the outage today? PLEASE CHOOSE AS MANY AS APPLY.

- ☐ Twitter
- ☐ Facebook
- ☐ Radio
- ☐ Telephone (automated phone messages)
- ☐ Text message
- ☐ Television
- ☐ Newspaper

- ☐ The Newfoundland Power website
- ☐ The Newfoundland Power call centre
- ☐ The Newfoundland Labrador Hydro website
- ☐ The Newfoundland Labrador Hydro call centre
- ☐ Word of mouth/friends/relatives
- ☐ Media or news
- ☐ Pre-recorded messages
- ☐ Direct Mail
- ☐ A personal call
- ☐ Another source (please specify in the box)
- ☐ Don't know
- ☐ Prefer not to say

Q11. What information source would be your business' preferred method of receiving information during an unplanned power outage? **SELECT ONE ONLY**

- ☐ Twitter
- ☐ Facebook
- ☐ Radio
- ☐ Telephone (automated phone messages)
- ☐ Text message
- ☐ Television
- ☐ Newspaper
- ☐ The Newfoundland Power website
- ☐ The Newfoundland Power call centre
- ☐ The Newfoundland Labrador Hydro website
- ☐ The Newfoundland Labrador Hydro call centre
- ☐ Word of mouth/friends/relatives
- ☐ Media or news
- ☐ Pre-recorded messages
- ☐ Direct Mail
- ☐ A personal call
- ☐ Another source (please specify in the box)
- ☐ Don't know
- ☐ Prefer not to say

Q12. After hearing a winter storm advisory or warning, does your business make any preparations in advance of a potential power outage?

- ☐ Yes
- ☐ No **Go to Q 14**
- ☐ Don't know/Not sure **Go to Q 14**
- ☐ Prefer not to say **Go to Q 14**

Q13. What type of preparations does your business make in anticipation of a power outage due to a winter storm?

Q14. Does your business have a business contingency or emergency preparedness plan in the event of severe weather?

- ☐ Yes
- ☐ No
- ☐ Don't know/Not sure
- ☐ Prefer not to say

SECTION #3 – REPORTING OUTAGES

Q15. If a power outage occurred in your business community or area, would you report this outage to <***recall answer from Q1***>?

- ☐ Yes
- ☐ No **Go to Q17**
- ☐ Don't know/Not sure **Go to Q17**
- ☐ Prefer not to say **Go to Q17**

Q16. How long would you wait before you report a power outage to <***recall answer from Q1***>? **SELECT ONE ONLY**

- ☐ I would report it immediately
- ☐ Less than 1 hour
- ☐ Within 1 to 6 hours
- ☐ Within 6 to 12 hours
- ☐ Within 12 to 24 hours
- ☐ More than one day
- ☐ Other (please specify in the box) [ ]
- ☐ Don't know/Not sure
- ☐ Prefer not to say

Q17. Have you ever reported a power outage to <***recall answer from Q1***>?

- ☐ Yes
- ☐ No **Go to Section 4**
- ☐ Don't know/Not sure **Go to Section 4**
- ☐ Prefer not to say **Go to Section 4**

Q18. Which of the following methods did you use to report an outage? **SELECT ALL THAT APPLY**

- ☐ Newfoundland Power website
- ☐ Newfoundland Power toll-free line
- ☐ Newfoundland Labrador Hydro website
- ☐ Newfoundland Labrador Hydro toll-free line
- ☐ Other (please specify in the box) [ ]
- ☐ Don't know/Can't remember
- ☐ Prefer not to say

SECTION #4 – CONSERVATION

During certain weather conditions, Newfoundland Power and/or Newfoundland and Labrador Hydro may request that their consumers try to conserve energy, especially during "peak times". This request can be made in order to avoid an outage caused by energy use that is greater than the electricity system can supply.

Q19. When asked by <***recall answer from Q1***>, how often would your business practice any energy conservation measures to help potentially avoid an outage caused by more demand than supply?

