Q. Please provide a copy of Newfoundland Power's Emergency Management Manual, or similar document that describes Newfoundland Power's severe storm monitoring, preparedness, and restoration plans.

A. Attachments A through E of this response are documents that describe Newfoundland Power's severe storm monitoring, preparedness, and restoration plans. The attachments are as follows:

- Attachment A - Storm Preparation Checklist
- Attachment B - System Restoration Manual
- Attachment C - Joint Storm Outage Communications Plan[1]
- Attachment D - System Restoration Plan Rotating Power Outage
- Attachment E - System Restoration Plan Cold Load Pickup

[1] Individual employee contact information has been redacted in Attachment C in accordance with the Company's privacy practices.

Newfoundland Power Storm Preparation Checklist

Newfoundland Power
Storm Preparation Checklist
(Revised November 2018)

The following is a list of items to consider when preparing for a storm or other significant event.

1. **Safety (All Departments)**
    a. Consider holding a pre-storm safety meeting & briefing with available staff.
    b. Consider reviewing relevant safety training or OPR's. For example you might review chain saw safety prior to a wind storm or winter driving prior to a snow storm or remind everyone to wear ice creepers.
    c. Consider having the Region's assigned Safety Advisor travel in advance of the storm to the Area expected to be affected the most.
2. **Regional Operations Department Preparations**
    a. Vehicles
        i. Fuel all vehicles (heavy & passenger).
        ii. Ensure all line trucks are stocked with required material.
        iii. Equip line trucks with special tools as required. For example for a pending wind storm, trucks should be equipped with a functioning chain saw.
        iv. Test truck VHF radios to ensure they are working.
        v. Check tablets are charged and ready.
        vi. Ensure off-road vehicles (ATV's, snowmobiles, Argo's) are working and fuelled.
        vii. Ensure all vehicles (including passenger vehicles) are equipped with cell phone chargers.
        viii. Ensure vehicles are suitably equipped for the storm/winter season in advance. Many vehicles used by NP employees today are rentals and may not be fully prepped as the NP company vehicles. (ie. snow tires, emergency beacon, cones, shovel, ice melter/torch for unfreezing best locks, ice scraper, etc.).
    b. Operations Staff
        i. Put staff on notice of pending storm/event. Consider bringing staff in early or holding them back from their normal days work to stand-by for the storm.
        ii. Where possible ensure staff is rested.
        iii. Consider having line, meter reader, field services reps, and technical staff, take company vehicles home on the night before the storm.
        iv. Ensure Supervisors have accurate contact information for all staff including the availability of staff on vacation.
        v. Consider re-deploying Regional line, technical and other support staff to Areas most likely to be impacted by the storm/event.
        vi. Consider requesting the re-deployment of non-critical head office staff to support possible Area restoration efforts.

vii. Review list of management and union support staff and customer service staff and identify who is eligible to be called in, and for what tasks, and what is the proper order. For example, make sure do not have any medical restrictions and union employees called for union work before management employees.
viii. Ensure support staff and customer service staff such as Meter Readers, Field Services Reps, ACR's are made aware of the pending storm/event. Confirm their contact information as well.
ix. Considering pre-arranging for a means to deliver meals & material. For example taxis for delivering materials or meals, catering companies to prepare and deliver meals, contractor labour for general assistance. Also consider bringing NP staff from unaffected Areas for support.
x. Consider moving an IS support person(s) to the affected Area(s) as a technology support person.
xi. Consider holding a pre-storm meeting with Area management to ensure all understand the Incident Command Structure.
xii. Consider reviewing the Outage Ticket Management process with affected staff.
xiii. Consider reviewing the Damage Assessor process with damage assessors.

c. Accommodations

i. Contact local hotels to determine availability of rooms in the event that crews/staff are moved into the Area. Preference to be given to facility with back-up power generation. Consider reserving a block of rooms.

d. Buildings

i. Test run back-up diesel generators and ensure they are fully fuelled.
ii. Consider renting a portable generator for buildings not equipped with a backup diesel or, if an NP owned portable generator is available, ensure it is test run and a supply of fuel is available. Consider how the generator is to be connected/used.
iii. Confirm with Engineering the ability to alter temperature controls in the building to defeat normal after-hours temperature setbacks.

e. Tools & Equipment

i. Test tools as required; chain saws, phasing sticks, etc. Ensure adequate fuel is on hand. Ensure phasing sticks have spare fresh batteries in the case.
ii. Test/maintain 60 ton press and ensure it is complete with dies, hoses etc.
iii. Test portable generators.
iv. Ensure electronic devices such as tablets and modems are working on trucks.

f. Communications

i. Check location and availability of Satellite Phones and portable VHF radios. Ensure they are charged and that they are working.
ii. Each Area to ensure they have access to a list of company Satellite phone numbers.
iii. Ensure appropriate staff has working cell phones. Ensure adequate cell phone chargers and spare batteries are available.

iv. Test Area office base station radios.
v. If communications are down and we are using sat phones, then obtaining phone numbers from Webster may be an issue. Ensure there's a hardcopy of phone numbers (sat and mobile) available as a precaution. Alternatively, ensure Managers have added key personnel to their "contacts" on their phones.

g. System Security

i. Make extra efforts to correct any abnormal system conditions on the Transmission, Distribution and Substation systems.
ii. Where practical consider suspending construction on capital jobs to return the system to normal.
iii. Where abnormal conditions cannot be corrected consider developing contingency plan(s).
iv. In consultation with the Engineering Dept. consider reviewing substation transformer loading and protection settings and feeder loading and protection settings and consider protection changes above normal settings or groups.

h. Contractors

i. Put Pole/Live Line/Line Construction/Vegetation/Flagging contractors on notice of pending storm/event and ask that they prepare their vehicles and staff.
ii. Confirm with each contractor their emergency contact information.
iii. Also confirm their available resources and their ability to assist.
iv. Confirm pole contractor's supply of poles on hand.
v. Ensure snow clearing contractors are on alert and available.
vi. Consider confirming the availability of helicopters.
vii. Consider notifying cleaning contractors of the requirement for extra cleaning (washrooms in particular) & garbage collection.

i. Government

i. If required, prior to the storm, confirm contacts for emergency snow clearing with the Department of Transportation.
ii. Confirm after hours government officials contact information for arranging transportation permits and escorts for portable substations and generations.

j. Temporary Area Operations Centre (i.e. the War Room)

i. Consider establishing the operations centre prior to the storm/event.
ii. Confirm all data and phone communications into the operations centre prior to the storm/event.
iii. Establish/confirm roles & responsibilities of key operations centre staff.
iv. Ensure the availability of restoration manual & Business Continuity Plans.

3. Engineering/System Operations Department Preparations

a. System Control Centre

i. Ensure minimum of three PSO are scheduled on duty at the System Control Center.

ii. Review with PSO's the System Restoration Plans most likely to be utilized during the storm including procedures for rotating power and cold load pickup.
iii. Review with Area Managers and update list of priority feeders and critical loads.
iv. Make contact with Newfoundland and Labrador Hydro's ECC personnel to make sure they are ready to respond and coordinate system restoration with NP. Confirm the status of Hydro's transmission system and available generation capacity and expected reserve margins heading into the storm event.
v. Ensure the availability of restoration manual & Business Continuity Plans.
vi. Check SCC building generator full of fuel and UPS working okay.

b. Vehicles

i. Fuel all vehicles (passenger and maintenance).
ii. Ensure vehicles have cell phone chargers.
iii. Ensure vehicles are suitably equipped for the storm/winter season in advance. Many vehicles used by NP employees today are rentals and may not be fully prepped as the NP company vehicles. (ie. snow tires, emergency beacon, cones, shovel, ice melter/torch for unfreezing best locks, ice scraper, etc.).

c. Buildings

i. Arrange to alter temperature controls in affected NP buildings to defeat normal after-hours temperature setbacks.

d. Contractors

i. Consider updating listing of contractors in area and ensure Stand-By agreements are up to date.

e. Communications

i. Consider posting a warning to the Fortis Major Storm Mutual Assistance website to alert sister utilities of the approaching storm and potential for requests for assistance.
ii. Manager of System Control Centre to communicate to all operations departments and to Customer Relations and Corporate Communications any temporary system conditions that will remain in effect during the storm/event.
iii. Check location and availability of Satellite Phones. Ensure the phones are charged and working

f. Engineering/Operations Staff

i. Put head office technical staff on notice of the pending storm/event and consider re-deploying non critical head office staff to support possible Area restoration efforts.
ii. Consider having technical and head office staff, take company vehicles home.
iii. Ensure Supervisors have an accurate listing of staff including the availability of staff on vacation. Listing should include contact information.

g. Portable Substation & Generation Preparations

i. Consider location and availability of portable generation and portable substations. Re-deploy as required.
ii. Ensure fuel supply for system generators.
iii. Consider clearing snow from substations and yards.

h. System Security

i. Make extra efforts to correct any abnormal system conditions on the Transmission, Distribution and Substation systems.
ii. Where practical consider suspending construction on capital jobs to return the system to normal.
iii. Where abnormal conditions cannot be corrected consider developing contingency plan(s).
iv. In consultation with Regional Operations consider reviewing substation transformer loading and protection settings and feeder loading and protection settings and consider protection changes above normal settings or groups.

4. Customer Service Department Preparations

a. Confirm Area connections to the Communication Hub. Ensure an Area person is assigned to communicate with the Communication Hub.
b. Consider assigning a Communications Hub member to SCC/Dispatch Centre.
c. Communicate with Operating Areas to determine the requirement for Remote.
d. Confirm the availability of local Customer Service staff to help with local dispatch, ticket management, food delivery, contacting critical customers, call backs etc.
e. Ensure you have an updated contact list for surrounding municipalities. Consider contacting municipalities prior to the storm to inform them of our preparations.
f. Engage HR to review the list of non-CSR employees and identify who is eligible to be called in and for what tasks and in what order. For example, as per the Clerical Contract, in order to be called in to work in the contact center you must have worked as a CSR or ACR, or have a minimum a 2 year college diploma. There is a specific order in which they are called in. Will also need to ensure the employee does not have any medical restrictions.

5. Materials Management Department Preparations

a. Ensure Central Stores has staff on call.
b. Ensure Area stores are staffed.
c. Check stock levels in Area stores for items likely to be needed during the storm; fuses, cutouts, insulators, transformers, conductor, etc.
d. Confirm local inventories of poles and consider confirming the supply of poles on the island.
e. Consider putting sister utilities on notice for the possibility of supplying material.

6. Transportation Department Preparations

a. Put a rush on any maintenance or repair work for any vehicles that are off the road for maintenance or repair and get as many vehicles back in service as possible.
b. Notify garages and mechanics of the impending storm/event.
c. Confirm after hour contacts with government departments in the event that permits are required to re-locate portable equipment. Or, obtain permits in advance as a precaution.

d. Confirm the availability of tractor to relocate portable equipment. Confirm contractors emergency contact information. Or, hire the tractor and send it to the location of the portable equipment to stand-by as a precaution.
e. Arrange for any necessary escorts.

7. Information Systems Department Preparations

a. Provide IT support in customer Contact Centre/Area Office(s). Regional Director or area manager and Technology Manager (Tom Krauklis) to discuss and decide in advance to allow for travel time when necessary. Prepare additional mobile devices and be ready to make them available to additional damage assessors or for use as spares for breakdown/problems. Should also confirm that performance/stress test of the NP website occurred prior to Winter Storm season.
b. Consider putting an IS support person on the ground in the affected Area(s).
c. Consider postponing any scheduled system updates or changes.
d. Confirm that performance/stress test of the Contact Centre phone system occurred prior to Winder Storm season.

8. Finance Department Preparations

a. Take out a set of numbers for charging the storm/event. Communicate same.

9. Human Resources

a. Consider putting sister utilities on notice for the possibility of supplying staff.
b. Consider putting a representative from HR in Duffy Place to assist the Contact Centre and the Region with employee call in and other contract issues.

10. **Dispatch Centre Preparations**

a. Ensure staffing levels are adequate in Dispatch Centre for regular and after hours operations and establish work schedules.
b. Confirm mobile connectivity from Dispatch Centre to truck computers.
c. Confirm the location of re-deployed crews within Click.
d. Determine the point where Dispatch would be engaged in dispatching after normal operating hours.
e. Check Click Optimizer for prioritizing order of tickets for response.
f. Review storm protocol with Dispatch staff and areas, roles and responsibilities.
g. Confirm operation of mobile VHF radios in event of cellular disruption.
h. Confirm dispatch processes in event Click and communications are unavailable.
i. Working with the Damage Assessment Coordinator (Who will be designated by the Regional Director or Area Manager) review processes with all potential damage assessors for using Click to collect damage info, and how that damage info gets used.

11. GIS Preparedness

a. Verify any daily or nightly processes running or scheduled are reviewed and determine if they need to be postponed or expedited to ensure appropriate GIS system functionality and performance are not negatively impacted.
b. Review AVL availability and identify any that are active that are not properly reporting through GPS gate.
c. Identify and communicate the person assigned as point-of-contact for GIS support in the event of issues that may arise during storm response.
d. Identify individual(s) that are available to support regional operations efforts during storm response.

Newfoundland Power System Restoration Manual

Newfoundland Power

System Restoration Manual

(Updated November 2018)

NEWFOUNDLAND POWER
A FORTIS COMPANY

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1.0 Introduction

In Newfoundland Power's service territory there are a number of potential events that can have a significant impact on the ability of the electricity system to provide service to customers. These include natural disasters such as hurricanes and forest fires and acts of terrorism, sabotage or vandalism. Failure of major electrical equipment can also have a significant impact on the ability to provide service in certain locations depending on the criticality of the equipment in the system. However, the vast majority of damage incurred to the electrical system historically has been caused by severe weather events. The magnitude and duration of the impact on the electricity system is a function of the severity of the weather event, the particular section(s) of the electricity system that is affected and the extent of damages incurred.

2.0 Proactive Monitoring

Events Affecting System Reliability
Events affecting system reliability and the performance of the electricity system fall into the following categories:

(i) Freezing rain/sleet storms
(ii) Blizzards/ winter storms
(iii) High winds
(iv) Lightning
(v) Flooding or coastal storm surges
(vi) Hurricanes or tropical storms
(vii) Forest fires impacting transmission lines
(viii) Erosion or landslides
(ix) Vandalism, sabotage or acts of terrorism
(x) Internal electrical equipment failure

Monitoring and Internal Notifications Protocol
The vast majority of the events identified that may affect system reliability are weather or environment related. Typically warning is available prior to the event via weather forecasting services and provincial fire and emergency services contacts. The System Control Centre ("SCC") has the responsibility to continually monitor and assess the potential impacts of weather forecasts and environmental events. Should a pending event have a strong probability of impacting our electrical system the Manager responsible for the SCC will contact the Director Operations, Vice President Customer Operations, Director Customer Service and appropriate Regional Directors, identifying the risk and the probable areas of the Company that may be affected.

For events with high probability of significant damage, the Fortis Hurricane Warning System will also be updated to make other Fortis utilities aware their assistance may be required. The SCC will continue to provide updates on pending weather and environmental events until the danger has passed or Newfoundland Power (NP) has entered into active storm and major outage event restoration mode. Internal notification of non-weather related outage events shall follow the normal outage management communications protocol.

