

1 **Q. (Response to PUB-NP-22) The response states (page 4 of 7, lines 4 to 8) "Critical**  
2 **customers included, but were not limited to, hospitals, fire and police stations,**  
3 **seniors' homes, and water pumping stations. In total, 247 of Newfoundland Power's**  
4 **306 distribution feeders were considered eligible for rotating power outages". The**  
5 **response goes on to say (page 4 of 7, lines 11 to 16) The list of distribution feeders**  
6 **considered for rotation is adjusted based on operating experience and consultation**  
7 **with customers and other stakeholders. For example, following the system**  
8 **disruption associated with the Sunnyside transformer fire on January 4<sup>th</sup> 2014 and**  
9 **after communication with municipalities, the Company modified the feeder rotation**  
10 **list to exclude feeders serving community warming centres and fuel supply depots".**

11  
12 **Please explain how Newfoundland Power ensures that its priorities are consistent**  
13 **with those of the public. Please identify and file any protocols that have been**  
14 **adopted for determining which customers are "critical" and how such critical**  
15 **customers were selected, and file any Board approvals relating to the critical**  
16 **customer list and the criteria used to determine which customers are "critical".**

17  
18 **A. A. Introductory**

19  
20 The electrical system events which occurred during the period January 2-8, 2014  
21 resulted in substantial numbers of Newfoundland Power's customers being  
22 without service for extended periods of time. For a service which is widely  
23 considered by the public to be "essential" in nature, the outages during this period  
24 were distressing. It has been recognized for decades that outages of this  
25 magnitude can be extremely serious in a societal sense.<sup>1</sup>

26  
27 Newfoundland Power's priorities in periods of electrical system distress such as  
28 those during the period January 2-8, 2014 are consistent with those of the public it  
29 serves. They are also consistent with current North American public utility  
30 practice.

31  
32 These priorities ensure that, to the extent Newfoundland Power is able, service  
33 disruption is minimized to those customers whose roles are essential to the health,  
34 safety and welfare of the communities which the Company serves. This response  
35 outlines how Newfoundland Power practically established and maintains those  
36 priorities during major electrical system events.

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<sup>1</sup> See, for example, the observation of James C. Bonbright in *Principles of Public Utility Rates* (Columbia University Press, 1961), that "Especially in a large city, even a temporary stoppage of electric power service is serious, and a prolonged cessation would be disastrous." (at page 8).

**B. Critical Customers**

January 2<sup>nd</sup>, 2014 was the first time Newfoundland Power was required to conduct rotating power outages on a sustained basis to respond to a forecast generation shortfall on the Island Interconnected System.<sup>2</sup> By January 4<sup>th</sup>, 2014, the complexity of matters materially increased.<sup>3</sup>

To prepare for the rotating power outages on January 2<sup>nd</sup>, the Company reviewed existing distribution feeder lists identifying “critical customers” for accuracy. These lists were created to assist in determining priorities for service restoration following major system events such as ice storms.

Newfoundland Power’s primary criteria for designating critical customers focuses on roles which are essential to the health, safety and welfare of the communities the Company serves. These roles are critical in times of distress such as major electrical system failures. These criteria for designation of critical customers are broadly consistent with both common sense and existing public utility practice.<sup>4</sup>

The creation and maintenance of distribution feeder lists with critical customers is the responsibility of Newfoundland Power’s Superintendents of Area Operations in consultation with customer service staff.<sup>5</sup> These feeder lists are reviewed by the Company’s Regional Managers.

During restoration efforts following a major system event, it is not uncommon for Newfoundland Power to add distribution feeders with critical customers to

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<sup>2</sup> See Newfoundland Power Interim Report, March 24<sup>th</sup>, 2014, page 2, lines 1-3 and The Liberty Consulting Group Interim Report, April 24<sup>th</sup>, 2014, page 60.

<sup>3</sup> The major electrical equipment failures on the bulk system which commenced on January 4<sup>th</sup>, 2014 would ultimately account for almost 80% of the time customers were without electrical service during the January 2-8, 2014 period.