Every time we are asked 01

Most of the time..... 02

About half the time 03

Less than half the time 04

Rarely..... 05

Never 06

Q20. What energy conservation measures would your business practice? **SELECT ALL THAT APPLY**

- ☐ Turn off lights
- ☐ Turn down the heat or air conditioning
- ☐ Unplug any office equipment (i.e., computers, printers, etc)
- ☐ Reschedule work
- ☐ Other (please specify in the box)
- ☐ Nothing
- ☐ Don't know/Not sure
- ☐ Prefer not to say

Q21. In general, and not related to a specific request, which, if any, of these energy conservation measures do you currently practice at your business?

- ☐ Turn off lights at the end of each workday
- ☐ Turn down the heat or air conditioning at the end of each workday

- ☐ Unplug office equipment at the end of each workday (i.e., computers, printers, etc)
- ☐ Reschedule work
- ☐ Other (please specify in the box)
- ☐ None of the above
- ☐ Don't know/Not sure
- ☐ Prefer not to say

Q22. How much of a difference do you feel your business is making when it practices these energy conservation measures?

A great deal of difference 01

Some difference 02

A little difference 03

Very little or no difference 04

Q23. **IF Q19 = RARELY OR NEVER**: Why would your business choose not to practice any energy conservation measures when asked?

Section 5 Rotating Power Outages

At times there may be a situation when the demand for electricity is greater than the supply. Last winter when this happened you may have experienced or heard of rotating power outages where the power would be off for an hour or more and then back on as the power company tried to manage or share the electricity that was available.

Q 24. How much notice would you expect before a rotating power outage?

An hour or two 01

3 – 4 hours 02

About a day 03

2 – 3 days 04

A week 05

Other _____

Not Sure/Don't Know 09

Section 6 Confidence in the Electrical System in Newfoundland and Labrador

Q 25. Do you need improved reliability with your electrical utility supply? For example fewer outages?

Yes 01

No ..... 02 GO TO SECTION 7

Not Sure/Don't Know 09

Not Sure/Don't Know 09

Q 26. Would you be willing to pay more for increased levels of reliability?

Yes 01

No ..... 02 GO TO SECTION 7

Not Sure/Don't Know 09

SECTION #7: DEMOGRAPHICS

We now have a few final questions to ask. These questions will ONLY BE used to help us analyze the results. Please be assured that your responses will be kept strictly confidential.

D1. What is your current position within the business?

- ☐ Owner/Proprietor
- ☐ Partner

- ☐ Managing Director/Director
- ☐ Senior Manager
- ☐ Office Manager
- ☐ Other (Please specify in the box) ☐
- ☐ Prefer not to say

D2. Which one of the following broad categories best describes the total sales of goods and services generated by your business in 2013?

- ☐ $0 to $99,999
- ☐ $100,000 to $499,999
- ☐ $500,000 to $1,999,999
- ☐ $2,000,000 to $9,999,999
- ☐ $10,000,000 to $49,999,999
- ☐ $50,000,000 +
- ☐ Don’t know
- ☐ Prefer not to say

D3. Into which of the following broad categories does your age fall?

- ☐ 18 – 24
- ☐ 25 – 34
- ☐ 35 – 44
- ☐ 45 – 54
- ☐ 55 – 64
- ☐ 65 or older
- ☐ Prefer not to say

D4. Are you:

- ☐ Male
- ☐ Female
- ☐ Prefer not to say

CLOSING: Thank you very much for your time. To show our appreciation, you are now eligible to be entered into three charitable draws of $250, $150 and $100 to be donated in your name to the charity of your choice! The draw will take place at the end of _____. We will be contacting the winners by email. To have your name entered, please provide your first and last name, email address and the name of your charity in the space below. **Please note that this information will not be shared with anyone and will only be used to contact the winners.**

Name (First and Last): _____

Email Address: _____

Name of your Charity: _____

THANK YOU VERY MUCH FOR YOUR TIME! IT IS VERY MUCH APPRECIATED!