Monitoring Resources
The following resources and websites are used by the SCC operators and the Manager and Supervisor of the System Control Centre for monitoring of severe weather forecasts and major environmental events:

- **http://weather.gc.ca/forecast/canada/index_e.html?id=NL /**Environment Canada
- **http://www.nhc.noaa.gov/**US National Hurricane Center
- **http://www.ec.gc.ca/ouragans-hurricanes/**Canadian Hurricane Centre

Email warnings for significant storms are also received directly from the Warning Preparedness Meteorologist within Environment Canada and from PAL Aerospace Shore Base Manager and meteorologist.

Communications on forecasted severe weather events are received from Fire and Emergency Services Newfoundland ("FES"). In addition, this agency coordinates conference calls with all emergency service agencies and municipalities in anticipation of significant weather events that have the potential to cause significant damage to public and utility infrastructure. The Manager or Supervisor responsible for the SCC participates in these conference calls.

Newfoundland and Labrador Hydro subscribes to a real time lightning detection service known as LTRAX. As lightning is detected that may affect the electrical power grid, Hydro's Energy Control Centre contacts the SCC. Regular updates are provided as lightning storms track across areas of the province.

3.0 Storm and Major System Event Preparations

Days Prior to Event
When a severe weather event is forecast, adjustments to routine operations are made to ensure all Areas of the Company are prepared to respond quickly should the system sustain significant damage and customer outages occur. Preparations should normally start two days in advance of the forecasted severe weather event. Preparations include placing NP operations staff and line construction, pole setting and vegetation management contractors on alert and reviewing all work in progress and temporary system conditions to evaluate the vulnerability of the electrical system to the approaching storm. When practical, lines and equipment should be returned to service and temporary system configurations returned to normal to ensure the integrity and readiness of the electricity system. The status of the workforce should be reviewed and locations where crews and technical support staff may be redeployed in advance of the storm should be discussed. If necessary, employees should be recalled from vacation and non-operations employees who might be called upon to help with logistical assignments and other support tasks should be put on notice.

Contact should be made with the Company's key contractors and suppliers to advise them of the forecasted severe weather or environmental event and confirm their availability of resources and readiness to respond. If major system damage is expected to occur, other Fortis companies should be put on notice of the possible need for their assistance and asked to assess their workforce and be ready to deploy resources. The Fortis Hurricane Website shall be used for this purpose and updated by the Director Operations or VP Customer Operations.

No later than the day prior to the forecasted severe weather event, any switching or work related to ensuring the security of the electricity system should be completed. Also, any redeployment of the workforce to locations where the storm damage is most likely to occur should take place the day prior to the event. Consideration should be given to packing up, and making ready for transport, Newfoundland Power's mobile generators and portable substations and whether any of this equipment should be moved in advance of the storm to arrive while weather and road conditions permit.

All vehicles should be fuelled up and fuel levels checked and topped up as required in building backup generators and system standby generation equipment. Material inventories should be checked, reserved emergency stock levels verified and arrangements for distribution of materials reviewed. Key customers should be contacted to ensure they are aware of the upcoming event and are making necessary preparations. As well municipal leaders, appropriate government agencies and FES personnel should be contacted to discuss any required coordination of operations and to confirm communication contacts and readiness to respond.

Day of Event
Depending on when the storm is expected to hit employees should be identified who will be required to start work prior to their regularly scheduled shift. Consideration should be given to allowing these employees to leave work early to get the required rest break. Consideration should be given to having extra operators scheduled to work at the SCC and having additional senior engineering personnel at the SCC for operational support and system restoration decision making. The Customer Contact Centre ("CCC") should consider the need to schedule additional staff at the CCC. Corporate Communications, in consultation with Customer Relations, should consider the need for and make preparations to establish the Communications Hub to support internal and external outage communication information. Also, consider whether Technology staff should be deployed to Regional Operations facilities or to the SCC or CCC and to be ready to provide on-site technical support for computer systems, operational applications and customer communications technology.

Storm Preparation Checklist
The Company maintains on Webster a checklist to guide making all necessary preparations in advance of a major storm. The checklist outlines responsibilities for things that need to be done by Safety, Regional Operations, Engineering, System Operations, Customer Service, Materials Management, Transportation, Technology, Dispatch Centre and GIS group personnel to ensure the company is as ready as it can be to respond efficiently to restore power to our customers during a major outage event.

4.0 Initial Event Response

Identification of System Faults
In major outage situations, it is critical that there be clear communication on the status of all transmission and distribution lines and substation equipment and that regular updates be provided as status changes. Through normal protocol, the SCC operator shall provide notification to each Area as faults are encountered on transmission and distribution lines or substations. The Company's policy on re-energizing of power lines that have experienced faults

(OPR 106.45) shall be adhered to during major outage events. During the initial event response the Manager or Supervisor System Control is responsible to prepare and communicate a list of transmission lines, substations and feeders that are impacted and a summary of the system status including Hydro's system and any generation capacity supply shortfall concerns and shall communicate this to the Director Operations and appropriate Regional Directors, Corporate Communications staff and the Vice President Customer Operations. This summary will be updated hourly and as long as the system continues to incur additional damage.
In the case of significant outages to the island interconnected system, the SCC is responsible to coordinate with Hydro as may be required to operate and switch the electrical system and restore the power grid. A number of power system restoration plans have been prepared for various system outage scenarios. The most current versions are available on Webster for download and are listed here:

SRP-001	Rotating Power Outages
SRP-002	Cold Load Pickup
SRP-011	East Coast
SRP-021	Loss of 43L/80L/41L
SRP-031	Burin Peninsula
SRP-041	Bonavista Peninsula
SRP-051	Bonavista North
SRP-052	Gander Bay/ Twillingate System
SRP-081	Stephenville 66kv System
SRP-082	Port aux Basques System

High Level Damage Assessment
Within each operating Area, the Manager Area Operations or Regional Engineering or designate will be responsible to initiate a damage assessment for all faulted transmission lines, distribution lines and substation equipment. Damage assessors shall be appointed as required by the Area Manager and instructed to use Click Mobile to capture and communicate damage to feeders, transmission lines or substations. Where practical, patrols should be completed via helicopter to speed the completion of damage assessments. If helicopters cannot be used due to weather conditions, availability or darkness ground patrols of lines shall be initiated as soon as conditions permit.

The following format can be used for the assessment of damage on transmission and distribution plant.

Location Information:
- (i) Line or feeder number,
- (ii) Trunk or tap, structure number,
- (iii) Civic reference or GPS coordinates,
- (iv) Structure type,
- (v) Pole height and class

Damage:
- (i) Location of poles or conductor across roadways, buildings or vehicles
- (ii) # poles broken or leaning

(iii) # cross-arms broken or twisted
(iv) # insulators broken
(v) # spans 1-phase or 3-phase wire down or floating
(vi) # spans neutral down
(vii) # transformers damaged or on the ground
(viii) # anchors pulled or guys broken

The Manager Area Operations or Regional Engineering shall provide regular damage assessment updates to the Regional Director and the Manager System Control and Director Operations.

Mitigation of Additional Damage Following an Event
Following an event and damage assessment, there may be sites identified where immediate action is required to prevent additional damage to the electricity system. Examples of this are failed structures that have placed additional stress on remaining plant that has high potential to cause cascading failure of adjacent structures, or areas of downed conductor near vehicular traffic that could damage the conductors or pull down structures. Every effort should be made either through direct intervention by NP employees or contractors or through engagement of local authorities such as police to limit the potential for additional damage to downed conductors and structures caused by vehicular traffic.

Protection of the Public
The primary objective during power system damage assessments and restoration efforts is the protection of the public from the electrical and physical hazards presented by downed electrical plant and the restoration of power supply in an orderly, efficient and safe manner. Corporate Communications and Customer Relations shall communicate regularly with customers on the general hazards of downed power lines, as well as any specific hazards presented by downed plant. Direct notification through the media, including social media such as Twitter and Facebook, will be used. In addition, direct communication with affected customers or Municipal and Provincial government authorities in affected areas may also be required.

5.0 Categorizing the Event

The damage assessment will be used to determine restoration team requirements, location of restoration centers, contractor, labour, material and equipment requirements. In order to categorize events, three levels of power outage emergencies are defined as follows:

Level 1: A local area power outage where damage is confined to a smaller geographic area and affects less than 2000 customer. Generally damage is limited to one or two feeders, a small substation or a single transmission line. Repairs and power restoration can be carried out by local crews and contractors and requires no support from other Areas or Regions. Power restoration to customer is expected within 12 hours. Potential impact on the health and safety of the public and the environment is minimal.

Level 2: An Area or multiple Area power outage events affecting multiple feeders or one or more substations or transmission lines and affects less than 10,000 customers in total. Repairs and power restoration requires additional support from crews and

contractors from other Areas or Regions or from other utilities. Power restoration to customers could take up to 24 hours. Potential impact on the health and safety of the public and the environment is moderate. This event will require communication with Newfoundland Power senior management, the Public Utilities Board, the media and the general public.

Level 3: A major event causing extensive damage to utility infrastructure and power outages event affecting over 10,000 customers in total. Repairs and power restoration will likely require external resources to restore power within 3 to 5 days. Potential impact on the health and safety of the public and the environment is significant. Protective measures may be required to protect the health and safety of the general public. This event will require communication with senior management, the Public Utilities Board, media and general public. Once assessments indicate that restoration efforts will extend for multiple days, out of province resources and mobile substations and generation will typically be called upon.

Table 1 provides guidance to the classification of the emergency levels.

Table 1
Power Outage Classification

Power Outage Classification	**Initiating Conditions**	**Response Coordination**	**Restoration Center Locations**
Level 1	2,000 customers or less without power and restoration effort 12 hours or less. Repairs typically completed by local crews.	Manager Area Operations	Area Office
Level 2	Between 2,000 and 10,000 customers without power and restoration effort expected to exceed 24 hours. Restoration effort will typically require resources from other Areas and possibly NL Hydro.	Regional Director	Designated Area / Regional Emergency Operations Centre established
Level 3	Greater than 10,000 customers without power and restoration effort expected to exceed 72 hours. Restoration effort will typically require significant resources from outside Newfoundland Power.	Vice President Customer Operations	Restoration Center may be established at the SCC for overall coordination and restoration response and in Regional Operations offices depending on scope of the response.

6.0 Response Planning Phase

Establish Restoration Operation Centre
While the power outage classification level and scope will determine the requirements for establishing emergency operations centres, as a rule the centre or centres shall be located at the closest Area office in consideration of logistics for the anticipated size of the restoration team (including internal employees, contractors and resources from other utilities). In addition, in the case of Level 3 outages, the boardroom of the SCC can be utilized as a base for overall planning and tracking of the restoration process. This location is especially suitable for loss of supply system events and restoration of generation and transmission events. The SCC meeting room is equipped with SCADA system access, access to all Company communications systems and has redundant supply of power.

Estimation of Restoration Effort
As lines experiencing outages are inspected and damage assessments compiled, the Manager Area Operations in consultation with engineering and operations staff will review overall damage and prepare plans for restoration. Estimating the resources required to complete the power restoration and establishing approximate power restoration times for the individual areas affected is the responsibility of the Area Manager or person appointed the System Restoration Coordinator for the Area or Region. Consideration must be given to:

(i) Detailed description of the damage;
(ii) Materials required and allowance for material to be salvaged
(iii) The number of local NP crews, crews coming from other Area and availability of contractor crews and timing of their arrival
(iv) Required rest breaks for all crews and Supervisors ;
(v) Requirements for and availability of specialized tools and equipment;
(vi) Additional resources deployed from Engineering, Electrical Maintenance, or Generation groups.
(vii) Priority of lines to be repaired
(viii) Impacts on weather, travel and working conditions

Determining Priorities
When there are multiple damaged lines, priorities will be established for the sequence of repairs. Generally restoration priorities are determined based on achieving the greatest number of customers restored with the least amount of restoration effort in the shortest amount of time. Restoration priority must also acknowledge that transmission and substations have to be restored before power can be delivered to distribution feeders. The normal order of prioritizing work and deploying resources takes into consideration the estimated repair time for transmission lines, substations and feeder work and typically resources are deployed simultaneously on transmission, substations and feeders in a time coordinated fashion with the following order prevailing:

(i) Transmission Line Repair

(ii) Substations Equipment Replacement or Repair
(iii) Trunk Feeder Repair Work
(iv) 3-Phase Tap Repair Work
(v) 1-Phase Lateral Repair Work
(vi) Transformer Replacement, Repair, Re-fusing
(vii) Individual Customer Service Replacement or Repair

Restoration priorities must also consider the following:

(i) Importance of the line in the overall restoration process or stability of the system;
(ii) Priority customers such as hospitals, nursing and seniors homes, fire and police, airports, community centers, emergency shelters, pharmacies, groceries, fuel suppliers, water supply and sewage stations;
(iii) Availability of crews and/or materials;
(iv) Restoration site access issues.

Storm Centre Information
The Storm Centre site on Webster http://operations/Storm/SitePages/Home.aspx is a work in progress and provides a lot of useful information on managing outage events including outage ticket management and defining work processes, structure, roles and responsibilities helpful to Regional Operations management of outage events.

7.0 Communication with Customers

One of the most critical aspects of any restoration process is communicating with customers that are affected by the outage in a timely manner. Customers need to understand the cause, what we are doing to respond and when they can expect to have their power restored. Depending on the outage level, the delivery method for notifying customers will vary.

For a Level 1 outage, ensuring that the telephone-based Informer outage messaging system, and the internal "whiteboard" outage information system, accurately describe the location and cause, and provide realistic restoration times, is critical for this communication. Note that Informer outage messages are also linked to Newfoundland Power's website where an additional level of outage detail can be provided over that afforded by the telephone message alone. Supplementing this, customers can make contact with a live agent (CAR, SCC Operator) should they have or require more detailed information on their outage. Area customer service staff should also provide direct communication to municipalities and large commercial customers within the affected area. As a general rule, outage messages should be updated at least every hour for Level 1 outage events.

When the number of Informer outage messages posted reaches 5 or 6 or more for a sustained period a dedicated person shall be assigned to the SCC to work with the SCC Operators to help manage Informer message content and ensure timely updating of outage messages.

For Level 2 and 3 outages, which involve significantly more customers with restoration times that can extend to days rather than hours, Newfoundland Power's Communications Hub will become operational. The role of the Communication Hub during the Company's restoration effort is to ensure customers are updated with accurate, consistent and timely information regarding the status of the power outage and expected restoration times. The following outage communication tools are available:

(i) Informer – provides automated recorded phone messages describing outages in each Area and is linked to Newfoundland Power's Website. Can also issue text message alerts to customers notifying of outages in their area;
(ii) Newfoundland Power Website – Outage Maps and Outage Listing , Information on preparing for power outages and storm related safety messages;
(iii) Outage Blog – updates contact center agents to assist in processing calls;
(iv) Social Media – Twitter.