<sup>4</sup> For example, Newfoundland Power’s affiliates Fortis BC, Maritime Electric Company (P.E.I.) and Central Hudson Electric and Gas (N.Y.) all have critical customer lists for the purposes of prioritizing service restoration to customers. These lists give priority to public health facilities such as hospitals and police and emergency services. Similarly, Nova Scotia Power and New Brunswick Power restores service in a way that provides priority to customers such as hospitals and police services which are considered fundamental to public health and safety. Relatively few utilities specify detailed protocols for rotating power outages, however, the few that do appear to exempt public health, safety and security services from such events (see, for example, Southern California Edison’s practice in this regard at [www.sce.com/info/PowerOutages](http://www.sce.com/info/PowerOutages)).

<sup>5</sup> Newfoundland Power has Superintendents of Area Operations responsible for (i) Stephenville/Port-aux-Basques, (ii) Corner Brook, (iii) GrandFalls-Windsor/Gander, (iv) Bonavista/Burin, (v) Carbonear, and (vi) St. John’s. Superintendents of Area Operations have a variety of backgrounds: 3 are professional engineers, 1 is an electrical equipment technologist, 1 is a powerline technician and 1 is a business graduate (B. Comm.). The 6 current Superintendents of Area Operations have an average of over 23 years of service with the Company.

1 respond to a particular feature associated with that event.<sup>6</sup> While distribution  
2 feeder lists with critical customers are reviewed periodically, the Company does  
3 not keep formal records of additions and deletions to these lists.<sup>7</sup>  
4

5 Newfoundland Power has never submitted its list of critical customers to the  
6 Public Utilities Board (the “Board”) for approval. However, the Board routinely  
7 reviews the Company’s response to major electrical system events, including how  
8 service to customers is restored.  
9

### 10 C. January 2-8, 2014

11  
12 During the period January 2-8, 2014, Newfoundland Power undertook rotating  
13 power outages during 5 days.<sup>8</sup>  
14

15 At the commencement of rotating power outages on January 2<sup>nd</sup>, 2014, a total of  
16 46 distribution feeders were not considered eligible for rotation. These feeders  
17 primarily served health care facilities and seniors homes. A list of these feeders  
18 and the criteria used to exclude them from rotation are contained in Attachment A  
19 to this response to Request for Information.  
20

21 During the course of the period January 2-8, 2014, Newfoundland Power was in  
22 continuing consultation with (i) Fire and Emergency Services, (ii) Municipal  
23 Officials in a number of communities most impacted by overall system events,  
24 (iii) police services, (iv) the Provincial Government’s Power Outages Response  
25 Committee, and (v) a variety of hospitals, senior citizens’ complexes and school  
26 boards.<sup>9</sup> These consultations were particularly critical during this period as the  
27 succession of major electrical equipment failures on the bulk power system  
28 created an increasingly difficult situation for Newfoundland Power’s customers.  
29

30 For example, the extended outages in the northeast Avalon due to equipment  
31 failures which commenced on January 4<sup>th</sup>, required municipal leaders in some

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<sup>6</sup> For example, many health care facilities or security service suppliers have standby generation. If the standby generation is for some reason unavailable, Newfoundland Power may treat that health care facility or security service provided as a critical customer for that particular system event.

<sup>7</sup> This is partially because the feeders which serve customers such as health care facilities change very infrequently. Also, changes in service restoration priorities occur simply because of the particular circumstances encountered in a particular system event. This occurred on January 4<sup>th</sup>, 2014 when successive major electrical equipment failures on the bulk power system aggravated an existing generation supply shortfall (see page 3, line 30, *et. seq.*). These changes are typically limited to the particular system event.

<sup>8</sup> The days of these outages are outlined in the response to Request for Information PUB-NP-022 and Newfoundland Power’s Interim Report, March 24<sup>th</sup>, 2014, **B.2.2: The Rotating Power Outages: January 2-8, 2014**, page 19, *et. seq.*

<sup>9</sup> Co-ordination with Fire and Emergency Services personnel and municipal leaders is a part of Newfoundland Power’s standing system restoration protocol (see Attachment A to the response to Request for Information PUB-NP-187, pages 5-6).