Appendix E

Business Tables

Q1: Who supplies electricity to your business? Who do you receive a bill for electricity from?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Newfoundland Power (NP)	74%	100%	0%
Newfoundland and Labrador Hydro (NLH)	19%	0%	100%
Don't know/Not sure	8%	0%	0%

Q2: How important would it be for your business to know the following information in advance of a planned power outage?

		Total	Supplier	
			Newfoundland Power	NL Hydro
Total Unweighted (n)		91	67	17
The time of day the outage will happen	7	2%	3%	0%
	8	4%	4%	6%
	9	3%	4%	0%
	10 - Extremely important	89%	88%	94%
	Don't know	1%	0%	0%
How long the power will be off	5	1%	0%	6%
	6	1%	0%	6%
	7	3%	3%	6%
	8	9%	9%	12%
	9	1%	1%	0%
	10 - Extremely important	84%	87%	71%
	Don't know	1%	0%	0%
The cause or reason for the outage	1 - Not at all important	11%	9%	18%
	2	4%	6%	0%
	3	4%	4%	6%
	4	3%	4%	0%
	5	16%	16%	18%
	6	14%	13%	18%
	7	10%	10%	12%
	8	10%	9%	6%
	9	3%	4%	0%
	10 - Extremely important	22%	22%	24%
	Don't know	1%	0%	0%
Knowing the geographic extent of the outage	1 - Not at all important	4%	4%	6%
	2	1%	0%	0%
	3	3%	4%	0%
	4	1%	1%	0%
	5	10%	10%	6%
	6	9%	7%	18%
	7	10%	10%	6%
	8	8%	7%	6%
	9	5%	4%	12%

	10 - Extremely important	47%	49%	47%
	Don't know	1%	0%	0%

Q2: How important would it be for your business to know the following information in advance of a planned power outage?
% 8 or higher

	Total	Supplier	
		Newfoundland Power	NL Hydro
The time of day the outage will happen	98%	97%	100%
How long the power will be off	94%	97%	82%
The cause or reason for the outage	36%	36%	29%
Knowing the geographic extent of the outage	61%	61%	65%

Don't knows have been excluded.

Q2: How important would it be for your business to know the following information in advance of a planned power outage?
-Mean Values-

		Total	Supplier	
			Newfoundland Power	NL Hydro
The time of day the outage will happen	N	90	67	17
	Mean	9.8	9.8	9.9
How long the power will be off	N	90	67	17
	Mean	9.6	9.7	9.1
The cause or reason for the outage	N	90	67	17
	Mean	6.2	6.2	5.9
Knowing the geographic extent of the outage	N	90	67	17
	Mean	7.8	7.9	8.1

Q3: The following is a list of possible ways the supplier could inform you about a planned power outage. Please select the one or ones that would be best for you.

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Twitter	20%	21%	6%
Facebook	26%	24%	24%
Radio	56%	61%	35%
Telephone (automated phone messages)	57%	57%	53%
Text message	43%	42%	47%
Television	30%	34%	18%
Newspaper	19%	22%	6%
The Newfoundland Power website	27%	34%	0%
The Newfoundland Power call centre	16%	18%	6%
The Newfoundland Labrador Hydro website	7%	4%	12%
The Newfoundland Labrador Hydro call centre	4%	4%	0%
Word of mouth/friends/relatives	4%	4%	6%
Media or news	37%	42%	12%
Pre-recorded messages	14%	18%	0%
Direct Mail	19%	16%	24%
A personal Call	45%	42%	59%

Q4: If the planned outage lasted longer than expected and there was a need to provide an update, which of the following would be the best way to provide that update?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Twitter	24%	24%	18%
Facebook	30%	24%	41%
Radio	51%	58%	18%
Telephone (automated phone messages)	43%	43%	35%
Text message	49%	51%	53%
Television	22%	22%	18%
Newspaper	4%	6%	0%
The Newfoundland Power website	30%	33%	0%
The Newfoundland Power call centre	14%	16%	0%
The Newfoundland Labrador Hydro website	9%	3%	18%
The Newfoundland Labrador Hydro call centre	7%	3%	18%
Word of mouth/friends/relatives	3%	4%	0%
Media or news	26%	30%	0%
Pre-recorded messages	15%	18%	0%
Direct Mail	7%	7%	0%
A personal call	44%	40%	59%
Another source (please specify in the box)	14%	9%	35%

