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The Island Regulatory
and Appeals Commission

May 12, 2023

Ms. Cheryl Mosher
Island Regulatory & Appeals Commission
PO Box 577
Charlottetown PE C1A 7L1

Dear Ms. Mosher:

**UE22503 - Application for an Order to Approve Stage 1 Rate Design Changes
Response to Interrogatories from Commission Staff**

Please find attached the Company's response to the Interrogatories filed by Commission Staff with respect to the Company's Application for an Order to Approve Stage 1 Rate Design Changes. An electronic copy will follow.

Yours truly,

MARITIME ELECTRIC

A handwritten signature in black ink that reads "Gloria Crockett". The signature is written in a cursive style.

Gloria Crockett, CPA, CA
Manager, Regulatory & Financial Planning

GCC06
Enclosure



Response to Interrogatories

UE22503 – Application for an Order to Approve Stage 1 Rate Design Changes from Commission Staff

Submitted May 12, 2023

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RATE DESIGN STUDY¹

IR-1 The Farm Rate Study (attached as Appendix C to the Rate Design Study) is identified as a “preliminary draft” and states that “*a final report is planned for late in 2020, based on 24 months of hourly metered data*”. Please provide the final Farm Rate Study. Does the final study impact any of the proposals in the Rate Design Study or the Rate Design Application?

Response:

The Application for an Order Approving Stage 1 of Rate Design Changes (the “Application”), which was filed on May 14, 2021, included Appendix A – Farm Study. This version of the Farm Study was based on 24 months of hourly metered data, covering the period July 1, 2018 to June 30, 2020, and is considered the final report.

Proposals in the Application in regard to farms were based on the Farm Study in Appendix A.

¹ See Exhibit M-1(a), filed June 30, 2020.

- IR-2** Upon elimination of the Residential declining block rate, Maritime Electric is proposing to give farms the option to remain in the Residential rate class or migrate to the Small Industrial class. In doing so, Maritime Electric is proposing to allow each farm customer to choose the most advantageous rate class based on its electricity usage.
- a. Is this consistent with Maritime Electric's General Rules and Regulations?
 - b. Do any other Maritime Electric customers have the option to choose which rate class they take service under?
 - c. If not, please provide justification for allowing farm customers to choose their rate class.
 - d. Please explain how allowing farm customers to choose the most advantageous rate class is consistent with cost of service regulation.
 - e. Please explain how allowing farm customers to choose the most advantageous rate class is consistent with Bonbright's principles of rate design,² specifically:
 - i. Freedom from controversies as to proper interpretation;
 - ii. Fairness of the specific rates in the apportionment of total costs of service among the different customers;
 - iii. Avoidance of undue discrimination in rate relationships; and
 - iv. Efficiency of the rate classes and rate blocks in discouraging wasteful use of service while promoting all justified types and amounts of use.

Response:

- a. Yes, Maritime Electric believes that the General Rules and Regulations allow customer choice in limited circumstances.

The General Rules and Regulations Section F-2, Billing and Payments – Establishment of Rate Category, states: *"The Customer will inform Maritime Electric regarding the use of the Service. Based on this information, Maritime Electric then establishes the applicable rate category."*

In practice, establishing the applicable rate category is not always as straightforward as the above excerpt might suggest. As explained in response to part (b), there are instances when the customer has a choice, and in these instances Maritime Electric helps identify the best choice for the customer. Allowing farm customers to choose the most advantageous rate class would be an extension of this practice, and thus not inconsistent with the Company's General Rules and Regulations.

² See Rate Design Study at page 19.

- b. Yes. Certain customers have a choice between the Small Industrial (rate code 320) and Large Industrial (rate code 310) rate classes. Both of these rate classes include the following paragraph:

“Customers whose demand is above 750 kW and less than 3000 kW may choose to be billed at the Small Industrial Rate but must meet certain conditions of the Large Industrial Rate; specifically, they must be metered at a primary voltage of 69 kV and own the step-down transformation from the primary service voltage or pay an equivalent rental charge”.

