

1 **Q. Reference: "2027 Capital Budget Application," Newfoundland Power Inc.,**
2 **May 29, 2026, Supporting Materials, Distribution: 1.2, Feeder Additions for**
3 **Load Growth, p. 5.**

4
5 **Newfoundland Power states that an analysis of distribution feeder BLK-02**
6 **was completed using CYME Power Engineering software and verified using**
7 **field load measurements. The analysis showed that the peak load on the**
8 **identified single-phase section of the feeder is approximately 107 amps,**
9 **exceeding Newfoundland Power's planning criterion of 85 amps for maximum**
10 **current on a single-phase distribution line.**

11
12 **Please provide the maximum amperage observed through field load**
13 **measurement on the identified single-phase section of distribution feeder**
14 **BLK-02, including the date and time of measurement, measurement location,**
15 **measurement duration, and whether the observed maximum was used to**
16 **calibrate or validate the CYME model result of approximately 107 amps.**

17
18 **A.** Newfoundland Power conducted field measurements on the identified single-phase
19 section of distribution feeder BLK-02 on January 24, 2024, at approximately 10:15am.
20 The measurement was on a section of primary conductor in Brigus Junction
21 approximately 23 kilometres from BLK Substation, and approximately 2 kilometres from
22 the main three-phase trunk section of BLK-02. The measured current on the section of
23 distribution feeder was 81.4 amps.

24
25 At the time of the field measurement, real-time data from metering devices at BLK
26 Substation indicated a current of 86.4 amps on phase C of distribution feeder BLK-02.
27 The measured current on the identified single-phase section in Brigus Junction, which is
28 also supplied by phase C, therefore represented approximately 94% of the total load on
29 phase C of BLK-02.¹

30
31 An analysis of historical metered data on BLK-02 indicated that the five-year historical
32 winter peak on phase C of BLK-02 was approximately 114 amps, which indicates the
33 actual peak load on the identified single-phase section in Brigus junction is
34 approximately 107 amps.²

35
36 Newfoundland Power uses CYME to allocate total load across distribution feeders to
37 approximate load at each distribution transformer downstream from its substations
38 based on their individual capacities. As this process provides approximations only, field
39 measurements, such as those undertaken on BLK-02, are subsequently used to calibrate
40 CYME models based on real-world measurements.

¹ (81.4 / 86.4) x 100% = 94.2%.

² 0.94 x 114 = 107.