Q5: In the event of a planned power outage, how much advance notice would your business need?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Less than a day	7%	9%	0%
1 to 2 days	52%	57%	29%
3 to 4 days	26%	25%	24%
One week	7%	6%	12%
Two weeks	4%	1%	18%
More than two weeks	4%	1%	18%

Q6: How important is it for your business to have a say in the actual day and/or time of a planned outages?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Very important	45%	43%	53%
Important	18%	19%	12%
Neither Important nor unimportant	29%	25%	35%
Unimportant	8%	10%	0%
Very unimportant	1%	1%	0%

Q7: How important would it be for your business to know the following information during an unplanned power outage?

		Total	Supplier	
			Newfoundland Power	NL Hydro
Total Unweighted (n)		91	67	17
How long the power will be off	5	1%	1%	0%
	7	1%	1%	0%
	8	8%	9%	6%
	9	5%	6%	6%
	10 - Extremely important	84%	82%	88%
	Don't know	1%	0%	0%
The cause or reason for the outage	1 - Not at all important	12%	12%	12%
	2	5%	7%	0%
	3	5%	4%	12%
	4	2%	3%	0%
	5	19%	18%	24%
	6	4%	6%	0%
	7	11%	10%	18%
	8	11%	10%	6%
	9	4%	6%	0%
	10 - Extremely important	24%	22%	29%

	Don't know	1%	0%	0%
Knowing the geographic extent of the outage	1 - Not at all important	4%	6%	0%
	2	3%	3%	0%
	3	2%	1%	6%
	4	1%	1%	0%
	5	13%	15%	12%
	6	8%	4%	12%
	7	8%	9%	6%
	8	9%	9%	6%
	9	5%	4%	12%
	10 - Extremely important	45%	46%	47%
	Don't know	1%	0%	0%
The corrective action being taken	1 - Not at all important	4%	6%	0%
	2	3%	4%	0%
	3	3%	3%	6%
	4	2%	3%	0%
	5	11%	13%	6%
	6	7%	4%	6%
	7	9%	10%	6%
	8	10%	9%	12%
	9	11%	13%	6%
	10 - Extremely important	38%	33%	59%
	Don't know	1%	0%	0%
When the next update will happen	5	4%	6%	0%
	7	4%	6%	0%
	8	11%	10%	18%
	9	12%	12%	18%
	10 - Extremely important	67%	66%	65%
	Don't know	1%	0%	0%
If repair crews are already on site making repairs	1 - Not at all important	1%	1%	0%
	2	3%	4%	0%
	3	1%	1%	0%
	4	1%	1%	0%
	5	5%	6%	6%
	6	8%	10%	0%
	7	11%	12%	12%
	8	11%	10%	12%
	9	11%	10%	18%

	10 - Extremely important	46%	42%	53%
	Don't know	1%	0%	0%

Q7: How important would it be for your business to know the following information during an unplanned power outage?
% 8 or higher

	Total	Supplier	
		Newfoundland Power	NL Hydro
How long the power will be off	98%	97%	100%
The cause or reason for the outage	40%	39%	35%
Knowing the geographic extent of the outage	60%	60%	65%
The corrective action being taken	60%	55%	76%
When the next update will happen	91%	88%	100%
If repair crews are already on site making repairs	69%	63%	82%

Don't knows have been excluded.