Note that for Level 2 and 3 outage events, Corporate Communications take the lead role for communications with Government, Fire and Emergency Services and the media. Information provided to these groups is typically reviewed prior to release by the appropriate Director or Vice President, and the Director or Manager responsible for Corporate Communications.

In releasing information, the following elements should be considered.

(i) Public safety messaging;
(ii) Description of the system failure or event and what caused it;
(iii) Location affected by the failure or event;
(iv) Proposed plan for restoration;
(v) Estimated time for restoration;
(vi) How can customers help (conserve energy, reduce cold load pickup, stay at home, stay off roads);
(vii) Location of shelters, where power is on, where essential supplies are available.

Once public communications has started, regular updates should be provided at set intervals until power is restored. For Level 2 events, outage updates should generally be provided every 2 to 4 hours, and for Level 3 events, every 4 to 6 hours. Status of our efforts in relation to the plan and updates on any significant changes should be covered. In addition to traditional media releases, posting via social networking (Twitter) and the corporate website should mirror information released through the traditional media. Social media should also be monitored by Corporate Communications to gauge the effectiveness of our information release.

8.0 Resourcing the Restoration

Internal Workforce
For a Level 1 response, it is assumed that the resources required will not extend beyond the normal staffing of an operating Area. In this case, the Manager Area Operations shall select the necessary workforce based on the scope of the restoration work, including supervision and technical support. They will also ensure that there is adequate staffing to maintain customer contacts throughout the outage.

In the case of Level 2 and 3 outages, the Regional Director(s) shall ensure there are adequate numbers of internal resources deployed to complete the following functions:

(i) Line Patrols
(ii) Damage Assessments
(iii) Line re-design if there is opportunity to strengthen rebuilt construction;
(iv) Pole setting
(v) Tree removal and vegetation control ;
(vi) Substation equipment replacement or repair
(vii) Protective relaying and equipment operation expertise
(viii) Installation of any required portable generation or substations
(ix) Contractor supervision;
(x) Vehicle maintenance and support;
(xi) IT technical support
(xii) Public, media and government communications;
(xiii) Meals and lodging for all workers ;
(xiv) Key customer, municipal leaders and emergency responders communications.

Contractor and External Resources

(i) Pole installation
Standard contracts for the installation of poles shall have provision for emergency response and contain performance criteria regarding lead times. Contracts will also have provision for providing emergency response outside their normal operating Area including terms of engagement. This will be required in a Level 2 or 3 response.

(ii) Transmission line construction
Newfoundland Power has and maintains Standing Agreements with approved contractors for providing transmission line construction services. These contracts contain provision for emergency response.

(iii) Distribution line construction
Newfoundland Power has and maintains Standing Agreements with approved contractors for providing distribution line construction services. These contracts contain provision for engagement under emergency response.

(iv) Brush and tree removal
Newfoundland Power has and maintains Standing Agreements with approved contractors for providing brush and tree removal. These contracts contain provision for engagement under emergency response.

(v) Helicopter services
Newfoundland Power maintains service contracts for helicopter services which outline the terms of engagement under emergency response scenarios.

(vi) Fuel supply
Newfoundland Power has supply contracts for the purchase of vehicle and generation equipment fuels that incorporate specific provisions for the supply of fuel under extended power outage conditions. Contracts include terms that allow Newfoundland Power to provide electricity to the supplier's fuel terminal facilities and be provided with fuel on a priority basis for Company vehicles and generation. In addition, where practical, the delivery of diesel fuel to the heavy fleet vehicles at our operation centers is provided for.

(vii) Accommodations and Food
By their nature Level 2 and 3 responses will require the traveling of crews from other operation centres within the Company and in the case of Level 3 response from other utilities and organizations. For Level 2 and 3 responses a team of employees shall coordinate the overall process of arranging required accommodations within the affected area. This same group will ensure breakfast and dinner and worksite lunch is provided. Each traveling crew will be informed of the arrangements provided for them while they are on route to the affected area.

The Regional Director for the affected Areas shall determine if Clause 14.12 "Emergency Situations" will be invoked in the Craft and Clerical collective agreements, thus suspending rights under clause 14.08 "Travel Allowance" and 14.09 "Commuting Option", and shall communicate this to workers.

Materials

(i) Storm contingency inventory:

a) Newfoundland Power's inventory levels for transmission and distribution material contains provision for a Level 2 event and for most anticipated Level 3 events. Inventory items that are included in this contingency will be identified by the Newfoundland Power Materials Management Section and reviewed on an annual basis to ensure standards changes are incorporated into the contingencies.

b) Contingency inventory items will be held either directly within Newfoundland Power warehouses or be stocked within the warehouses of approved suppliers. These external suppliers have provision for delivery of these contingency items to Newfoundland Power's warehouses on a 24 hour, 365 day a year basis.

c) Poles, anchors and associated hardware inventories are held directly by Newfoundland Power pole installation contractors at their facilities. These inventories are carried either on consignment or purchased directly from suppliers selected by Newfoundland Power. Newfoundland Power has established minimum inventory quantities to be maintained by contractors with provision for emergency contingency. For consignment items, the supplier will provide monthly reports of inventory in contractors' yards and other on-island inventory.

(ii) Needs assessment:

As soon as damage assessments have been completed, the Manager Area Operations for the affected area shall provide the Materials Management Section with a breakdown of required materials for each major section of damaged plant. In addition, they will provide an overall assessment of the material requirements for individual service calls within their Area.

(iii)Contingency for material shortfalls:

Newfoundland Power-approved suppliers for storm contingency items shall provide information on normal manufacturer inventory levels, production lead times and a listing of other Canadian utilities that use the same approved product.

(iv)Worksite delivery:

Where practical the Materials Management Section should provide for worksite delivery of bulk materials on larger restoration projects. Depending on the nature of the restoration, this may involve placing the required components adjacent to structures or establishment of remote stores facilities to distribute materials.

Equipment
Newfoundland Power has 4 portable substations of various voltage configurations and power ratings as well as 2 portable generators. One portable generator is a 2.5 MW portable diesel on a single trailer that connects at 12.5kV or 25kV 3-phase voltages, and the other is a 6 MW portable gas turbine in a 2 trailer configuration that interconnects at 12.5kV or 25kV 3-phase voltages. Portable fuel storage tanks are available to supply each portable generator.

Also consider availability of smaller mobile generation rental packages that may be useful in providing power to a priority building in a community, such as a community hall or designated warming center.

9.0 Execution of the Plan

Securing and dismantling damaged equipment

(i) Damaged equipment shall be dismantled, removed and either reclaimed as salvage or disposed of in an environmentally-responsible manner.

(ii) All damaged equipment that may present a public safety hazard shall be rendered to a safe condition as soon as possible following an event. This may require grounding of downed wires and removal of hanging equipment, particularly in urban areas.

(iii) Public warnings should be provided if specific hazards exist and cannot be remedied in a reasonable timeframe.

(iv) If practical, the specific location should be barricaded or warning signs posted if there will be a significant delay before the equipment can be placed in a safe status.

Design requirements for rebuilds

If the nature of the restoration requires engineering resources beyond the capability of the affected Area (e.g. transmission rebuild, installation of a portable substation or portable generator), the Regional Director in conjunction with the Director Engineering or Director Operations will assign a design team and equipment installation team to be dedicated to the restoration process.

ROW and environmental issues

The corporate sections responsible for land management and environmental management shall be consulted to help with coordinating and resolving any right-of-way and environment issues associated with repairs, fuel storage, access to effect repairs, permissions, permits and any other conflict that may occur in redesign of lines.

Material Requirements

The Materials Management Section shall coordinate the supply of material requirements to support the restoration process. This may include the release of emergency stock, procurement of additional requirements from suppliers or other utilities, and the salvaging of damaged lines or equipment.

Resources, contractors, vehicles and equipment

Regional Directors shall insure that the required resources, contractors, vehicles and equipment are mobilized and that adequate accommodation provision for meals is put in place.

Field and project safety

Working 16-hour days under adverse conditions with a multitude work groups and external hazards will present challenges to ensuring all work is carried out safely. Ensuring workers are provided with a minimum 8 hour rest break must be strictly enforced. Tools to help manage crew scheduling are available under *Storm Centre* on Webster.

It is critical that safe work practices are maintained throughout the restoration process and all groups continue to adhere to the requirement of the Worker Protection, Grounding and Bonding Code and the Job Safety Planning Codes. The Corporate Safety Section should be engaged to help with informal work observations and overall health and safety management. Maintaining the safety of workers is the first priority in each and every power restoration event.

A daily safety briefing should be held with all workers to review hazards specific to the restoration process, review the required safe work practices and work methods, to discuss any worker concerns, and to be aware of and learn from any near miss incidents that have occurred. Reminders shall be given to ensure all job safety planning practices are maintained and tailboards completed. These meetings can also serve as opportunities to discuss overall progress with repairs and to thank everyone for their contribution and efforts with the power restoration work.

Directors, Managers, Supervisors and Safety Advisors shall maintain a presence in the field to observe work and reinforce safety.

Worker Protection – Switching Orders, Work Permits and Protection Guarantees
In the case of Level 2 and 3 storm response, there will be heightened requirements for formal worker protection and emergency contacts with customers and outside agencies. The Manager System Control shall insure that the SCC shifts are adequately staffed to effectively manage this additional workload. Consideration shall be given to the need to establish a local Area control authority as provided by the Worker Protection Code.

Inspection prior to being energized
Prior to energizing reconstructed high voltage lines and replaced or repaired electrical equipment the line or equipment shall be inspected and commissioned to ensure there are no unrecognized hazards, that all grounds have been removed and all is ready to energize. Auto-reclosing should be blocked when energizing newly re-constructed lines for the first time.

Worksite cleanup and property issues
Should the restoration process involve damage to private property in accessing company plant, this damage will be documented as soon as possible. If possible, a photo of the damaged property should be filed. Repairs to private property shall be carried out as soon as practical after power has been restored.

If there are sections of plant that are replaced as part of the restoration process and damaged plant remains in the field these locations should be recorded by Area staff. These locations should be addressed as soon as possible following the restoration effort.

The Manager Operations for the affected Area shall be responsible for ensuring damaged property or plant to be removed is recorded.

Cold Load Pickup and Power Rotation
Newfoundland Power has System Restoration Procedures to guide operations personnel in managing cold load pickup when restoring electricity supply to feeders, substation transformers and transmission lines that have been out of service for many hours in cases where higher than normal peak loads can be expected during power restoration activities. Procedures have been developed to guide operations personnel in cold load pickup and feeder rotation activities as may become necessary such as during system generation shortage events. The most current versions of the procedures are available on Webster for download and are listed here:

SRP-001 Rotating Power Outages

SRP-002 Cold Load Pickup

10.0 Post Event Review

A post event review shall be completed as soon as practical after the restoration is complete. It shall review the event and identify improvements for responding to future events. The review shall include.

(i) Review of any safety incidents
(ii) Timeliness of power restoration
(iii) Adequacy and deployment of resources
(iv) Effectiveness of communications with customers and other stakeholders
(v) Cost control
(vi) Damage assessments;
(vii) Decisions and timeliness of opening Contact Center, Central Dispatch,
(viii) Effectiveness of Communications Hub
(ix) Completion of outage interruption reports;
(x) Adherence to Storm Response Protocol, outage ticket management and establishing storm response roles and responsibilities
(xi) Assess compliance with use of technology such as Click Mobile, electronic tailboards, AVL and mapping
(xii) Assess inventory levels and replenishment of material stocks ;
(xiii) Management of crew schedules and rest breaks
(xiv) Assess overall effectiveness of how the restoration was executed and how it can be improved.

11.0 Management Review

On an annual basis, the System Restoration Manual shall be reviewed to ensure its effectiveness as a guide for restoring service to customers. In particular, the review shall focus on the safety of employees, the public, the Company's assets, and the environment, and the continued ability of the Company to respond effectively to a significant outage event or major damage to the electrical system.

This review will revise emergency restoration standards, requirements, policies and objectives and program documentation. The review should consider the following:

(i) Findings from post event reviews;
(ii) Findings from drills and exercises;
(iii) Findings from past reviews;
(iv) Changes in Company structure and employees;
(v) Updates to emergency contact data;
(vi) Advances in technology;
(vii) New equipment;
(viii) Changes in the regulatory environment;

(ix) Changes in the expectation of stakeholders.

Newfoundland Power and Newfoundland and Labrador Hydro
Joint Storm/Outage Communications Plan

June 14

Updated: November 2018

Joint Storm/Outage Communications Plan

Newfoundland Power and Newfoundland and Labrador Hydro

This plan reflects the cooperation and coordination between Newfoundland Power and Newfoundland and Labrador Hydro with respect to Storm/Outage Communications.

LEGAL ADVICE: PRIVILEGED AND CONFIDENTIAL

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INTRODUCTION

Authority of the plan

This joint Storm/Outage Communications Plan (the Plan) is derived from Liberty Consulting Group Recommendation #44 which states: "*Hydro and Newfoundland Power should jointly develop a coordinated, robust, well-tested and up-to-date Storm/Outage Communications Plan documenting protocols, plans, and templates to guide communications during major events, beginning with preparation by June 15, 2014 of a detailed plan and schedule for doing so.*"

This Plan directs Newfoundland Power's and Newfoundland and Labrador Hydro's (the Utilities) communications activities during a major event that results in damage or interruption of power supply to the island interconnected electricity system. It is intended to ensure that the Utilities are the primary authoritative voice during a critical incident that affects either Company's operations. It enables both Corporate Communications Teams to quickly activate, and provides strategies, tools and templates to effectively communicate to customers, employees, media and key stakeholders during outage situations.

Plan Administration

Execution of the Plan is the joint responsibility of the Manager of Public and Government Affairs, Newfoundland Power, and the Manager of Communications, Newfoundland and Labrador Hydro (Hydro).

The Manager, Public and Government Affairs, Newfoundland Power, and the Manager, Communications, Hydro, are responsible for ongoing changes and ensuring plan maintenance. They will ensure that this Plan is reviewed and tested as required. The overall plan will be updated on an annual basis, with contact lists updated quarterly. In addition, communications debriefing sessions will be conducted after each major incident to evaluate the effectiveness of the Plan and the Utilities' response with a focus to identifying areas of improvement.

Statement of Joint Utility Cooperation

Newfoundland Power and Hydro generally play different roles with respect to the electricity system on the Island portion of the Province. Newfoundland Power's predominant role is to deliver to end-use customers the energy that Hydro generates and transmits. However, Hydro has a small number of end-use customers on the island portion of the province and serves all customers in Labrador, and Newfoundland Power has a small amount of generating resources.

Accurate and timely communication of information is critical when dealing effectively with outage situations and the restoration process. Both Utilities understand and respect the important role each plays in providing safe, reliable electricity to the people of the Province. Newfoundland Power and Hydro are committed to strengthening their

existing intra-utility and inter-utility communications protocols and practices. This will ensure the timely and accurate sharing of information required to provide the most effective and consistent messaging possible to customers, key stakeholders and the public during outage events.