When appropriate, Maritime Electric would assist customers to determine which of the Small Industrial rate or Large Industrial rate is more advantageous for them. Customers have been known to request such assistance and this may result in a customer moving from the Small Industrial to the Large Industrial rate class.³

Designing rate classes such that customers have choice also supports economic growth. For example, a new cannabis operator could start a small business and be served under the Residential rate class as a “small farm”. If the Company’s proposals are approved, that customer could move to the Small Industrial rate class as they grow their business. Then, if that customer chose to further expand their business, they could move into the Large Industrial rate class.⁴

Therefore, Maritime Electric believes the proposal to allow farm customers to choose between the Residential and Small Industrial rate classes is consistent with the current General Rules and Regulations.

- c. Refer to the response to part (b).
- d. Allowing farm customers to choose the most advantageous rate class is not inconsistent with cost of service regulation.

Under cost of service regulation, the cost of providing service to the various rate classes is estimated by a cost allocation study, which should be updated periodically. Any movement of customers amongst the rate classes, or other changes to costs, customer loads, etc., would be reflected in the updated cost allocation study allowing customer rates to be appropriately adjusted to stay within the desired revenue-to-cost (“RTC”) ratio range.

As discussed in the Application, Maritime Electric acknowledges that Stage 1 will not bring the RTC ratio of all rate classes within the approved range. For Maritime Electric, its past practice has been to update its cost allocation study every three years and the expectation is that this practice will continue. Therefore, each updated cost allocation study will allow the Company to assess whether further adjustments are necessary to bring and maintain all rate classes within the approved range.

³ For example, in 2017 three customers moved from the Small Industrial to the Large Industrial rate, which was prompted by an increase in their load and an analysis completed by Maritime Electric that demonstrated it was more advantageous for them to be served under the Large Industrial rate.

⁴ As noted in response to IR-4, the Company plans to add a new SIC code, Horticultural Specialties, to both the Large Industrial rate classes.

- e. The Bonbright principles of rate design continue to provide good guidance for ratemaking and, like most principles that have broad application, these principles can compete with each other, which requires further judgment to strike the right balance between the principles.

The following discusses the specific principles referred in the interrogatory:

- i. Freedom from controversies as to proper interpretation refers to customer understanding and acceptance. Allowing farm customers to choose the most advantageous rate class provides an opportunity for Maritime Electric to discuss with the customer their options and educate them on what is the best option, thereby facilitating customer understanding and acceptance.
- ii. Fairness of the specific rates in the apportionment of total costs of service among the different customers. Maritime Electric engages an expert consultant to complete a cost allocation study which apportions the total costs of service to the different customer classes and, therefore, the resulting changes to the RTC ratios over time are reflected in subsequent cost allocation study results.
- iii. Avoidance of undue discrimination in rate relationships. By focusing on “undue” discrimination, this principle acknowledges the concept that some discrimination may be useful in accomplishing other objectives. With respect to the Application, the “other objective” is the Bonbright principle of rate stability.⁵

Any perceived discrimination by allowing farm customers to choose between two rate options would be temporary. As indicated in the Application, further rate adjustments will be needed in Stage 2 in order for the RTC ratio of all rate classes to be within the approved range. Therefore, in Stage 2 any remaining undue discrimination in rate relationships would be corrected.

- iv. Efficiency of the rate classes and rate blocks in discouraging wasteful use of service while promoting all justified types and amounts in use refers to having price signals that encourage efficient use and discourage inefficient use of electricity. Allowing farm customers to choose between two rate options does not encourage the wasteful use of electricity.

⁵ From page 19 of the Rate Design Study, this principle is: Stability of the rates themselves, with a minimum of unexpected changes seriously adverse to existing customers.