Q7: How important would it be for your business to know the following information during an unplanned power outage?
-Mean Values-

		Total	Supplier	
			Newfoundland Power	NL Hydro
How long the power will be off	N	90	67	17
	Mean	9.7	9.6	9.8
The cause or reason for the outage	N	90	67	17
	Mean	6.2	6.1	6.3
Knowing the geographic extent of the outage	N	90	67	17
	Mean	7.7	7.6	8.1
The corrective action being taken	N	90	67	17
	Mean	7.6	7.2	8.6
When the next update will happen	N	90	67	17
	Mean	9.3	9.2	9.5
If repair crews are already on site making repairs	N	90	67	17
	Mean	8.2	7.9	8.9

Q8a: We'd like to understand how often you need to be updated with different types of information. First, think about an outage that is expected to last 4 – 5 hours or less. How often should you be updated with information such as:

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
More than hourly	3%	4%	0%
At least hourly	40%	34%	53%
Every few hours	45%	49%	35%
A couple of times a day	8%	7%	6%
Daily or less	4%	4%	6%

Q8b: And what if the power is expected to be off for 10 or 12 hours or longer? Now how often should you be updated on the following types of information?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
More than hourly	2%	3%	0%
At least hourly	27%	24%	41%
Every few hours	48%	51%	47%
A couple of times a day	18%	19%	0%
Daily or often	4%	3%	12%

Q9: How soon after the power goes out do you expect your electricity company to provide you with an estimate of when the power will be back on?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Within a half hour	33%	36%	24%
Within an hour	46%	40%	71%
Within two hours	15%	18%	6%
Within three hours	2%	1%	0%
Or is some other amount of time reasonable?	2%	3%	0%
Not Sure/Don't Know	1%	1%	0%

Q10: If there was a power outage, where would you go to get information about the outage today?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Twitter	22%	22%	12%
Facebook	30%	22%	47%
Radio	53%	61%	12%
Telephone (automated phone messages)	30%	30%	29%
Text message	25%	28%	18%
Television	22%	22%	18%
Newspaper	4%	6%	0%
The Newfoundland Power website	44%	52%	12%
The Newfoundland Power call centre	21%	24%	6%
The Newfoundland Labrador Hydro website	14%	6%	41%
The Newfoundland Labrador Hydro call centre	9%	3%	29%
Word of mouth/friends/relatives	15%	15%	24%
Media or news	33%	33%	18%
Pre-recorded messages	16%	16%	6%
Direct Mail	4%	4%	0%
A personal call	24%	24%	29%
Another source (please specify in the box)	3%	3%	6%
Don't know	1%	1%	0%
Prefer not to say	1%	0%	0%

Q11: What information source would be your business' preferred method of receiving information during an unplanned power outage?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Twitter	3%	3%	6%
Facebook	2%	3%	0%
Radio	14%	16%	6%
Telephone (automated phone messages)	23%	24%	24%
Text message	20%	22%	18%
The Newfoundland Power website	14%	15%	0%
The Newfoundland Power call centre	3%	4%	0%
The Newfoundland Hydro call centre	1%	1%	0%
Word of mouth/friends/relatives	1%	0%	6%
Another source (please specify in the box)	13%	7%	41%
Prefer not to say	2%	1%	0%
Don't know	2%	1%	0%

Q12: After hearing a winter storm advisory or warning, does your business make any preparations in advance of a potential power outage?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Yes	66%	69%	71%
No	26%	28%	18%
Prefer not to say	1%	0%	6%
Don't know/ Not sure	7%	3%	6%

Q14: Does your business have a business contingency or emergency preparedness plan in the event of severe weather?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Yes	43%	37%	53%
No	52%	60%	41%
Prefer not to say	1%	1%	0%
Don't know/ Not sure	4%	1%	6%

Q15: If a power outage occurred in your business community or area, would you report this outage to the supplier?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Yes	87%	88%	88%
No	10%	9%	12%
Don't know/ Not sure	3%	3%	0%

Q16: How long would you wait before you report a power outage to the supplier?SUBSET: Those who would report.

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	79	59	15
I would report it immediately	48%	49%	53%
Less than 1 hour	38%	37%	33%
Within 1 to 6 hours	13%	14%	13%
Within 6 to 12 hours	1%	0%	0%

Q17: Have you ever reported a power outage to the supplier?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Yes	57%	61%	53%
No	36%	34%	41%
Don't know/ Not sure	7%	4%	6%

Q18: Which of the following methods did you use to report an outage?
SUBSET: Those who reported a power outage in the past.