OBJECTIVES

- To provide a joint storm/outage communications plan that addresses the steps to be taken during a large scale outage event, one which is actionable and accessible.
- To identify the appropriate communications response based on the outage impact to customers and degree of severity of the storm or outage.
- To follow a well thought out strategic plan that identifies the outage communications team, roles and responsibilities.
- To provide a checklist of actions and templates of key communications.
- To develop messaging that reassures the public that the Utilities are capable of managing the event and will fully cooperate to restore power as safely and quickly as possible.
- To provide accurate and timely updates that demonstrates empathy and concern for customers.

GUIDING PRINCIPLES

The Utilities will adhere to conduct that advocates transparency for all stakeholders, stays true to corporate core values and underscores the importance of ethical behavior during periods of outage communications.

During outage events, the Utilities are committed to facilitating communications to reach the appropriate internal and external target audiences based on the following overarching guiding principles:

- Safety first
- Customer-focused
- Open/honest/transparent
- Timely/accurate/consistent
- Empathetic/caring/professional

Outage situations can cause immense pressure and uncertainty for employees and people connected to them. Whenever possible, internal communication should precede external communication; at a minimum, internal and external communication should be simultaneous and provide consistent messages.

BACKGROUND

Newfoundland Power and Hydro are committed to protecting the safety of its employees, the public and the communities in which we live and work. This Plan will provide public and media responses in the event of any outage situation that significantly impacts the Utilities, its customers, stakeholders and its employees. Its role is to also preserve corporate reputation during and after an incident in order to maintain confidence in the electricity system.

Overview of the Provincial Electricity System

The Province is served by two electric utilities, Newfoundland Power and Hydro.

Newfoundland Power is an investor-owned utility that operates an integrated generation, transmission and distribution system throughout the island portion of Newfoundland and Labrador. The Company serves approximately 267,000 customers, making up approximately 87 per cent of all electricity consumers in the province. The Company purchases approximately 93 per cent of its energy needs from Hydro, and generates the balance from its own smaller hydroelectric stations.

Hydro, a Nalcor Energy company, is a crown corporation, and the primary generator and transmitter of electricity in Newfoundland and Labrador. The Company serves three distinct customer groups: Newfoundland Power; over 38,000 customers in rural Newfoundland and Labrador; and, major industrial customers mainly in the pulp and paper, mining and oil refining industries.

The electricity system in the province is unique with the following characteristics that present significant challenges:

- according to Environment Canada, the province experiences some of the harshest weather conditions in North America, and a significant amount of infrastructure is located along the coastline and is subject to high winds, salt spray and ice;
- customers are widely dispersed across the province; and,
- many customers heat their homes electrically which makes system management challenging due to the seasonal variations with this type of usage.

Integration and Coordination with Other Plans

This Plan is aligned with, and meant to complement, the Utilities' other emergency response and business continuity plans. It should be read and executed in conjunction with applicable plans in the event of an interruption to operations, or an event impacting business continuity processes.

This Plan is designed to work in tandem with the following:

- Service Restoration Plan (NP)
- Emergency Preparedness and Response Plan (NP)
- Business Continuity Plans (NP)
- Outage Communications Protocol (NLH)
- Notification of Generation Reserves (NLH)
- Corporate Emergency Response Plan (NLH)
- Emergency Communications Plan (NLH)
- Business Continuity Plan (NLH)
- Emergency Plan for Generation, Transmission and Distribution (NLH)
- Restoration Plan for East Coast (NLH/NP)
- Operating Instructions T-001 and T-096 (NLH)

Inter-Utility Operation Coordination

Newfoundland Power's System Control Centre (SCC) and Hydro's Energy Control Centre (ECC) are central to the Utilities' response to major electricity system events, including severe weather events, failure of major system components and/or loss of supply. Operation coordination and scheduling of work between the two utilities is integral to the safe and reliable delivery of service to customers. This ensures that: one utility's actions will not unnecessarily affect the other utility's provision of service to its customers; and, that the joint actions of the two utilities are undertaken in a way which is least disruptive to the reliable delivery of electricity to customers.

Efficient and timely information flow between the Utilities is critical to the reliable operation of the electricity system. Improving the availability of information and establishing clear guidelines for customer communications between the Utilities will ensure customers receive timely, accurate and consistent messaging on the overall status of power disruptions and restoration efforts.

In addition, the Inter-utility System Planning and Reliability Committee, which includes senior operations and engineering management from Newfoundland Power and Hydro, meets monthly to consider matters related to system reliability, including reliability targets, system contingency and restoration planning, review system additions and major capital projects, generation availability and peak load management preparedness. This committee provides a forum that allows for frequent discussion and action on matters of operational importance between the Utilities that has the potential for service disruptions for customers.

TARGET AUDIENCE/KEY STAKEHOLDERS

This Plan addresses the information and communications needs of:

- customers (residential/commercial)
- employees/contractors
- media
- government (provincial/municipal/federal)
- first responders (FES/fire/police)
- Board of Commissioners of Public Utilities (PUB)
- Boards of Directors

Forthright, Simple Tone

The tone of messaging should be a confident one that leads the customer and key stakeholders to understand the Utilities as authoritative, credible, knowledgeable, engaging, respectful and caring/empathetic. The language must be understandable to the masses.

The Public, Customers and Stakeholders

One of the most critical aspects of any power restoration process is communicating with the public, and in particular with customers that are affected by the outages, in a timely manner. Residential and Commercial customers are interested in the cause of the outage, the areas affected, what the Utilities are doing to respond, and when power will be restored. It is the responsibility of the Utilities to keep the public informed in order to ensure public safety, and to allow customers and government officials to make informed decisions about the safety and well-being of their families and residents.

Employees and Contractors

Employees and contractors can be the Utilities' greatest asset during times of outages. Their visibility helps restore customer and public confidence that everything possible is being done to restore power. A strategic focus on demonstrating the Company's core values and beliefs through internal communications will assist with maintaining a positive work environment during what can be a long and challenging process-depending on the weather and extent of system damage. Providing timely updates and establishing external communications expectations protocols is important to maintaining a positive corporate image. If possible, providing a forum for employee engagement and feedback to gauge the effectiveness of external messaging can be helpful in refining and/or developing ongoing messaging.

Media

The media will get the story, with or without the Utilities help. Members of one or both of the Utilities' Communication Teams will interact with the media in a timely, open and honest manner. When dealing with members of the media, it is important to:

- demonstrate professionalism and be completely transparent, accurate, and factual at all times;
- be available for comment and response;
- be timely, and respect the increasingly fast pace of the news cycle; and,
- communicate with empathy by demonstrating understanding of the public's concerns.

IDENTIFICATION OF TYPE AND SEVERITY OF OUTAGE

There are a number of probable events that can have a significant impact on the ability of the electricity system to provide service to customers, with the vast majority of damages being caused by severe weather events. The magnitude and duration of the impact on the electricity system is directly related to the severity of the weather event, the particular section(s) of the electrical system affected and the extent of damages incurred.

Events impacting the electricity system generally fall into the following categories:

Weather-related	System Disruption	Supply Shortfall
• freezing rain • blizzard/winter storm • high wind • lightning • flooding or coastal storm surges • hurricanes or tropical storms • erosion and landslides	• distribution or transmission rights-of-way fires • electrical equipment failure • vandalism and sabotage	• loss of power supply • rotating outages • load shedding

Types of Major Outages

The different scenarios that could impact the electricity system can be broadly categorized as follows:

- **Major outage on either Newfoundland Power's or Hydro's system** – as a result of a natural disaster/severe weather or equipment failure (generally managed by the individual utility affected)
- **Major outage province wide –** as a result of a natural disaster/severe weather or equipment failure (requires a coordinated utility outage communications approach)
- **Loss of power supply by Hydro –** load shedding or rolling blackouts as a result of a provincial electricity system supply shortfall (requires a coordinated utility outage communications approach per the Island Interconnected System Supply Shortfall Customer and Stakeholder Advance Notice Protocol or the Avalon Peninsula System Supply Shortfall Customer and Stakeholder Advance Notice Protocol -see Appendix G and H)

Severity of Outages

The operational damage assessment, number of customers affected and the duration of outages will be used to determine the severity of outages as well as restoration efforts.

The Utilities categorize the severity of outages as follows:

Level	Common Characteristics	
	Newfoundland Power	**Hydro***
Level One	**Low** **System** – multiple lines and facilities affected. **Resources** - a single area is involved in the restoration and requires no support from other areas or regions. **Customer impact –** 2,000 customers or less without power. **Health and safety** - potential impact on customers and environment minimal. **Level of interest** - little or no interest/attention of the public or media beyond the local area. **Restoration** –within 24 hours.	**Minor** Local emergencies are managed on-scene and in coordination with local response agencies. Support from Corporate Emergency Operations Centre (CEOC) is not required.
Level Two	**Medium** **System** – multiple lines and facilities affected, likely including transmission lines and substations. Significant weather related damage. **Resources –** requires external support from other areas or regions and possibly Hydro but the impact of the event is limited to Newfoundland Power. **Customer impact –** between 2,000 and 10,000 customers without power. **Health and safety –** potential impact on customers and the environment is moderate. **Level of interest -** involves senior management, the PUB, media and the public. **Restoration –** expected to exceed 24 hours.	**Major** Local emergencies are managed on-scene and in coordination with local response agencies. Full or partial support from the CEOC is required.
Level Three	**High** **System** – multiple lines and facilities affected including transmission lines and substations over a large geographical area and/or supply shortfall. Widespread weather related damage. State(s) of emergency may be declared. Hydro's system may also be impacted. **Resources** – requires significant external resources that extend beyond Newfoundland Power. **Customer impact -** greater than 10,000 customers without power. **Health and safety** – protective measures may be required for customers and the environment. **Level of interest –** significant interest by executive/senior management, the PUB, government, FES, media and the general public. **Restoration** - expected to exceed 72 hours.	**Catastrophic** Emergencies cannot be managed on-scene even with support from local agencies. Full support from the CEOC is required.

* From Nalcor Energy Emergency Communications Plan.

Outage Severity Levels and Communications Response Strategies

The severity of the outage will determine the appropriate communications response. The following chart profiles normal operations and the three severity levels, and the corresponding level of communications response. The joint communications plan would typically be activated in response to a Level 2 or 3 event.

Severity Level	Communications Response Strategy	Strategy	Corresponding Operational Response Levels
Normal	**Low Level Reactive**	"Normal" is indicative of day-to-day operations. Corporate Communications will engage in daily, ongoing media and social media monitoring, and ensure that the storm/outage communications plan remains up-to-date and accurate.	Day-to-day operations. No corresponding response levels.
Level One	**High Level Reactive**	A Level 1 event may not warrant proactive communications efforts. However key members of the team will be activated to heighten media and social media monitoring and be prepared to respond to inquiries from the media with pre-determined statements and key messages as required. Specific customer service mechanisms in place to handle small scale outages.	NP – Level 1 - Low NLH – Level 1 - Minor
Level Two	**Low Level Proactive**	A Level 2 event would warrant a targeted, proactive approach. Corporate Communications will proactively communicate with impacted key stakeholders and local and/or regional media if interest is evident. The decision to issue a news release or hold a news conference for a Level 2 event will be made in consultation with the affected Regional Manager and the Vice President and/or the President and CEO. Consideration will be given to activating NPs Communications HUB.	NP – Level 2 - Medium NLH – Level 2 - Major
Level Three	**High Level Proactive**	A Level 3 event would warrant a broad, high level, proactive approach. Corporate Communications will proactively communicate with all stakeholders (internal and external) as well as all local/provincial/national media as required. Not only actively distribute information to media and public, but would consider holding press conferences to provide updates which may involve other stakeholders. NPs Communications HUB activated.	NP – Level 3 - High NLH – Level 3 - Catastrophic

Communications Approach and Tactics

Level One:

Strategy	High Level Reactive Response	
Traditional Media	Monitoring	Heighten media monitoring. Receive regular monitoring updates.
	Production	Develop initial messaging and prepare media materials (media holding statements) to be used reactively.
	Engagement	Provide media interviews as requested.
Social Media	Monitoring	Heighten social media monitoring to determine number of mentions and level of engagement.
	Production	Develop social media key messages and standby statements to be used in the event of interest.
	Engagement	Respond to social media concerns as needed/use discretion (ensuring not to enflame a non-issue). If incident is acknowledged on social media channels, commit to providing timely updates as information becomes available.
Internal	Monitoring	Rely on affected area to determine if employee feedback warrants broader communication.
	Production	Prepare FAQ sheet in the event that employees ask about what has occurred.
	Engagement	Targeted internal communications as deemed appropriate. Rely on face-to-face communication from leaders to employees in the affected areas.
Website	Engagement	Ongoing updates to website.
Stakeholder	Engagement	Notify local municipal leaders as required.
Broadcast/Text	Engagement	Use outbound text.

Level Two:

Strategy	Low Level Proactive Response	
Traditional Media	Monitoring	Heighten media monitoring. Receive regular monitoring updates.
	Production	Using discretion, prepare and disseminate media materials (news release and media holding statements) to local outlets near affected areas.
	Engagement	Do follow-up media calls to outlets reporting on the incident offering interviews. Do one-on-one media interviews as requested. Commit to ongoing formal updates, as deemed necessary.
Social Media	Monitoring	Heighten social media monitoring to determine number of mentions and level of engagement.
	Production	Develop social media holding statements.
	Engagement	Acknowledge the incident on appropriate social media channels and commit to providing timely updates and information becomes available. Proactively engage on social media channels that are actively discussing problems or concerns relevant to the incident. Correct misinformation where appropriate. Commit to ongoing updates in the absence of concrete information.
Internal	Monitoring	Monitor feedback from employees. Use feedback to revise messaging externally and internally, as appropriate.
	Production	Prepare employee releases with regular updates as appropriate. Provide direction for employees on what to do if they are approached by the media.
	Engagement	Open two-way communication through the Executive/Managers

		blog to allow for feedback from employees.
Website	Engagement	Targeted messaging on outage page of website; ongoing updates (by Communications HUB if activated).
Stakeholder	Engagement	Notify municipal, provincial reps as required as well as PUB and FES (as a courtesy).
Broadcast/Text	Engagement	Use outbound text.

Level Three:

Strategy	**High Level Proactive Response**	
Traditional Media	Monitoring	Heighten media monitoring. Use the findings to appropriately update messaging.
	Production	Prepare and disseminate media materials (media holding statements, news release and advisories where appropriate) to media outlets (television, radio, print, etc.).
	Engagement	Perform follow-up calls to all news outlets, offering either invitation to news conference or interviews with appropriate spokesperson or executive/subject matter expert as deemed appropriate. Consider holding news conference (within first business day) and for sustained crisis, hold daily news or teleconference press updates/briefings. Commit to ongoing updates (every 6-10 hours) for formal updates for as long as the event requires. Record and respond to all media requests.
Social Media	Monitoring	Heighten social media monitoring. Ensure frequent reports and updates.
	Production	Develop social media key messages and engagement strategy, determining which tools would be appropriate to use.
	Engagement	Engage in all major social media channels actively discussing the incident. Answer questions, correct misinformation and provide links to website or other credible sources of information. Reach out to any previously identified social media influencers offering context or explaining the incident.
Internal	Monitoring	Monitor feedback from employees. Use feedback to revise messaging externally and internally, as appropriate.
	Production	Create internal information updates for managers to disseminate to their teams and use appropriate internal communication tools such as employee releases and the blog.
	Engagement	Disseminate critical information updates on the intranet and post fact sheets. Consider using regular internal conference calls and briefings with senior management.
Website	Engagement	Takeover front page of website (dark website); ongoing updates by Communications HUB.
Stakeholder	Engagement	Notify municipal, provincial reps as required as well as PUB and FES.
Broadcast/Text	Engagement	Use outbound text.
Advertising	Engagement	Consider use of advertising to supplement all other mediums.