IR-3 Refer to Maritime Electric's General Rules and Regulations.

- a. Please explain why service to churches falls within the Residential rate class, while service to other religious and charitable institutions falls within the General Service rate class.
- b. How does MECL distinguish between churches and other religious and charitable institutions? Please provide examples of each.

Response:

- a. This is a carryover from the adoption NB Power's rate structure in the 1990s as part of the "NB Power plus 10%" rate regime.⁶
- b. In Maritime Electric's General Rules and Regulations Section B-1, Definitions, a church is defined as: "*A building used primarily for public worship*". Public worship is the distinguishing feature. Religious and charitable organizations whose gatherings are mainly for members only are served under the General Service rate. An example is a parish hall that is a separate building from the church building. In this instance, the parish hall is served under the General Service rate class while the church building is served under the Residential rate class.

⁶ In New Brunswick, churches are still service under NB Power's residential rate.

IR-4 In Appendix C, at pages 84 to 85 of the Rate Design Study, MECL discusses the requirements for farms to be eligible under the Small Industrial rate class. What changes to MECL’s General Rules and Regulations are required to facilitate the proposed migration of farms to the Small Industrial rate? In particular, please specify any proposed amendments to the existing definitions (Section B) and the rate application guidelines (Section N).

Response:

Maritime Electric believes minimal amendments are required to allow farms to be eligible under the Small Industrial rate class. The proposed amendments in Sections B and N are shown as red underlined additions.

The “Industrial Service” definition will need to be amended to include “farming” in Section B-2. Similarly, “farming” also needs to be added to first paragraph of the Small Industrial Rate Schedule in Section N-7.

The addition of seven Standard Industrial Classification (“SIC”) codes to the Small Industrial rate class will allow the proper tracking of farms serviced under this rate class in Section N-8.

In addition to the changes proposed to the Small Industrial class, “farming” needs to be added to the first paragraph of the Large Industrial Rate Schedule in Section N-9. This and the addition of one SIC code to the Large Industrial rate class in Section N-9 will allow customers who are cannabis growers to be serviced under this rate class, subject to them meeting the other criteria of this rate class.

Section B – Definitions

Industrial Service: Rate categories for Customers who use electricity chiefly for manufacturing, assembly or processing of goods, farming, or the extraction of raw materials.

Section N-7 Rate Schedules and Rate Application Guidelines

Small Industrial Rate Schedule [excerpt]

Small Industrial That category of Customers who use electricity chiefly for manufacturing, processing of goods, farming or for the extraction of raw materials and have a minimum contracted demand of five (5) kilowatts.

Section N-8 – Rate Schedules and Rate Application Guidelines

Small Industrial Rate Application Guidelines [excerpt]

Industrial Rates apply to the following S.I.C groups:

*Division C Major group:
04 Logging Industry*

Division D Major groups:

06 Mining Industries

07 Crude Petroleum and Natural Gas Industries

08 Quarry and Sand Pit Industries

09 Service Industries Incidental to Mineral Extraction

011 Livestock Farms (Except Animal Specialties)

012 Other Animal Specialty Farms

013 Field Crop Farms

014 Field Crop Combination Farms

015 Fruit and Other Vegetable Farms

016 Horticultural Specialties

017 Livestock, Field Crop and Horticultural Combination Farms

Division E Manufacturing Industries

In addition:

Agricultural farming operations are eligible for service under the Small Industrial rate. If there is a residence(s) on the same property as the farming operation, the residence(s) must be metered separately and billed under the Residential Service rate

Section N-9

Rate Schedules and Rate Application Guidelines

Large Industrial Rate Schedule [excerpt]

Large Industrial

That category of Customers in all areas served by Maritime Electric who use electricity chiefly for manufacturing, processing of goods, farming or for the extraction of raw materials and have a minimum contracted demand of 750 kW.