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	52	41	9
Newfoundland Power website	10%	12%	0%
Newfoundland Power toll-free line	67%	80%	11%
Newfoundland Labrador Hydro website	0%	0%	0%
Newfoundland Labrador Hydro toll-free line	19%	5%	89%
Other	12%	12%	11%
Don't know/Can't remember	2%	0%	0%

Q19: When asked by the supplier, how often would your business practice any energy conservation measures to help potentially avoid an outage caused by more demand than supply?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Every time we are asked	77%	75%	94%
Most of the time	18%	19%	6%
About half the time	3%	4%	0%
Less than half the time	1%	0%	0%
Rarely	1%	1%	0%

Q20: What energy conservation measures would your business practice?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Turn off lights	91%	94%	88%
Turn down the heat or air conditioning	88%	90%	88%
Unplug any office equipment (i.e., computers, printers, etc)	69%	75%	65%
Reschedule work	35%	36%	41%
Other	5%	7%	0%
Nothing	0%	0%	0%
Don't know/Not sure	2%	1%	0%

Q21: In general, and not related to a specific request, which, if any, of these energy conservation measures do you currently practice at your business?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Turn off lights at the end of each workday	96%	96%	100%
Turn down the heat or air conditioning at the end of each workday	84%	84%	88%
Unplug office equipment at the end of each workday (i.e., computers, printers, etc)	18%	13%	29%
Reschedule work	3%	3%	6%
Other	4%	4%	0%
None of the above	2%	1%	0%
Don't know/Not sure	0%	0%	0%

Q22: How much of a difference do you feel your business is making when it practices these energy conservation measures?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
A great deal of difference	11%	12%	12%
Some difference	52%	46%	71%
A little difference	31%	36%	6%
Very little or no difference	7%	6%	12%

Q24: How much notice would you expect before a rotating power outage?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
An hour or two	12%	13%	12%
3 – 4 hours	30%	33%	18%
About a day	41%	42%	29%
2 – 3 days	13%	9%	29%
A week	3%	1%	12%
Other	1%	1%	0%

Q25: Do you need improved reliability with your electrical utility supply? For example fewer outages?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Yes	75%	73%	76%
No	11%	12%	12%
Not sure/ Don't know	14%	15%	12%

Q26: Would you be willing to pay more for increased levels of reliability?SUBSET: Those who need/not sure/don't know to improve reliability of electrical utility supply.

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	81	59	15
Yes	21%	20%	20%
No	59%	54%	73%
Not Sure/ Don't Know	20%	25%	7%

D1: What is your current position within the business?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Owner/Proprietor	36%	42%	29%
Partner	3%	4%	0%
Managing Director/Director	16%	21%	0%
Senior Manager	18%	15%	35%
Office Manager	9%	4%	12%
Prefer not to say	10%	7%	6%
Other (Please specify in the box)	8%	6%	18%

D2: Which one of the following broad categories best describes the total sales of goods and services generated by your business in 2013?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
$0 to $99,999	11%	12%	12%
$100,000 to $499,999	14%	15%	18%
$500,000 to $1,999,999	23%	28%	6%
$2,000,000 to $9,999,999	18%	21%	0%
$10,000,000 to $49,999,999	9%	9%	12%
$50,000,000 +	8%	3%	29%
Prefer not to say	12%	7%	24%
Don't know	5%	4%	0%

D3: Into which of the following broad categories does your age fall?

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
18 – 24	2%	3%	0%
25 – 34	5%	1%	6%
35 – 44	22%	22%	24%
45 – 54	26%	22%	41%
55 – 64	25%	28%	24%
65 or older	15%	19%	6%
Prefer not to say	3%	3%	0%

D4: Gender:

	Total	Supplier	
		Newfoundland Power	NL Hydro
Total Unweighted (n)	91	67	17
Male	48%	52%	41%
Female	46%	43%	59%

Prefer not to say	5%	4%	0%