Customer Communications

One of the most critical aspects of any restoration process is communicating effectively with customers that are affected by the outage in a timely manner. Depending on the outage level the delivery method for notifying and updating customers will vary. Strong linkages exist between Corporate Communications and Customer Service to allow for the seamless sharing of information to ensure up to date, consistent and meaningful updates are provided to customers and key stakeholders.

Primary methods of communication with customers will vary for both utilities and includes:

- "Informer" telephone-based outage messaging system
- digital media (website, twitter, facebook, youtube)
- customer contact centre
- media
- broadcast messaging/texting

For level 2 and 3 events which involve significantly more customers with restoration times that can extend to days rather than hours, Newfoundland Power's Communications HUB will be activated (see Appendix A; page 22-23).

Communications Timelines/Targets

The Utilities will, to the highest degree possible, adhere to a standard of timely communications. Balancing speed and accuracy is an important consideration when responding to outage situations. The following points should be considered when following the communications timeline policy below:

- While initial messages should outline as much information about the event as possible, not all the details will be known immediately. This shouldn't hinder the dissemination of high level messaging that indicates to the media and the public that the Utilities are aware a situation has occurred, and the situation is being handled/ mitigated, fixed and/or investigated.

- Communications tools and tactics, such as media holding statements, are mechanisms through which the Utilities have the opportunity to: acknowledge an incident; demonstrate to concerned stakeholders understanding and care about the impact the outages may have; assure the public that everything is being done to restore power as safely and quickly as possible; and, show commitment to transparent and timely updates as more information becomes available.

The following table outlines the minimum communications timeline targets to which the Utilities will strive to adhere:

Communication	Timeline Target
Initial social media acknowledgment	Within **15 minutes** for a confirmed Level 2 or Level 3 event post a holding statement. Electricity System Notifications, customer requirements and critical information i.e. conservation tactics posted as soon as alert level confirmed.*
Media holding statement	Within **30 minutes** for a Level 3 event brief holding statement information can be released. For Level 2, use discretion.
Website	Within **15 minutes** for a confirmed Level 2 or Level 3 event post a holding statement. Electricity System Notifications, customer requirements and critical information i.e. conservation tactics posted as soon as alert level confirmed.*
Internal communication	Within **1 hour** for a confirmed Level 2 or 3 event if required.
Media release	Within **1 hour** of mobilizing the communication team for a Level 3 crisis. For a Level 2 crisis, use discretion.
Media conference (if required)	**Before end of business day** for a Level 3 event (use discretion). *Ideal timing would be prior to the noon news (11:00 a.m.) or early afternoon.*
Formal updates for prolonged events (as required) • News releases, internal updates, media conferences, social media	As new information comes in: • Media updates via interviews or media release as substantial information changes are confirmed – use discretion. • Internal updates (as needed). • Social media/website (ongoing).
Stakeholder relations (as required)	Minimum of twice daily in the a.m. and p.m.

* Appendix G or H

ACTIVATION OF JOINT UTILITY PROTOCOL

In the event of a pending weather-related system that has the potential to impact the infrastructure of both Utilities, or an anticipated supply shortfall, a coordinated approach to communications will be essential. This coordination should commence a minimum of one to two days prior to the anticipated event to ensure lines of communications are open and any joint preparation or advance messaging is prepared and ready to go.

The following steps should be taken by the Utilities to share information and effectively communicate with customers and key stakeholders:

- Prior to Storm/Major Event (minimum two days prior to event)
    - Manager, Public and Government Affairs, Newfoundland Power, and Manager, Communications, Hydro, will connect to review operational preparations and communications plans
    - the Utilities will provide advance customer/stakeholder notification messaging to the public and its customers to ensure they are aware of the impending event and are making the necessary preparations (see Appendix G and H)
    - Utilities will directly contact key customers, government (municipal and provincial) and FES as required depending on the severity of the pending event

- Requests for customer conservation (following the Island Interconnected System Forecast Supply Shortfall Customer and Stakeholder Advance Notification Protocol or the Avalon Forecast Supply Shortfall Customer and Stakeholder Advance Notification Protocol-see Appendix G and H)
    - conservation messaging will also be used during cold load pick up situations to assist operations in restoring power to as many customers as possible Where there has been system or weather-related outages affecting a small number of customers

- Information sharing (during and after outage)
    - Once the level of severity is determined and initial assessments of the outages an customer impact has been made, the Utilities will immediately begin joint coordination
    - Hydro will generally take the lead on messaging related to provincial generation or transmission problems as well as issues related to its infrastructure, facilities and customers
    - Newfoundland Power will generally take the lead on messaging related to the distribution system as well as issues related to its electricity system, facilities and customers
    - To ensure timely, accurate and consistent messaging, each Utility will provide the other with media releases and key messages at least one hour prior to release to the public to allow for review and feedback as required
    - A joint lessons learned session will be held within two weeks after each Level 2 or 3 event to review communications efforts and response to make any necessary improvements on a go forward basis

- Joint communications (internal and external)
    - Where appropriate, joint communications through media releases, media advisories, news conferences, etc. will be used to provide consistent messaging and instill confidence in the public that the Utilities are working together to restore power
    - Where appropriate, joint media interviews will be arranged to include both Utilities to ensure the full system perspective is provided
    - Joint communications will be prepared by the lead Utility and provided to the other Utility, a minimum of one hour in advance, to allow adequate time for review, feedback and approval

- Feedback/approval process
    - Individual Utility messaging will be shared and an opportunity provided for feedback to ensure its accuracy and consistency
    - Messaging that has the potential to impact both Utilities must be reviewed and approved by the Manager of Public and Government Affairs, and the Manager of Communications, Hydro

KEY MESSAGES

Messaging Priorities

Outage events go through a series of phases that are characterized by distinct priorities. Each of these priorities is based on expectations from the public during periods of heightened public scrutiny and uncertainty.

Advance

The majority of outage events are weather or environment related when there is generally advance notice or warning through weather forecasting and FES. Pending an event, messaging will focus on encouraging customers and the public to be prepared and reassure them that the Utilities are prepared to respond if required as well as remind them to always keep safety top of mind.

Initial Phase

The initial phase is that narrow period of time when the Utilities are conducting damage assessments and may not be in a position to provide specific details or to mobilize its forces to begin bringing the situation under control. It is important that the Utilities get in front of the situation as soon as possible, acknowledging the event with an appropriate tone of concern, and providing as much information as possible about what has happened and how they are working to restore power to restore confidence.

Maintenance Phase

The maintenance phase begins when the Utilities have a concrete understanding of the scope of the damage and resulting outages. The problem has been identified and the

public is aware of what has happened, but uncertainty remains around what caused the problem, how the organization is restoring the situation and the full extent of impact or damages. During this phase, media outlets and recognized opinion leaders are actively providing their opinions on the situation, the company's response to it, the emergency response effort itself, the plight of those affected, and who they believe is ultimately to blame. Specifically in the maintenance phase, the Utilities must commit to timely and accurate information updates.

Resolution Phase

The resolution phase comes after the event is under control. The narrative around the entire event will be largely shaped by the Utilities response and communications efforts during the initial and maintenance phases. Much of the public will have formed an opinion about the situation so this phase remains important for the reputation recovery and overall assessment of the overall handling of the restoration effort.

Types of Messages

Event specific messaging will be developed based on the type and severity of the outage, with a focus on the specific damage to the electricity system, the areas affected, the restoration plan and estimated time for restoration.

However, the following generalities may be utilized throughout the process:

- **Safety**: Nothing is more important to us than ensuring the safety of our employees, our contractors, our customers and the public. We are committed to safe work practices and public safety education. Share links to safety sections of the Utilities websites.

- **Customer Service**: Our customers are at the centre of everything we do. They deserve the best and we deliver – everyday. Share links to outage information sections of the Utilities websites.

- **Reliability**: For our customers, it's about keeping the lights on. We are committed to increasing our reliability by upgrading our infrastructure and continuing maintenance work.

- **Conservation/Energy Efficiency:** It is important for customers to conserve...saving energy means saving money, and using resources wisely is the right thing to do from an environmental perspective.
    - takeCHARGE has rebate programs to assist customers manage their energy usage and save money on their electricity bills.
    - Reduces cold load pickup and helps us get more customers back on more quickly

- **Be Prepared:** Share links to preparation information sections of the Utilities websites as well as other appropriate websites such as the government.

- **Contact info/how to report an outage/how to report an emergency situation**

ONGOING AND POST EVALUATION

Evaluation methods will include media monitoring, social media metrics, public sentiment, calls to contact centre and website analysis. The number of requests for media interviews will also be used as a gauge of public interest as well as tone and interest on various radio call-in shows. Ongoing discussions and feedback from stakeholders as well as a post-event review will be used to identify potential areas for improvement. All tracking activities and logs must be completed and filed for post-event evaluation.

Utilities will undertake joint research with the assistance of an external research supplier at their discretion. The research would allow for more intensive input from customers into communications and customer service activities with a view to making improvements.

APPENDICES

Appendix A – Roles and Responsibilities

Outage Communications Responsibilities

Newfoundland Power

Manager, Public and Government Affairs (Michele Coughlan)

- outage spokesperson/media liaison
- government relations (provincial and municipal)
- key stakeholder engagement
- liaison with FES
- provides ongoing updates to Board of Directors and PUB as required
- corporate counsel for executive
- notify executive and corporate communications team of communications issues as they arise
- liaison with Communications HUB
- liaison with Director, Operations
- liaison with Manager, Communications, Hydro
- press conference planning

Communications Specialists (Jessica Fisher; VACANT)

- digital media (social media and website)
- Communications HUB representatives
- liaise with Manager, Public and Government Affairs, Newfoundland Power, to ensure consistent messaging between traditional and social media as well as employee communications
- internal communications including employee release, blog and webster
- assist with media releases, media advisories, safety advisories, key messages
- social media monitoring
- assist with press conference planning as required

Community Affairs Coordinator (Lee Ann Surette)

- media monitoring
- assist with stakeholder engagement as required
- maintain media and outreach logs
- record keeping and document control
- contact centre backup as required
- liaise with Manager, Public and Government Affairs, Newfoundland Power

Newfoundland Power's Communications HUB

The role of the Communications HUB Team (CHT) during a major power outage and the subsequent power restoration process is to ensure customers and key stakeholders receive accurate, consistent and timely system status updates and expected restoration times. For level 2 events, the goal is to provide updates every 2-4 hours. For level 3 events, updates will be provided every 4-6 hours.

The following customer outage communication tools will be used:

- Informer – Newfoundland Power website updates and automated recorded phone messages
- Newfoundland Power Website and APP – Outage Maps and Outage Listing, Storm Mode, Electricity System Notification Alerts
- Webster Outage Blog- Updates CSR's and ACR's to assist in responding to calls
- Social Media – Twitter/Facebook/Instagram/YouTube
- Outage Alerts
- Customer Blog
- Automated Calling

Communications HUB Team **Email Address- CHT@NewfoundlandPower.com** **Location: FSR Area – Duffy Place**	
Team Member	**Alternate/Backup**
Chris Acreman – [redacted] Team Lead	Kevin Power - [redacted]
Michelle Marley – [redacted] Customer Relations	Stephanie Daley – [redacted]
Kristine Hamlyn – [redacted] Digital Media/Communications	Jessica Fisher – [redacted]
Keith Barrett – [redacted] Operations Liaison	Allison Hicks – [redacted]
Peter Upshall – [redacted] Technical Support*	Trevor Neil – [redacted]
Frank Flynn – [redacted] Information Services*	

*Only called if this role is required.

Management Liaisons for Communications HUB

The Management Liaisons will make the decision when activation of the CHT is required to support the System Control Centre (SCC) and the Contact Centre to manage/ operate the technologies used to communicate updates to customers on the status of power restoration efforts. This will be based on assessment of a number of factors such as (but not limited to) opening of the Contact Centre to handle customer calls, extent of outage, anticipated length of outage, loss of supply event and number of customers affected.

The CHT will contact the following Liaisons for support and direction on the status of power restoration efforts and activation.

Michele Coughlan - Manager, Public and Government Affairs
Wade Hiscock – Director, Customer Relations
Sean LaCour - Director, Operations

Operations Liaisons for Communications HUB

The System Restoration Coordinator will be the primary contact between the CHT Operations Liaison and Regional Operations. The Operations Liaison will work directly with the System Restoration Coordinator for updates and information related to outages, restoration plan and estimated restoration times.

Area Offices – The Superintendent of Area Operations or their designate will assign a regional System restoration Coordinator for each area office as required. Once identified, the CHT will initiate contact and confirm a process to receive regular updates on the status of power restoration efforts in their area.

Newfoundland and Labrador Hydro

Outage Communications

For low level severity or "normal" operations outages and Level one (minor):

This is the responsibility of the Manager, Communications, and Senior Communications Specialists, Newfoundland and Labrador Hydro. Responsibilities include:

- Liaise with Energy Control Centre, field operations team and customer service
- Social media monitoring and updates as required
- Public advisories as required
- Media interviews as required
- Liaise with VP, Corporate Relations and VP, Hydro as necessary
- Government relations as necessary (provincial and municipal)
- Key stakeholder engagement as necessary
- Updates to Board of Directors as necessary
- Internal communications if required
- Liaison with executive and corporate communications team on issues as they arise

Emergency Communications

For level two (major) or three (catastrophic) events, Hydro's Corporate Emergency Response Plan (CERP) may be activated.

All emergency roles and responsibilities for Newfoundland and Labrador Hydro are clearly detailed in Hydro's CERP.

