**Q. How many of Newfoundland Power's feeders have underfrequency relays? Describe the frequencies that cause load shedding and indicate the load shedding steps. What are the criteria for selecting which feeders have underfrequency tripping?**

A. Newfoundland Power has underfrequency relays controlling 168 out of its 306 feeders. There are 7 underfrequency trip groups that total 482 MW of estimated peak load. Table 1 shows the frequency at which each of the trip groups operate and the estimated peak load of each group.

A feeder must have remote control capability and a minimum of 2 MW of estimated peak load to be considered for underfrequency tripping. Feeders with critical customers such as hospitals are not included.

Following an underfrequency event, the feeders that were impacted by the trip are rotated with others that have not been recently impacted. This helps to share the burden of these outages among all customers.

**Table 1**
**Underfrequency Trip Groups**

| Group | Frequency (Hz) | Estimated Peak Load (MW) |
|---|---|---|
| 1 | 59.0[1] | 40 |
| 2 | 58.8 | 34 |
| 3 | 58.6 | 43 |
| 4 | 58.4 | 56 |
| 5 | 58.2 | 60 |
| 6 | 58.1 | 90 |
| 7 | 58.0 | 159 |

[1] The group 1 frequency trigger of 59 Hz includes a 15 second delay.