Section N-11 – Rate Schedules and Rate Application Guidelines

Large Industrial Rate Application Guidelines [excerpt]

Industrial Rates apply to the following S.I.C groups:

Division C Major group:

04 Logging Industry

Division D Major groups:

06 Mining Industries

07 Crude Petroleum and Natural Gas Industries

08 Quarry and Sand Pit Industries

09 Service Industries Incidental to Mineral Extraction

016 Horticultural Specialties

IR-5 Assume farm customers are given the option to either remain in the Residential rate class or migrate to the Small Industrial rate. Provide an estimate of the number of farms that are expected to remain in the Residential rate class, and those that are expected to migrate to the Small Industrial rate class.

Response:

On page 30 of the Application, the Company estimates that approximately 45 per cent of farm customers with consumption greater than 5,000 kWh per month would move to the Small Industrial rate class, if eligible. Therefore, 55 per cent is expected to remain in the Residential rate class.

IR-6 Based on the above estimates, and assuming that MECL's Rate Design Application is approved as filed, calculate the resulting RTC for each of MECL's rate classes.

Response:

In the Application, Tables 6, 7 and 8 show the calculation of the resulting RTC ratios for each of the Company's rate classes, assuming that the Application is approved as filed.

These calculations incorporate the following Stage 1 changes:

1. 45 per cent of the load in Residential cohort 6 (i.e., Farms > 5,000 kWh per month) moves to the Small Industrial rate class;
2. 75 per cent of the load in Residential cohort 7 (i.e., Other > 5,000 kWh per month) moves to the Small Industrial rate class;
3. The second energy block charge in the Residential rate class is increased to be equal to the first block energy charge, over a four-year period;
4. A 4.4 per cent increase in revenue from the Large Industrial rate class in year one; and
5. A 7.4 per cent increase in revenue from the Street Lighting rate class over years one and two.

The following table shows the resulting RTC ratios, as taken from Table 8 of the Application.

Table 2	
Resulting RTC ratios after implementation of Stage 1 changes	
Rate class	RTC ratio
Residential	94.3
Residential (Farms)	89.1
Residential (Seasonal)	95.5
General Service	112.8
General Service (Seasonal)	110.1
Small Industrial	98.6
Large Industrial	97.7
Lighting	97.8
Unmetered	104.4

RATE DESIGN APPLICATION – STAGE 1⁷

IR-7 In Docket UE20954, Maritime Electric defined “rate shock” to mean “*a rate increase so high that some customers cannot pay their bills. The determination of the point at which a rate increase qualifies as rate shock is subjective.*” Maritime Electric continued to state that “*while [rate shock] is one consideration in developing rate proposals, it is not, nor should it be, the only consideration.*”⁸

In the present application, MECL is proposing to limit annual increases in customers’ bills to 5% to “*minimize rate shock*”.⁹

- a. Is it MECL’s position that an annual rate increase of greater than 5% represents rate shock?
- b. If yes, what evidence does MECL have regarding customers’ inability to pay bills if an annual rate increase exceeds 5%?

Response:

- a. No, it is not Maritime Electric’s position that an annual rate increase of greater than 5 per cent represents rate shock.

As discussed in Section 5.0 of the Application, the proposed rate design changes are independent of the rate changes proposed by the Company in its General Rate Application (“GRA”), which was filed with the Commission on June 20, 2022. This means that rate changes approved under the GRA would be in addition to any rate changes approved under this Application.

The Company’s proposed rate changes as a result of the GRA are expected to increase annual costs for benchmark customers by 3.0 per cent annually beginning on March 1, 2023.¹⁰ By keeping the Stage 1 rate design changes to less than 5 per cent, the combined rate impact of both rate changes is, therefore, expected to be approximately 8 per cent.

Rate shock is a subjective concept and there is no industry consensus as to what constitutes rate shock, as stated by the Commission’s own expert Synapse Energy Economics Inc.¹¹ Their report does indicate that some jurisdictions consider increases of 14 per cent up to 20 per cent as a threshold for rate shock.