Appendix B – Contact Lists

Joint Communications Contact List

Newfoundland Power

Michele Coughlan
Manager, Public and Government Affairs
Work: [redacted]
Cell: [redacted]
Email: [redacted]

Jessica Fisher
Communications Specialist
Work: [redacted]
Cell: [redacted]
Email: [redacted]

Lee Ann Surette
Community Affairs Coordinator
Work: [redacted]
Cell: [redacted]
Email: [redacted]

Newfoundland and Labrador Hydro

Dawn Dalley
VP, Regulatory Affairs and Corporate Services
Work: [redacted]
Cell: [redacted]

Erin Squires
Manager, Communications, Hydro
Work: [redacted]
Cell: [redacted]

Janine McCarthy
Senior Communications Specialist, Hydro
Work: [redacted]
Cell: [redacted]

Mark King
Senior Communications Specialist, Hydro
Work: [redacted]
Cell: [redacted]

Nalcor Energy

Deanne Fisher
Director, Corporate Affairs
Corporate Communications & Shareholder Relations
Work: [redacted]
Cell: [redacted]

Karen O'Neill
Communications Manager, LCP
Work: [redacted]
Cell: [redacted]

Cara Pike
Manager, Marketing and Brand
Work: [redacted]
Cell: [redacted]

Provincial Media Contact List

2016 Media Contact List						
Region	**Media**	**E-mail**	**Community**	**Reporter**	**Twitter Handle**	**Phone #**
Avalon	Print	editor@cnbcompass.ca	Carbonear		cbncompass	709-596-6458
Avalon	Print	telegram@thetelegram.com	St John's		StJohnsTelegram	709-364-6300
Avalon	Print	afitzpatrick@thetelegram.com	St John's	Ashley Fitzpatrick	TeleFitz	709-364-6300
Avalon	Print	pframpton@thetelegram.com	St John's	Pam Frampton	Pam_Frampton	709-364-6300
Avalon	Print	pghent@nfldherald.com	St John's	Pam Pardy-Ghent		709-570-5212
Avalon	Print	ssheppard@nfldherald.com	St John's	Sarah Sheppard		709-570-5299
Avalon	Print	dcollins@nfldherald.com	St John's	Dillon Collins		709-570-5242
Avalon	Print	chief@themuse.ca	St John's	Jeff Smyth	JeffSmythNL	709-864-8919
Avalon	Print	science@themuse.ca	St John's	Conor McCann		
Avalon	Print	tsnews@nf.aibn.com	CBS	The Shoreline		
Avalon	Radio	feedback@vocm.com	St John's		590VOCM or VOCMNews	709-726-5590
Avalon	Radio	hitsmail@991hitsfm.com	St John's		hitsfm	709-726-5590
Avalon	Radio	onair@coast1011.com	St John's		coast1011	709-754-6748
Avalon	Radio	ozfm@ozfm.com	St John's		CHOZFM	709-576-6936
Avalon	Radio	email@krockrocks.com	St John's		975krock	709-738-7625
Avalon	Radio & Television	Terry.roberts@cbc.ca	St. John's	Terry Roberts	TRobertsT	
Avalon	Radio & Television	hereandnow.nl@cbc.ca	St John's		CBCHereandNow or CBCNL	709-576-5225
Avalon	Radio & Television	Peter.Cowan@cbc.ca	St John's	Peter Cowan	PeterCBC	
Avalon	Radio & Television	Mike.Rossiter@cbc.ca	St John's	Mike Rossiter	CBCMikeRossiter	
Avalon	Radio & Television	Lisa.Gushue@cbc.ca	St John's	Lisa Gushue	lgushue	
Avalon	Television	news@ntv.ca	St John's		NTVNewsNL	709-722-5015
Avalon	Television	rtilley1@nf.sympatico.ca	St John's	Ross Tilley		
Avalon	Television	mconnors@ntv.ca	St John's	Michael Connors	MikeConnors	
Avalon	Television	hgillis@ntv.ca	St John's	Heather Gillis	HeatherMGillis	
Avalon	Television	outofthefog@rci.rogers.com	St John's		OutoftheFogTV	709-753-7175
Avalon	Television	martine@dreamshakemedia.com	St John's	Martine Bleu (CBC)	visionaryhag	709-891-8737
Avalon	Web	Holly.mckenzie-sutter@thecanadianpress.com	St. John's	Holly McKenzie-Sutter		709-576-0687
Avalon	Web	alex@allnewfoundlandlabrador.com	St. John's	Alex Bill		
Avalon	Web	dan@allnewfoundlandlabrador.com	St. John's	Dan Arsenault		
Avalon	Web	news@allnewfoundlandlabrador.com	St. John's	Samantha Long		709-722-4186
Central	Radio	centralmorning@cbc.ca	Gander & GFW		CBCNL	Gander: 709-256-4311, GFW: 709-489-2102
Central	Print	info@thecentralvoice	GFW			709-489-2162

Central	Print	tana.adams@tc.tc	Springdale	Tana Adams	thenorwester	709-673-3721
Eastern	Print	editor@thepacket.ca	Clarenville		nlpacket	709-466-2243
Eastern	Print	editor@southerngazette.ca	Marystown		southerngazette	709-279-3188
Eastern	Radio	chcm.newsroom@vocm.com	Marystown			709-279-2560
Labrador	Print	sgallant@thelabradorian.ca	Happy Valley-Goose Bay	Sharon Gallant	labradoriannl	709-896-3341
Labrador	Print	editor@theaurora.ca	Labrador City		auroranl	709-944-2957
Labrador	Radio	labradormorning@cbc.ca	Labrador City & HVGB		CBCNL	Lab City: 709-944-3616, HVGB: 709-896-2911
Labrador	Radio	bailey.white@cbc.ca	Labrador City & HVGB	Bailey White	baileywhite	
Labrador	Radio	matt.mccann@cbc.ca	Labrador City & HVGB	Matt McCann	the_shortwave	
Labrador	Radio	okradio@oksociety.com	Nain			709-922-2187
Western	Radio	onair@cfcbradio.com	Corner Brook		CFCBRadio	
Western	Radio	cbrookradio@cbc.ca	Corner Brook		CBCNL	709-634-3141
Western	Radio	bernice.hillier@cbc.ca	Corner Brook	Bernice Hillier	BerniceCBC	
Western	Print	newsroom@thewesternstar.com	Corner Brook			
Western	Print	chantelle.macisaac@gulfnews.ca	Port aux Basques	Chantelle Macisaac	thegulfnews	709-695-3671
Western	Print	info@northernpen.ca	St. Anthony		northernpen	709-454-2191
Western	Radio	cfsx.news@vocm.com	Stephenville		cfsxradio	709-643-2191
Western	Television	westcoast@ntv.ca		Don Bradshaw		
		ivanmorgan@gov.nl.ca				
		jeangraham@gov.nl.ca				
		cory.hurley@tc.tc		Cory Hurley	Saltwire Network	709-634-6201
		Chris O'Neill-Yates@oneillyatescbc				
		david@allnewfoundlandlabrador.com				
		Kenneth.oliver@thetelegram.com				
	NTV	lbeaudoin@ntv.ca		Leila Beaudoin	LeilaBeaudoin	709-722-5015 or 709-730-2628

Provincial Government Contact List

(Note: The most up-to-date contact list from government's website will be used during an event.)

http://www.gov.nl.ca/departments.html

Provincial Government Communications Contacts

http://www.releases.gov.nl.ca/Contact

Members of the House of Assembly

http://www.assembly.nl.ca/members/cms/membersalpha.htm

Municipal Government Contacts

http://miga.gov.nl.ca/municipal_directory/index.html

Appendix C – Checklists

Press Conference Checklist

Set Up Required:

- ☐ Theatre style (most common). Make sure the centre aisle is wide enough to accommodate camera people.
- ☐ View premises as a TV camera would; ensure the background image will not distract from speakers of reflect badly on the company.
- ☐ Podium plus company logo or sign if available.
- ☐ Head table with skirting if possible.
- ☐ Tent cards identifying all spokespeople.
- ☐ Rise for head table if required.
- ☐ Retain an area with appropriate background for follow-up one-on-one TV and radio interviews.
- ☐ Media sign-in table outside or inside doorway
- ☐ Directional signage for facility to simply direct to the news conference location.
- ☐ Have coffee/water available if possible.

Audio Visual Requirements:

- ☐ Microphones for podium and/or head table depending on the number of participants and availability of equipment.
- ☐ Laptop computer and projector if used.

Preparing for the Media:

- ☐ Send out a media advisory. Do this as far in advance as possible. Give the date, time and place of the news conference as well as the topic and the spokespeople if these are known.
- ☐ Provide a media sign-in sheet (copy provided) to report back who attended the news conference.
- ☐ Arrange media monitoring.

News Conference:

- ☐ Prepare media kit containing:
    - News release with contact names(s) and numbers
    - Backgrounders and fact sheets as available
    - List of all participating spokespeople with titles
    - Copies of any presentation given
- ☐ Always try to convince participants to have a dry-run in advance. It helps iron out kinks and prepares them for questions and answers.
- ☐ Have a member of Corporate Communications act as moderator to: set the agenda, introduce the head table and facilitate the question and answer period.
- ☐ Set time parameters from the start and limit the time for questions and answers.

Media Sign-In Sheet

Name	Media Outlet	Phone #	Email Address

Appendix D – Templates/Forms

MEDIA RELEASE TEMPLATE

MEDIA RELEASE

Utilities Working on Power Restoration

For Immediate Release: (Month, Day, Year)

(PLACE): Newfoundland Power and Newfoundland and Labrador Hydro are currently assessing system damage resulting from (INSERT REASON).

Provide update on current situation, include:

- X customers have been impacted (include Region/Communities most affected)
- Estimate restoration times, if available
- Crew updates (i.e. assessing damage, on the way to the site, on site, restoring power)
- Safety messages/warnings

Newfoundland Power and Newfoundland and Labrador Hydro would like to thank customers for their patience during this outage. Remember to put safety first: to report downed lines or an emergency situation call Newfoundland Power at 1-800-474-5711 or Hydro at 1-888-737-1296.

With a customer base of approximately 263,000 accounts, Newfoundland Power Inc. is committed to safety and dedicated to providing the highest level of customer service and reliability of electricity in the most cost-efficient manner possible. For more information on Newfoundland Power's programs, services and community partnerships, please visit newfoundlandpower.com.

Hydro to INSERT BOILERPLATE HERE

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For further information, please contact:

Erin Squires
Manager, Communications
Newfoundland and Labrador Hydro
Phone: [redacted]
Cell: [redacted]

Michele Coughlan
Manager, Public Affairs
Newfoundland Power Inc.
Phone: [redacted]
Cell: [redacted]

MEDIA ADVISORY TEMPLATE

MEDIA ADVISORY

For Immediate Release: (Month, Day, Year)

'Subject Title'

Re: *(Specifics of the incident)*

Date: *(Day, Month date, Year)*

Location: *(Building name, Exact Address, Parking Considerations)*

Reason: *(Specific details regarding areas of public interest that will be addressed)*

Who: *(Key speakers, Newfoundland Power and Hydro representatives, etc.)*

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For further information, please contact:

Erin Squires
Manager, Communications
Newfoundland and Labrador Hydro
Phone: [redacted]
Cell: [redacted]

Michele Coughlan
Manager, Public Affairs
Newfoundland Power Inc.
Phone: [redacted]
Cell: [redacted]

Media Request Log

Prepared by: _____ Date: _____

Time	Contact Name/Media Outlet	Contact Information	Details of request	Status of Request (Request met? Still waiting?)

Stakeholder Contact/Outreach Log

During a crisis situation, Newfoundland Power will be required to communicate with a variety of stakeholders, depending on the type of crisis and those affected. To help prioritize and identify specific affected stakeholders for targeted communications outreach, refer to this tool.

STAKEHOLDER COMMUNICATIONS LOG						
INCIDENT:			**DATE:**			
Stakeholder	**Strategic Considerations**	**Key Messages**	**Communications Tactics**	**Owner**	**Actions Planned/Taken**	**Results/Remarks/ Coordination with Corporate Communications Team**
Regulatory Agencies						
Government Officials						
Employees and Families						

STAKEHOLDER COMMUNICATIONS LOG						
INCIDENT:			**DATE:**			
Stakeholder	**Strategic Considerations**	**Key Messages**	**Communications Tactics**	**Owner**	**Actions Planned/Taken**	**Results/Remarks/ Coordination with Corporate Communications Team**
Contractors and Suppliers						
Community Residents and other impacted stakeholders						
Multi-Stakeholder Organizations						

STAKEHOLDER COMMUNICATIONS LOG						
INCIDENT:			**DATE:**			
Stakeholder	**Strategic Considerations**	**Key Messages**	**Communications Tactics**	**Owner**	**Actions Planned/Taken**	**Results/Remarks/ Coordination with Corporate Communications Team**
Environmental and Other Special Interest Groups						
Media						
Others						

STAKEHOLDER COMMUNICATIONS LOG						
INCIDENT:			**DATE:**			
Stakeholder	**Strategic Considerations**	**Key Messages**	**Communications Tactics**	**Owner**	**Actions Planned/Taken**	**Results/Remarks/ Coordination with Corporate Communications Team**

Appendix E – Sample Messaging

Sample Messaging

Preparedness

- We are ready and prepared be to respond to any power interruptions or emergency situation.

- We focus on maintaining two critical functions in the face of disasters:
    1. Delivering reliable electrical service to our customers; and,
    2. Maintaining communications with our customers, stakeholders and employees.

- We have contingency plans in place to deal with any type of a disaster. In fact, we have Business Continuity Management Plans for every aspect of our operations, from electrical system failures to loss of technology, to a fire at one of our buildings.

- These plans are tested on a regular basis to ensure that employees are fully aware of their roles, to ensure that our equipment, technology and communications devices are working properly, and to ensure that we are as familiar as possible with our continuity plans so that we can respond immediately and efficiently.

- For example:
    - We have back-up generation for all of our offices;
    - We have materials and equipment strategically located throughout the island should inventory become an issue;
    - We have back-up communication and computer systems;
    - We have a very mobile workforce; and,
    - We have key contacts in other utilities, should we require the extra assistance or materials.

- As bad weather approaches...Plan ahead. Be prepared AND be safe! Check out our tips on how to prepare http://www.newfoundlandpower.com/Outages/HowToPrepare.aspx

- To report outages or damage to the electricity system visit newfoundlandpower.com or call 1-800-474-5711. Hydro customers can call 1-888-737-1296.

Conservation

- What can customers do?
    - Residential Customers:
        - Reduce electric heat by a few degrees
        - Conserve hot water by not running dishwashers, washers and showers
        - Avoid using clothes dryers
    - Business customers:
        - Only heat spaces where and when necessary – reduce temperatures or shut off heating in vestibules, stairwells, lobbies and unused spaces
        - Reduce equipment use during peak periods
        - Reduce lighting – turn off outdoor safety and security lighting at the start of each day and turn off non-essential indoor lights, outdoor signs, billboards and other lighting

- Conservation/Energy Efficiency: It is important for customers to continue to conserve...saving energy means saving money, and using resources wisely is the right thing to do from an environmental perspective.
    - takeCHARGE has rebate programs to assist customers manage their energy usage and save money on their electricity bills.

- As your power is restored please try to reduce usage to assist with restoration to all customers as safely & quickly as possible.

- Customers are being asked to avoid unnecessary electricity usage, particularly during peak use times: 7:00 a.m. to 10:00 a.m. and from 4:00 p.m. to 8:00 p.m.

- Residential customers can reduce electric heat by a few degrees, avoid drying clothes, and conserve hot water by not running dishwashers, washers, and showers.

- Businesses can help by reducing temperatures, only heating necessary spaces, reducing equipment use during peak periods, and turning off turning non-essential indoor lights and outdoor signs and billboards.

Safety

- Safety of our customers and employees is our first and foremost priority

- Crews will work around the clock to restore customers' power unless it is determined that conditions (such as weather) pose a risk to safety.

- We are working directly with FES, and other emergency service providers.

- Priority to respond immediately to all emergency and safety calls.

