Q. (Reference slide 36) Can Newfoundland Power manage EV charger demand through existing curtailment programs without the need for time-of-use (TOU) rates which have benefits that are only ½ the cost to implement and administer. Further, it is stated that TOU rates are not expected to be economic until after 2030 when EV demand increases. It is understood that this is based on the Dunsky report which states that optimized dynamic rates such as TOU and critical peak pricing do not provide sufficient benefits to carry the full cost of the AMI investments needed to enable these programs before 2034. However, the Dunsky report goes on to say that a full business case assessment for AMI may reveal other benefits streams that could be combined with TOU/CPP programs to render the investment cost-effective. Has Newfoundland Power undertaken a "*full business case assessment for AMI*"? If so, does it take into consideration rate design principles such as fairness and equity, and providing customers with a level of control over the bills?

A. *This Request for Information relates to the Electrification, Conservation and Demand Management Plan: 2021-2025 (the "2021 Plan") developed in partnership by Newfoundland Power Inc. ("Newfoundland Power") and Newfoundland and Labrador Hydro ("Hydro") (collectively, the "Utilities") and the related Technical Conference presented by the Utilities on February 1, 2022. Accordingly, the response reflects collaboration between the Utilities.*

Existing curtailment programs, while similar in principle for achieving electricity system peak demand reduction, are not a viable option for managing EV load. Customers on the Curtailable Service Option are larger customers who have interval metering installed at the serviced premises and are small in number compared to the forecast number of EVs in the province.[1]

Ensuring effective utilization of curtailment or other load control programs requires a method for the utility to monitor the energy usage of the facility during the requested curtailment period. In lieu of an interval or TOU meter, this is normally accomplished through deployment of "smart" chargers or direct load controllers. Smart chargers have networking capabilities that allow for remote monitoring of a vehicle's charging so that the charging can be shifted to off-peak hours. Direct load controllers can allow a utility or third-party service provider to control a vehicle's charging to shift it to off-peak hours. These devices are often paired with incentives such as a monthly credit for customers that shift their charging to off-peak hours.

The Dunsky market potential study found that the majority of demand management potential is currently met through existing curtailment programs with commercial and industrial customers. Dunsky applied the Program Administrator Cost test to determine the cost-to-benefit ratio of TOU rates. The test yielded a result of 0.5, meaning the benefit of TOU rates is approximately ½ the cost.

[1] The Curtailable Service Option is available to customers billed on Rate #2.3 or #2.4 that can reduced their demand by between 300 kW and 5000 kW. See *Schedule of Rates Rules & Regulations*, page 27. During the 2020-21 Winter season, there were 24 sites enrolled in Newfoundland Power's Curtailable Service Option.

With respect to other benefit streams, AMI can also provide reduced metering costs in certain cases. However, these benefits would be minimal for Newfoundland Power as the Company has already reduced its meter reading costs by over 80% through the deployment of Automated Meter Reading technology.[2]

Given the benefits of AMI are demonstrably outweighed by the cost, Newfoundland Power has not conducted a full business case assessment at this time. A fulsome assessment, including consideration of rate design principles, would be undertaken when the potential benefits of AMI approach the point of outweighing the costs.

[2] Newfoundland Power's meter reading operating costs were reduced from approximately $2.8 million in 2012 to $540,000 in 2020 through the deployment of Automated Meter Reading technology.