1 communities to establish warming centers to protect the health and safety of  
2 citizens. To accommodate changing circumstances, an additional 13 distribution  
3 feeders were excluded from rotating power outages after January 4<sup>th</sup>.<sup>10</sup> A list of  
4 these feeders and the criteria used to exclude them from rotation are contained in  
5 Attachment B to this response to Request for Information.  
6

7 **D. Concluding**  
8

9 Major electrical system events, such as those that occurred during the period  
10 January 2-8, 2014, can threaten the health and safety of Newfoundland Power's  
11 customers.  
12

13 To the extent it is able, in restoration or rotating power outages, the Company  
14 places special emphasis on those customers that are essential to maintaining the  
15 health, safety and welfare of the communities the Company serves. This is  
16 undertaken by the Company in consultation with government agencies, municipal  
17 leaders and others charged with protecting the interest of the public. It also  
18 appears consistent with existing public utility practice in North America.  
19

20 In the Company's view, its practice is consistent with the priorities of the public  
21 that it serves.

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<sup>10</sup> Other 'critical customers' excluded from rotating outages were certain utility facilities, including Newfoundland Power's and Newfoundland and Labrador Hydro's Control Centres; Confederation Building; fuel supply facilities; and additional health and senior care facilities.

**CA-NP-016**

**Attachment A**

Supply Issues and Power Outages  
on the Island Interconnected System

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*Requests for Information*

**Newfoundland Power  
Critical Feeders  
January 2-8, 2014**

**Newfoundland Power  
Critical Feeders  
January 2-8, 2014**

**St. John's**

BCV-02	Hospital
BIG-01	Water Treatment Plant
CAB-01	Hydro Plant
CHA-02	Hydro Plant
GOU-02	Water Treatment Plant
HWD-06	NP Control Center
HWD-07	Sewer Treatment Plant
KBR-01	Hospital
KBR-03	Seniors' Home
KBR-07	Hospital
KEN-01	Seniors' Home
KEN-02	NP Duffy Place
MOB-01	Hydro Plant
MOL-05	Hospital
MOL-06	Seniors' Home
MOL-09	Seniors' Home
PEP-01	Seniors' Home
PEP-03	RCMP Headquarters and New Long Term Care
RRD-03	Seniors' Home
SJM-09	Hospital
SLA-02	Seniors' Home
SLA-09	Central Fire Station/911
SLA-11	Seniors' Home
VIR-07	Water Treatment Plant

**Eastern**

BLK-01	Hospital, Youth Center
CLK-03	Hospital and Seniors Home
CAR-01	Hospital
CAR-03	Seniors' Homes
NCH-03	Hydro Plant
OPL-03	Hospital
SPF-01	Seniors' Home
CLV-03	Hospital
BVA-01	Hospital and Seniors Home

**Newfoundland Power  
Critical Feeders  
January 2-8, 2014  
(Cont'd)**

**Western**

COB-01	Hospital
GAN-01	Hospital
TWG-02	Hospital
BOT-02	Chronic Care facility
GFS-02	Water Treatment Plant
GFS-10	Hospital
SCR-01	Hospital
SPR-02	Hospital and Seniors' Home
BVS-03	Hospital
GAL-03	Water Treatment Plant
HAR-01	Hospital
LGL-02	Hydro Plant
GBS-02	Hospital
<b>Total</b>	<b>46</b>

**CA-NP-016**

**Attachment B**

Supply Issues and Power Outages  
on the Island Interconnected System

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*Requests for Information*

**Newfoundland Power  
Critical Feeders Added During the Period  
January 2-8, 2014**

**Newfoundland Power  
Critical Feeders Added During the Period  
January 2-8, 2014**

<b>St. John's</b>	<b>Customer</b>	<b>Added During Period</b>
GDL-01	Warming Station	Yes
HWD-02	NP Radio Tower/Communication Towers	Yes
HWD-03	NP Control Center/Alternate Feed	Yes
HWD-08	Warming Station	Yes
KBR-09	Seniors' Home	Yes
MOL-08	Hydro ECC	Yes
RRD-05	Confederation Building	Yes
SJM-07	Warming Station	Yes
SJM-11	Seniors' Home/Communication Towers	Yes
SJM-12	Fuel Supply Terminal	Yes
SLA-05	Ronald McDonald House	Yes
SLA-08	Canadian Blood Services - Blood Supply	Yes
VIR-01	Warming Station	Yes
<b>Total</b>	<b>13</b>	