- When an outage occurs:
    - Check lights in your home to see if they are working, and check to see if your neighbours have power. If others still have power, it may be a tripped breaker or a blown fuse that has caused the outage.

    - If there are no lights on in the neighbourhood, please report online or call Newfoundland Power's outage reporting service (1-800-474-5711) to receive outage information, or to report downed wires, trees or broken poles.

    - To avoid damage to your appliances and equipment, and to reduce the load on the electricity system when power is restored, we recommend you:
        - unplug all electronic equipment and appliances such as TVs, computers, microwaves and stereo equipment;
        - turn off your range, washer, dryer and water heater;
        - turn your thermostats to the lowest setting or switch them off; and
        - keep only one light on to let you know when power has been restored.

    - If your basement floods, don't enter unless you're sure the water is not in contact with a source of electricity such as an appliance or heater, electrical outlet or extension cord. Call an electrician to disconnect the power before entering if you are unsure. Never touch a circuit breaker with wet hands or while standing on a wet floor.

    - Turn on your battery powered radio to get information about the outage.

Assessment/System Damage

- It is not always possible to determine a problem or damage immediately

- Crews often have to patrol a line. This means sometimes having to go into back country to locate a problem. Helicopters are sometimes needed to fly crews and materials in to the problem area.

- Severe weather conditions such as ice, sleet, snow and high winds can often make a problem area inaccessible. This week our crews had difficulty getting to some locations because of impassable roads.

- When needed, crews from other areas of the province (or other provinces if necessary) are used to assist with restoration efforts

Customer Appreciation

- The Company appreciates customers' patience
- We realize any outage is an inconvenience -- and that extended outages are especially difficult.
- We thank our customers for their patience.
- We also thank the many customers who have provided kind words of praise to our line crews for their efforts.

Situation Specific

- Provide regular updates on:
  - Regions/Communities/Areas/ affected
  - Number of customers affected
  - Restoration efforts
  - Realistic timelines
  - Safety concerns/warnings
  - How to get in touch with us

Appendix F –Social Media Holding Statements

Newfoundland Power:

- Currently experiencing widespread outages due to loss of power supply from NL Hydro. We'll share more info as available. Updates ow.ly/KcgkC

- Widespread outages due to loss of power supply from NL Hydro. Info at ow.ly/KcgkC/18004745711. Thanks for your patience as cause investigated.

- Approx. XX.XXX @NFPower customers are currently without power due to loss of power supply from @NLHydro. For updates on affected areas, visit ow.ly/KcgkC

- @NFPower working with @NLHydro to begin restoring power to customers as generation becomes available. Thanks for your patience. More info ow.ly/KcgkC

Electricity System Notifications:

- Electricity system status **Power Watch** in effect**.** Watching system closely. Be prepared to conserve. More info

- Electricity system status **Power Warning** in effect. Plse conserve electricity. Be prepared for rotating outages. More info

- Electricity system status **Power Emergency** in effect. Currently rotating power outages. Plse conserve electricity. More info
  - Rotating power outages expected to last approx. 60 min. Thank you for your continued patience. More info ow.ly/KcgkC

Newfoundland and Labrador Hydro:

Generation Issue-
@NLHydro is experiencing a generation issue. Approximately xx customers are currently without power.

Transmission Issue -
@NLHydro is experiencing an issue with transmission line feeding the Avalon Peninsula. This has caused outages to approx. xx customers.

Unknown issue –

@NFPower working with @NLHydro to determine the cause of current power outages. More information will be provided as known.

Appendix G –Island Interconnected System Forecast Supply Shortfall - Customer and Stakeholder Advance Notification Protocol

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Island Interconnected System Forecast Supply Shortfall[1]
Customer and Stakeholder Advance Notification Protocol

newfoundland labrador hydro a nalcor energy company

Alert Levels	Generation Reserves[2]	Stakeholder Notifications	NLH Actions	NP Actions	Customer Notifications
Normal Conditions (T-001[3] Level 0)	7-Day Generation Reserve Forecast indicates available reserves greater than the largest generating unit plus minimum spinning reserves	Daily Supply and Demand Status Report and 7-Day Forecast for the *Island Interconnected System* sent to Public Utilities Board (PUB) and Newfoundland Power.	Normal Operations	Normal Operations	None
Stage 1 ***Power Advisory (T-001 Level 1)***	7-Day Generation Reserve Forecast indicates available reserves less than the largest generating unit plus minimum spinning reserves	***Stage 1 - Power Advisory Notifications:*** Hydro System Operations notifies Newfoundland Power System Operations.	Follow System Operating Instruction T-001 as required to maintain minimum spinning reserves	Support Hydro with implementing T-001 measures	None
Stage 2 ***Power Watch (T-001 Level 2)***	24-Hour Generation Reserve Forecast indicates available reserves less than the largest generating unit	***Stage 2 - Power Watch Notifications*** : Hydro System Operations notifies Newfoundland Power, Hydro Regulatory Affairs notifies PUB and Hydro Communications notifies Newfoundland Power Communications and FES.	Follow System Operating Instruction T-001	Support Hydro with implementing T-001 measures	NP gives advance notification to its curtailable customers Utilities may issue[4] press release, update website, engage social media (or other communications tools) stating: ***"Power Watch in Effect - Conservation Request Likely"*** - Specify when conservation may be required. - Indicate what is the most effective ways for customers to conserve.
Stage 3 ***Power Warning (T-001 Level 3)***	Current Day Generation Reserve Margin less than half the largest generating unit	***Stage 3- Power Warning Notifications:*** Hydro System Operations notifies Newfoundland Power, Hydro Regulatory Affairs notifies PUB and Hydro Communications notifies Newfoundland Power Communications andFES.	Follow System Operating Instruction T-001	Support Hydro with implementing T-001 measures	Utilities will issue press release, update website, engage social media (or other communications tools) stating: ***"Power Warning in Effect - Customers Requested to Conserve Electricity; Rotating Outages Likely"*** - Request NP curtailable customers to curtail. - Specify when conservation is required. - Indicate the most effective ways for customers to conserve.
Stage 4 ***Power Emergency (T-001 Level 4)***	[5]Generation Shortfall Imminent - No reserves margin	***Stage 4- Power Emergency Notifications:*** Hydro System Operations notifies Newfoundland Power, Hydro Regulatory Affairs notifies PUB and Hydro Communications notifies Newfoundland Power Communications and FES.	Follow System Operating Instruction T-001	Support Hydro with implementing T-001 measures and implement Newfoundland Power SRP-001[6] for Rotating Power Outages	Customers to be notified immediately if a generation shortfall is anticipated. Utilities will issue press release, update website, engage social media (or other communications tools) stating: ***"Power Emergency in Effect - Conserve Electricity-Rotating Power Outages in Effect"*** - Inform customers of the actual impact (MW) conservation efforts are having on the electricity system. - Indicate what are the most effective ways for customers to conserve.

[1] Island Interconnected Supply Shortfall refers to ***all*** Firm Generating Capacity on the Island Electricity System.
[2] Operating Reserves = ((Island Interconnected System Available Generation / Island Interconnected System Forecast Peak) - 1) x 100%
[3] NLH System Operating Instructions for Generation Reserves
[4] Where desirable, utilities may undertake joint communications; however, each utility will communicate with its respective customers and key stakeholders directly according to its established protocols.
[5] In the event of an immediate loss of supply (unanticipated and unable to be forecast) this protocol will eliminate Stages 1-3 and begin with Stage 4: this applies to both a generation and transmission issue. Exception may be an underfrequency load trip that would result in a prompt power restoration.
[6] NP System Restoration Plan for Rotating Power Outages

Appendix H –Avalon Peninsula System Forecast Supply Shortfall - Customer and Stakeholder Advance Notification Protocol

Avalon Peninsula System Forecast Supply Shortfall[1]
Customer and Stakeholder Advance Notification Protocol

Alert Levels	Avalon Reserves	Inter-Utility Notifications	NLH Actions (Stakeholders)	NP Actions	Customer Notifications
Normal	7-Day Avalon Reserve Forecast indicates available reserves greater than 35MW under the single worst contingency.[2]	Daily Supply and Demand Status Report and 7-Day Forecast for the Avalon Peninsula provided to internal stakeholders.	Normal Operations	Normal Operations	None
Stage 1 Power Advisory	7-Day Avalon reserve is forecast to be less than the impact of the largest contingency plus 35 MW.	Stage 1 – Hydro System Operations notifies Newfoundland Power System Operations.	Follow Operating Instruction (T096) as required to maintain available Avalon reserves.	Support Hydro with implementing any requested measures to increase/maintain available Avalon reserves.	None
Stage 2 Power Watch	24-Hour Avalon reserve is forecast to be less than the impact of the largest contingency.	Stage 2 – Hydro System Operations notifies Newfoundland Power System Operations Hydro Communications notifies Newfoundland Power Communications	Follow Operating Instruction (T096) Hydro Comms to follow *Stakeholder Communication Process for Major System Events*[3]	Support Hydro with implementing any requested measures to increase/maintain available Avalon reserves.	NP gives advance notification to its curtailable customers to be prepared for possible load curtailment request.[4] Communicate according to *Joint Storm/Outage Communication Plan* Utilities may issue[5] a press release, update website, engage social media (or other communications tools) stating: **Power Watch in Effect – Be Prepared to Conserve if Asked** (Specify when conservation may be required, indicate what is the most effective ways to conserve)
Stage 3 Power Warning	Current Day reserve is forecast to be less than the impact of half the largest contingency.	Stage 3 – Hydro System Operations notifies Newfoundland Power System Operations Hydro Communications notifies Newfoundland Power Communications	Follow Operating Instruction (T096) Hydro Comms to follow *Stakeholder Communication Process for Major System Events*	Support Hydro with implementing any requested measures to increase/maintain available Avalon reserves.	Communicate according to *Joint Storm/Outage Communication Plan* Utilities **will** issue press release, update website, engage social media (or other communications tools) stating: **Power Warning in Effect – Customers Requested to Conserve Electricity; Be Prepared for Possible Rotating Outages** (Specify when conservation may be required, indicate what is the most effective ways to conserve)
Stage 4 Power Emergency	Avalon reserve is zero or in deficit.	Stage 4 – Hydro System Operations notified Newfoundland Power System Operations Hydro Communications notifies Newfoundland Power Communications	Follow Operating Instruction (T096) Hydro Comms to follow *Stakeholder Communication Process for Major System Events*	Support Hydro with implementing any requested measures to increase Avalon reserves and implement Newfoundland Power SRP-001 for Rotating Power Outages on the Avalon.[6]	Communicate according to *Joint Storm/Outage Communication Plan* Utilities **will** issue press release, update website, engage social media (or other communications tools) stating: **Power Emergency in Effect – Conserve Electricity – Rotating Power Outages in Effect** (Specify when conservation may be required, indicate what is the most effective ways to conserve)

[1] Refers to all Transmission and Generation capacity on the Avalon Peninsula.

[2] Single worst contingency – loss of major Transmission Line (i.e. TL202 or TL206) or loss of the largest generating unit (i.e. Holyrood Unit).

[3] Outlines stakeholder communication process for major system events, identifying stakeholders such as GNL, PUB, Executive, and key customers.

[4] The request for NP's curtailable customers to engage in load curtailment would be made by Hydro at least 2 hours in advance of whenever Avalon reserves are expected to drop below 35 MW, or, immediately following a trip of a transmission line or generation unit that places the Avalon in a Stage 4 Power Emergency.

[5] Where desirable, utilities may undertake joint communications; however, each utility will communicate with its respective customers and key stakeholders directly according to its established protocols. At various times of the year (i.e. Summer, high maintenance period) an advisory may be preferable over an alert, as conservation may not be required. Also, in the event of an immediate loss of supply (unanticipated and unable to forecast) this protocol will eliminate Stages 1-3 and begin with Stage 4: this applies to both a generation and transmission issue. Exception may be an under frequency load trip that would result in a prompt power restoration.

[6] NP System Restoration Plan for Rotating Power Outages.

Appendix I –Electricity System Notifications

ELECTRICITY SYSTEM NOTIFICATIONS

POWER WATCH

- **No immediate** action required.
- Electricity system being **watched closely.**
- **Be prepared** to conserve electricity if asked.

POWER WARNING

- **Conserve electricity.**
- This is a **warning** that current day electricity supply is getting close to maximum demand.
- **Be prepared** for possible rotating power outages.

POWER EMERGENCY

- **Rotating power outages** in effect.
- **Conserve electricity.**
- **Safety** should remain your highest priority when utilizing alternate sources of power, heat or light in your homes.

Visit newfoundlandpower.com/SaveEnergy
or NLHydro.com for tips on how to conserve.

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System Restoration Plan – Rotating Power Outage

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System Restoration Plan
SRP-001
Rotating Power Outage

September 20, 2016
Created by: R. Cahill
Modified by: N. Collins
Reviewed by: G. Samms October 2018

1.0 Purpose

The purpose of this guideline is to outline the general requirements and process to be followed when completing rotating power outages as a result of a forecasted generation shortfall on the Island Interconnected System.

2.0 Scope

This procedure applies to System Control Center (SCC) supervisors and operators involved with the coordination and implementation of the rotating power outages. This guideline is intended for experienced SCC and operations staff with detailed knowledge of Newfoundland Power's distribution system.

3.0 General

When Newfoundland and Labrador Hydro (Hydro) foresees a possible generation shortfall on the Island Interconnected System, Hydro will advise Newfoundland Power of the amount and duration of the forecast shortfall and indicate the expected start time for specific quantity of load to be shed in a specific area of the province. Hydro's planned response to a possible generation shortfall is outlined in Hydro's System Operating Instruction, T-001. As per this operating instruction, Newfoundland Power will run all its available generation, implement the voltage reduction protocol and issue a request to curtailable service option customers to curtail as requested by Hydro. This initial response will decrease the forecast generation shortfall to limit the number of customer impacted by rotating power outages. Rotating power outages typically involves multiple distribution feeders. The number of feeders involved and customers affected will depend on the size of the forecast generation shortfall.

The approach to rotating power outages adopted by Newfoundland Power is intended to maximize the use of available supply and minimize the duration of aggregate customer outages. This approach will also limit the duration of individual feeder outages times to less than one hour and minimize the impact of cold load pickup upon restoration of the feeder.

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It is unlikely Hydro will be able to provide Newfoundland Power with the required timely information in order for Newfoundland Power to provide its customers with specific advance notice of the precise timing and location of rotating power outages due to the dynamic nature of the rotating outage process. To provide such advance notice would require more customers to be without power than otherwise would be the case.

Newfoundland Power will however provide general information to customers that rotating outages are imminent, the general geographic location of the rotating outages and the general area where initial rotating outages will commence. Newfoundland Power will also communicate its target individual customer outages to be no more than 1 hour.

4.0 Preparing for Rotating Power Outages

Newfoundland Power maintains a list of distribution feeders for rotating power outages. This list includes information for each distribution feeder such as peak load, priority customers served, and whether the feeder has remote control capability.

The feeder rotation list is maintained as an electronic spreadsheet that has pre-established filters for operating region, priority, and load. The spreadsheet also contains sequential numbering for each feeder within a substation that allows for random sorting of the feeders to aid in the selection process for rotating outages.