The Company has proposed changes in both this Application and the GRA that will keep the combined annual impact of both to less than 10 per cent.

⁷ See Exhibit M-1, filed May 14, 2021.

⁸ See Docket UE20954, Exhibit M-7, Maritime Electric response to IR-1 and IR-3.

⁹ See Rate Design Application, page 21.

¹⁰ A GRA settlement, filed with the Commission on April 4, 2023, reduced the rate increase to 2.6 per cent effective May 1, 2023.

¹¹ See Exhibit C-4, Review of Maritime Electric’s Proposed Rate Changes, page 12.

- b. For Maritime Electric, evidence of a customer's inability to pay their bills tends to occur on a limited case-by-case basis. In fact, it has been the Company's experience that customers are committed to meeting their financial obligations even during difficult circumstances. This was evidenced in 2020 during the onset of the COVID-19 pandemic. In conjunction with the Commission, the Company introduced a COVID-19 Customer Support Program to help customers manage their electric bills during that very uncertain time. Even though this program was actively promoted to customers, signup was relatively low. Many customers who were having difficulty paying their bills simply chose to make alternate payment arrangements rather than signing up for the program. Of those who did choose to take part in the program, 96 per cent of the balances deferred were paid by the time the program ended in September of 2021.

Under any circumstances, Maritime Electric provides support to customers who are having difficulty meeting their payment obligations to the Company by offering alternate payment arrangements and providing suggestions on how to lower their monthly consumption, if possible. The Company further suggests that keeping the total impact of rate increases to reasonable levels, when possible, as discussed above in the response to part (a) will help customers' ability to pay their bills.

- IR-8** At page 41 of the Application, Maritime Electric states that “*Net metering customers pay little or none of the demand related fixed costs associated with their service resulting in these costs being recovered from all other customers in their rate class*”. MECL estimates that net metering customers are avoiding approximately \$645 of fixed costs per year, and that net metering customers have a RTC of only 31 percent.¹²
- a. Please provide the average cost broken down by component incurred by Maritime Electric to connect a net metering customer. Are these costs fully recovered by the net metering customer? If not, please explain how these costs are recovered.
 - b. Please explain why Maritime Electric is not proposing to increase the monthly service charge to recover these costs from net metering customers.
 - c. Has Maritime Electric considered creating a separate rate class for net metering customers? Please explain.
 - d. If Maritime Electric created a separate rate class for net metering customers, what would the monthly service fee be to recover costs associated with a net metering customer? Please include the justification, calculations and RTC’s under this scenario.
 - e. Please explain how the subsidization of net metering customers by other ratepayers is consistent with Bonbright’s principles and the preamble to the *Electric Power Act*, which requires electric rates to be reasonable, publicly justifiable and non-discriminatory.

Response:

- a. The following table is an estimate of the average annual cost to serve a residential urban customer without a solar net metering installation compared to a similar customer with a solar net metering installation.

¹² See Rate Design Application, Appendix D, pages 2-3.

TABLE 1 Net Metering Comparison – Residential Urban Customer			
		Without Solar	With Solar – Net Metering
Customer Energy Charge (\$/kWh)	A = B + C	0.1437	
- Estimated Energy Portion (\$/kWh)	B	0.0800	
- Estimated Fixed Cost Portion (\$/kWh)	C	0.0637	
Monthly Service Charge (\$/month)	D	24.57	
Average Annual Household Usage (kWh)	E	10,120	
Average Solar Installed (kW)		-	9.2
Calculation of Annual Charges:			
- Estimated Energy Portion (\$)	F = B X E	809	_ ¹³
- Estimated Fixed Cost Portion (\$)	G = C X E	645	_ ¹²
Service Charge (\$)	H = D X 12	295	295
Total Annual Charges (\$)	I = F + G + H	1,749	295
Cost to Service Customer (\$)	J	1,749 ¹⁴	940 ¹⁵
Recovery of Costs (%)	K = I / J	100%	31.3%

Table 1 illustrates that an appropriately sized solar installation results in the customer paying only 31 per cent of the Company’s cost to provide service to that customer.

