

Q. **Reference: Response to NP-NLH-103**

In a table provide the number of times each year Hydro requested Newfoundland Power to maximize available hydraulic generation going back to the introduction of the Generation Credit and the annual generation test. In the response, address any variance in the number of requests year over year explaining what may have changed with the operation of the power system.

A. Please refer to Table 1.

**Table 1: Number of Requests to Maximize Hydraulic Generation 2010–2025**

| Period  |      |          |      | Number of Requests to Maximize Hydraulic Generation |
|---------|------|----------|------|-----------------------------------------------------|
| From    |      | To       |      |                                                     |
| January | 2010 | December | 2010 | 48                                                  |
| January | 2011 | December | 2011 | 31                                                  |
| January | 2012 | December | 2012 | 53                                                  |
| January | 2013 | December | 2013 | 78                                                  |
| January | 2014 | December | 2014 | 94                                                  |
| January | 2015 | December | 2015 | 104                                                 |
| January | 2016 | December | 2016 | 135                                                 |
| January | 2017 | December | 2017 | 46                                                  |
| January | 2018 | December | 2018 | 86                                                  |
| January | 2019 | December | 2019 | 92                                                  |
| January | 2020 | December | 2020 | 79                                                  |
| January | 2021 | December | 2021 | 126                                                 |
| January | 2022 | December | 2022 | 78                                                  |
| January | 2023 | December | 2023 | 91                                                  |
| January | 2024 | December | 2024 | 76                                                  |
| January | 2025 | December | 2025 | 39                                                  |

The number of requests to maximize hydraulic generation demonstrated a high degree of annual variability, ranging from a low of 31 requests in 2011 to a high of 135 requests in 2016. The average annual volume over the 2010-2025 period was approximately 79 requests;

1           however, several years deviated significantly from this average, highlighting the dynamic  
2           operating environment in which these requests occur.

3           While the data clearly indicates substantial year-to-year fluctuations, the frequency of requests  
4           can be influenced by a wide range of operational, environmental, and system-related factors.  
5           Weather conditions alone can have a significant impact on system operations. For example,  
6           prolonged periods of cold winter temperatures can result in increased customer demand and  
7           higher system loads, requiring additional generation resources to maintain system reliability.  
8           Conversely, elevated summer temperatures can reduce transmission operating limits while  
9           increasing demand in certain areas of the system, resulting in a higher frequency of requests,  
10          particularly those associated with supporting the Avalon Peninsula. However, this typically  
11          occurs during the non-winter period.

12          Other factors that may contribute to annual variability include unplanned generation and  
13          transmission equipment outages or failures, frazil ice restrictions, transmission system  
14          constraints and changing system operating conditions. Labrador-Island Link testing,  
15          commissioning, and operational integration activities have also influenced system operations  
16          and increased the need for requests to maximize hydraulic generation during certain periods of  
17          time.