Prior to December 1st of each year the Manager of Operations for each operating area will ensure that the feeder rotation list is updated with the most current information. The individual feeder rotation lists for each operating area will be located on a rotating power outage SharePoint site under the SCC departmental page on Webster. The Manager of SCC will ensure that the individual lists from each area get compiled into the corporate feeder rotation list.

Prior to implementing rotating power outages, the distribution feeder list shall be reviewed for accuracy by the Manager of SCC and prioritized to minimize impact of feeder rotation to priority customers. High priority customers include, but are not limited to, hospitals, fire and police stations, acute care facilities, long term care facilities, community warming centers, fuel storage and offloading, water treatment/pumping stations and other critical municipal infrastructure.

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Depending on the location and size of the generation shortfall, field staff may be dispatched to pre-selected non-automated substations to manually complete the rotating power outages. Since the majority of Newfoundland Power's urban, most loaded feeders, have remote control capability the dispatch of field resources will be limited. The exact number and location of field staff dispatched will be determined prior to starting the rotating power outage and may change throughout the period of rotating outages.

The list of distribution feeders considered for rotation will be adjusted depending upon operating experience and consultation with customers and other stakeholders.

To prepare for rotating power outages, the Company's communications hub is activated as well as customer service, engineering, operations and System Control Centre staff are mobilized. The aim of the mobilization exercise is to ensure appropriate customer communication and maximize the use of available generation to minimize the number of customers impacted at any given time.

5.0 Technical Considerations

System Frequency and Voltage

The determination of the sequence and timing of when distribution feeders are rotated off and on the electrical system is guided by real time monitoring of system frequency and voltage levels. The nominal system frequency of 60Hz for the Island Interconnected System provides an indication of the balance of electrical demand and supply on a system wide basis and should be maintained above 59.8Hz as per Hydro's System Operating Instruction, T-001. Voltage levels measured at delivery points provide an indication of the balance of electrical demand and supply on a local geographical basis and should be maintained above 0.97 pu. During rotating power outages system frequency and voltage levels must be continuously monitored to prevent the automatic activation of the under frequency and under voltage load shedding schemes or risk system instability and collapse. Together, system frequency and voltage levels provide an indication of how many and which distribution feeders can be rotated off and on the electrical system at any point in time. The targeted minimum and maximum system frequency and voltage levels to be maintained during the rotating power outages shall be determined after consultation between Newfoundland Power and NL Hydro system control operators.

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Through the monitoring of system frequency and voltage levels additional small blocks of load are rotated on and off as required to limit the duration of outages and maximize the use of available generation. This dynamic process is responsive to both the available generation and the load dynamics of the customers who remain on the system.

Routine changes in demand by some customers receiving service can delay the reinstatement of service to customers who have no service. The longer a distribution feeder is disconnected the greater the impact of cold load pickup which can delay reinstatement of the feeder.

Cold Load

The presence of cold load pickup during the power rotation process will cause an increased risk of overloading distribution feeders or sections of feeders. The increased demand associated with cold load pickup can be as much as double the demand at time of disconnection. This additional demand increases the risk that fuses protecting distribution equipment will operate to protect the equipment. Once this occurs, Newfoundland Power is typically required to dispatch a line crew to re-fuse the equipment. This will extend the duration of customer outages and should be avoided if at all possible.

In some circumstances the impact of cold load pickup may require adjustments to be made to substation equipment by engineers and technologists in addition to linecrews. This may involve adjusting relay settings to avoid protection trips due to feeder unbalance or phase over current. This would tend to extend the duration of customer outages even further.

6.0 Rotating Power Outage Process

The process for rotating power outages will include the following steps:

1. Sort feeder rotation list spreadsheet by region, priority and load.

2. Start feeder rotations once notification given from Hydro on quantity and location of the forecasted generation shortfall.

3. Maintain continuous communication with customer service and corporate communications staff on the status of feeders affected.

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4. Record the load (MW) and time on each distribution feeder immediately prior to initiating a rotating outage.

5. Use the load information and outage time recorded to estimate the load impact which may occur upon restoration of power to that feeder including the effect of cold load pick-up.

6. Continuously monitor rotating power outage log to ensure the targeted 1 hour maximum outage time is maintained.

7. Monitor system frequency at the three measured locations and voltage levels at Newfoundland Power's supply points.

8. Select distribution feeders to be included in subsequent rotating outages by matching available generation and the estimated load that will be picked up from feeders which had previously been rotated off. This is done on a minute by minute basis with the overriding goal of keeping as many customers connected to the electrical system as possible at all points in time.

9. Rotate power to individual feeders by disconnecting the required quantity for warm feeders and reconnecting cold feeders.

10. Once forecast generation shortfall period ends. Communicate with NL Hydro and restore service to all disconnect feeders.

System Restoration Plan – Cold Load Pickup

NEWFOUNDLAND POWER
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System Restoration Plan
SRP-002
Cold Load Pickup

September 26, 2016

Created by: R. Cahill

Modified by N. Collins

Reviewed by: G. Samms October 2018

1.0 Purpose

The purpose of this guideline is to outline both the general and specific issues to be considered when dealing with Cold Load Pickup ("CLPU") on Newfoundland Power's electrical system.

2.0 Scope

This guideline is meant to be a reference document to inform System Control Center (SCC), Engineering and Operations Staff on the practices and procedures for managing CLPU on the distribution system.

3.0 Definition / Background

Reconnecting a distribution feeder that has been disconnected from the electrical system requires due regard for an engineering phenomenon known as Cold Load Pickup. Cold load pickup is simply the additional electrical demand which presents itself when a disconnected feeder is reconnected. Prior to disconnection, a distribution feeder normally has a degree of diversity (randomness of electrical devices on at any given time). The electrical demand which can be expected upon reconnection will be higher than that which existed at disconnection. This is the result of a lack of diversity of demand at the time of reconnection. When that distribution feeder is disconnected and later reconnected, or "picked up", the diversity is lost (all electrical devices are on at the moment of reconnection). This serves to increase the demand on the feeder at the moment of reconnection from what it was at the moment of disconnection.

4.0 Implications

An implication of cold load pickup is an increased risk of overloading electrical equipment or conductor. The increased demand associated with cold load pickup increases the risk that protection devices will operate to protect the equipment. Once this occurs, Newfoundland Power staff are typically required to react to these situations by increasing protection settings, sectionalizing feeders, increasing the size of

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fuses or installing solid blade disconnects. Depending on the magnitude and duration of the cold load pickup experienced a combination of these actions may be required to restore service to customers. Typically operations staff (engineers, technologist, linecrews) are required to be dispatched to the field to complete these actions. This tends to increase the duration of the customer outage.

5.0 Considerations

There are many factors that determine the magnitude and duration of cold load pick-up on the electrical system:

Outage Duration

The duration of an outage will impact the magnitude and duration of CLPU. As the length of an outage increases, the demand upon re-energizing the load will also increase due to the loss of load diversity.

Weather

Weather conditions will impact the magnitude and duration of CLPU. Extremely cold ambient temperatures will increase the amount and duration of the CLPU. Generally, feeders with a high penetration of electric heating have the highest CLPU factors.

Time of Day

The daily profile of the load on a circuit varies with the type of load. A common daily profile during winter conditions is to have two peak load periods per day, one in the morning and the other in the late afternoon or early evening period. CLPU will normally be at its maximum during these peak load periods of the day.

System Load

CLPU is highly dependent on the amount of load being served at the time of disconnection. The CLPU factor is defined as the CLPU divided by the normal winter peak load. If the maximum CLPU on a feeder is unknown, then the CLPU factor is assumed to be 2.0 and the duration is assumed to be 1.0 hour.

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6.0 Response

Typical response to CLPU during restoration activities are as follows:

Protection Setting Adjustments

Most electronic relays and reclosers include an automatic CLPU feature which temporally increases the protection trip settings to prevent protection trips due to cold load. These increased settings are determined by many factors including equipment and conductor ratings. This feature automatically activates after the protection device opens and a predetermined time delay elapses (normally 5-10 mins, depending on the type of relay). The CLPU setting will automatically reset and return to normal after the protection device is closed and predetermined time period elapses (normally 45 minutes to an hour depending on the type of relay).

If the breaker or recloser is only open for a few minutes to reconnect a previously sectionalized section of feeder, then the cold load feature will not activate and the protection group will have to be changed to accommodate any cold load.

There may be special cases during feeder trouble response when engineering or technical operations staff may request activation of alternate protection settings to prevent inadvertent feeder trips. Under these situations the settings should be changed as requested however they must be returned to normal once the risk of an inadvertent feeder trip due to abnormal load conditions has diminished.

The CLPU effect during the restoration of single phase lateral taps will significantly increase feeder unbalance and cause higher than normal neutral currents. This situation will require an increase in the ground protection relay setting to prevent an inadvertent protection trip upon reconnection of the single phase lateral line.

In some circumstances the impact of CLPU may require adjustments to be made to substation equipment by engineers or technical operations staff in addition to linecrews.

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Sectionalizing

Sectionalizing switches are installed in feeders to provide (i) better isolation of faults in all operating conditions, (ii) more flexible response to cold load pickup for timely restoration of feeders following extended outages, and (iii) a means of transferring a section of the feeder to an adjacent feeder.

Sectionalizing switches are used to sectionalize the feeder into smaller sections. This enables service to be restored to customers in stages while staying within the capacity limits of the feeder conductors and substation equipment during CLPU conditions. Downline remote controlled reclosers are installed on some of the larger feeders and allow for remote operation and sectionalizing of the feeder during restoration when CLPU is present.

For feeders without downline remote controlled reclosers, field staff must be deployed to manually operate downline sectionalizing devices such as disconnects or switches. Travel time, equipment setup, and switching required by field staff in these circumstances extends the length of the customer outage. The dispatching of field staff to sectionalizing points should be an early consideration to limit customer outage time.

See Appendix A for an example of conductor loading and sectionalizing during cold load pickup.

Re-fusing

At times when the electricity system is being restored during CLPU conditions downline protection fuses may operate. This requires a line crew to be dispatched to replace the fuse with another fuse of a higher rating. Normally this will involve fuses protecting single-phase lateral lines or individual distribution transformers. During extreme cold load conditions the response may include the installation of a solid blade disconnect on the lateral lines. While the single-phase tap is disconnected from the 3-phase trunk feeder, and following reconnection when cold load pickup is present, the 3-phase trunk feeder is unbalanced. Distribution feeder protection schemes cannot distinguish between single phase fault currents and large feeder unbalances. The substation and downline protection relays (if applicable) may require the neutral setting to be increased prior to re-fusing larger taps.

All fuses replaced with a higher rating or solid blades will be determined by regional engineering and the SCC operators.

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7.0 Cold Load Pickup Restoration - Checklist

The following steps should be addressed when restoring for Cold Load Pickup:

- Consider load, time of day, and weather to predict possible impact of CLPU when outage occurs.
- Confirm capacity of substation transformers are adequate (refer to appropriate technical staff).
- Confirm ratings of aerial conductors and underground cables (refer to appropriate technical staff).
- Confirm equipment ratings of substation protective devices are adequate.
- Confirm phase and neutral protection settings for the transformer and feeder relays and reclosers are adequate (adjust if necessary).
- Dispatch field staff as required to mitigate impact of CLPU during outage restoration activities.
- Advise Customer Service and Corporate Communications staff of outage information (location and duration) and make request for customer conservation if required.

SCC operators will likely require assistance from the appropriate engineering and operations personnel in order to assess the impact of CLPU and determine the response required.

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Appendix A - Example of Feeder Sectionalizing for Cold Load Pickup

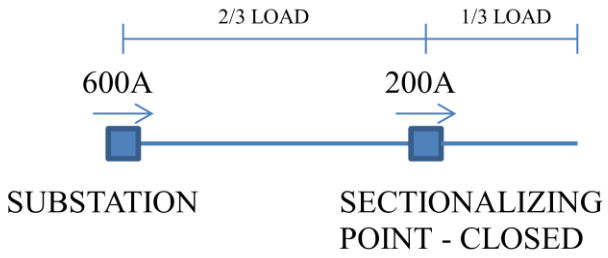
Consider an aerial feeder with no sectionalizing using 477 ASC conductor. The winter conductor ampacity is approximately 800 amps. Using a typical cold load pickup factor ("CLPU") of 2.0, the "feeder ampacity without sectionalizing" is 400 amps (i.e. 50% of the conductor winter ampacity).

If a sectionalizing switch were installed in the feeder at the optimal location (i.e. 2/3 of the load in the first section of the feeder), the feeder ampacity is 600 amps (i.e. 75% of the winter conductor ampacity).[1]

Under this scenario, when the first section of the feeder is energized (up to the downline sectionalizer) after an extended outage, the CLPU will be 800 amps (400 x 2.0). At no time does the CLPU exceed the winter ampacity of 800 amps.

The following illustrations demonstrate the sequence of restoring a feeder under cold load pickup conditions:

Originally the feeder is loaded to 600 amps, with 200 amps or 1/3 of the load beyond the sectionalizing point.



[1] The 75% of the winter conductor ampacity was chosen to provide a theoretical basis for the associated calculations. In practice the actual percentage will be something less due to (i) the age and physical condition of the conductor, (ii) the number of customers on the feeder, (iii) the ability to transfer load to adjacent feeders and (iv) operational considerations including the geographic layout and the distribution of customers on the feeder.

NEWFOUNDLAND POWER
A FORTIS COMPANY

System Restoration Plan

SRP-002

Cold Load Pickup

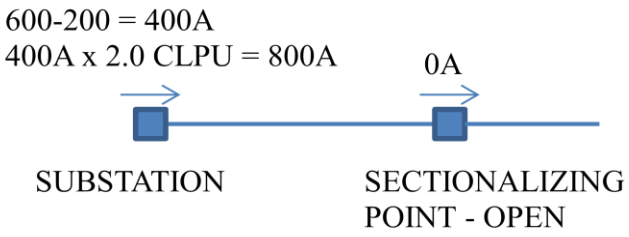
September 26, 2016

Created by: R. Cahill

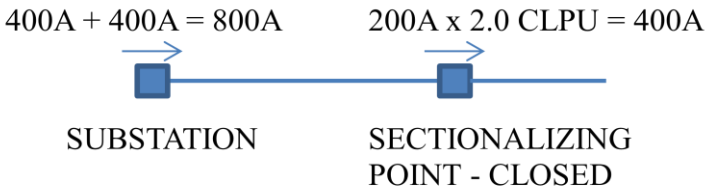
Modified by N. Collins

Reviewed by: G. Samms October 2018

After the outage occurs, the sectionalizing point is opened and the substation breaker or recloser is closed. At this point, power is restored to the first 2/3 of customers and the load at the substation is 800 amps (i.e. 400 x 2). After a period of 0.5 to 1.0 hours, the CLPU will have subsided and the normal winter peak load of 400 amps will be present.



The second section of the feeder may then be energized and the total load will again be 800 amps (i.e. 400 + 200 x 2).



After a period of 0.5 to 1.0 hours, the CLPU will have subsided and the normal winter peak load of 600 amps will again be present.