In accordance with legislation, the net metering customer is credited the full retail rate for energy it produces. The full retail rate includes both the energy portion (estimated at \$0.0800 per kWh) and the fixed cost portion (estimated \$0.0637 per kWh). By being credited the full retail rate, a net metering customer does not pay the fixed costs of the system (line G). As such, the Company must recover those fixed costs from other Residential customers.

- b. Article 12.(2) of the *Renewable Energy Act* (“REA”) states: “Under a net-metering system agreement ... a public utility shall not charge the small capacity renewable energy generator any fee or charge that is not charged or imposed on, or that differs in amount from any such fee or charge that is imposed on, any other customer of the public utility who is in the same power rate class ...”

It is Maritime Electric’s interpretation of this legislation that customers within a rate class who elect to invest in net metering infrastructure cannot be charged more than other customers in that class. Therefore, in order to continue to comply with the legislation, the Company is not proposing to recover any additional costs from net metering customers.

¹³ An appropriately sized solar net metering installation, on an annual basis, should produce the same amount of energy that the customer consumes, which is assumed in the calculations.

¹⁴ For illustrative purposes, it is assumed that a Residential Urban customers pays 100% of the cost to service that customer.

¹⁵ The cost to service a net metering customer includes the service charge (\$295) and the fixed cost portion (estimated at \$645). The energy cost portion is avoided because the solar installation provides the energy.

- c. While Article 12.(2) of the REA does not explicitly prohibit the formation of a new rate class for net metering customers, the Company considers this option to be inconsistent with the intent of the legislation.

In addition, the Company considered the recent experience of Nova Scotia Power (“NSP”) who proposed charging an access fee for customers who sell renewable power back to the utility. This proposal was essentially blocked by the Nova Scotia Government in February 2022 and NSP was eventually forced to withdraw the proposal. Furthermore, when asked by CBC PEI whether the current Provincial Government on PEI would consider a similar proposal by Maritime Electric, the Minister of Transportation, Infrastructure and Energy, Steven Myers, said *“We were encouraging people to [install roof top solar] and we want to continue to encourage people to do it but I’ve had a lot of people reach out to me since this Nova Scotia situation has started, worrying that it’s going to happen here. We would probably do the same as the government of Nova Scotia did, where we would move to block [putting a new charge in place]. In good faith we told people this is the deal when they put roof-top solar on, that we had a net-metering program. Anybody who has it, we will stand by that commitment.”*¹⁶

As such, the Company does not foresee the ability to increase the costs recovered from net metering customers at this time.

- d. If Maritime Electric created a separate rate class for net metering customers, the monthly service fee for an Urban Residential customer would need to increase by \$53.75 to recover the annual fixed cost portion of the energy charge (i.e., \$645, per line H from the above table, divided by 12 months). Therefore, the revised monthly service charge would be \$78.32 (i.e., \$24.57 plus \$53.75).¹⁷
- e. Assessing whether a situation is consistent with Bonbright’s principles requires considerable judgment including how the principle is interpreted. Therefore, the following assessment as to whether the subsidization of net metering customers by other ratepayers (i.e., cross subsidization) is consistent with each of the Bonbright principles, as outlined in the Application¹⁸, is based on Maritime Electric’s interpretation considering the Provincial governments policy related comments.
1. *Recovery of cost of service – The aggregate of all customer rates and revenue must be sufficient to recover all the utility’s cost of service.* The cross subsidization is consistent with the principle from the perspective that Maritime Electric will recover the shortfall in revenue, resulting from net metering customers not paying their allocated costs, from other ratepayers. Therefore, Maritime Electric will recover all the utility’s cost of service on an aggregate basis.
 2. *Fair apportionment of costs among customers and appropriate cost recovery should be reflected in rates.* The cross subsidization is inconsistent with this principal. Maritime Electric is not currently able to design a rate whereby net metering customers pay for their allocated costs. Assuming the net metering

¹⁶ Wayne Thibodeau, CBC News, February 3, 2022. <https://www.cbc.ca/news/canada/prince-edward-island/pei-solar-1.6337271>

¹⁷ The Company also has net metering customers in commercial rate classes. Therefore, the service charge for those classes would need to be revised as well.

¹⁸ Page 10 of the Stage 1 of Rate Design Application list the seven Bonbright principles.

- installation is sized in proportion to the customer's load, the customer does not pay for fixed system costs, and these are recovered from other ratepayers.
3. *Price signals that encourage efficient use and discourage inefficient use of electricity.* The cross subsidization is consistent with this principal. A net metering customer, with an appropriately sized installation, will be charged the higher energy charge for each additional kWh of energy used after being credited for their own self supply, which is an appropriate price signal to encourage efficient use of electricity. For customers who are not net metering customers, the higher energy charge required to cross subsidize net metering customers could be viewed as sending an appropriate price signal to encourage efficient use of electricity.
 4. *Customer understanding and acceptance.* The cross subsidization can be viewed as consistent with this principal from the perspective that customers with solar installations have an understanding and expectation of how a solar installation will impact their electricity bill. The cross subsidization can be viewed as inconsistent from the perspective of customers who do not have solar installations and do not understand why their electricity bill needs to increase.
 5. *Practical and cost effective to implement while sustainable to meet long-term objectives.* The cross subsidization is consistent with this principle from the perspective that net metering customers are included in an existing rate class and a rate change for the rate class is practical and cost effective to implement.
 6. *Customer rate stability with impacts to customers being managed.* The cross subsidization is consistent with this principle because rates are currently not materially impacted by the cross subsidization and customer rates are, therefore, being managed. As the number of solar installations continue to increase, it will have a material impact on future rates and become inconsistent with this principle.
 7. *Revenue stability.* The cross subsidization is consistent with this principle as Maritime Electric ensures that sufficient revenue is recovered from customers to cover the costs of providing service.
 8. *Avoidance of undue discrimination by enhancing and maintaining interclass equity.* The cross subsidization is not consistent with the principle. In fact, it creates discrimination and inequality within the Residential rate class.

Assessing the cross subsidization of net metering customers in reference to the *Electric Power Act*, which requires electric rates to be reasonable, publicly justifiable and non-discriminatory, also requires judgment and interpretation.

For example, if the majority of ratepayers support the Provincial Government's Net Zero Path, which includes incentives to increase the use of renewable energy through solar installations, then it may be reasonable and publicly justifiable for some ratepayers to subsidize this initiative for the greater good of all ratepayers. However, if public policy is excluded from the analysis, then the cross subsidization of net metering customers by other ratepayers would not be viewed as reasonable or publicly justifiable.

Finally, the cross subsidization is discriminatory as it requires customers without solar installations to pay for costs that should be recovered from the customers with solar installations.

In summary, inclusion of net metering customers in the residential class is both consistent and inconsistent with the rate design principles, as measured by Bonbright's principles

and the *Electric Power Act*. Electrification and Net Zero achievement may require utilities and regulators to incorporate broader societal objectives in their interpretation of how these principles are applied.¹⁹ Achieving a Net Zero end-state may reasonably require cross subsidization, taxpayer subsidy, intergenerational subsidy or some combination thereof that goes beyond the traditional interpretation of rate design and Bonbright's principles. This transition is still in its infancy and the impact on rate design will undoubtedly take time to evolve.

¹⁹ Electricity Canada Economic Regulation Innovation Committee is preparing a discussion document titled *Regulating Beyond Bonbright? Utility Rate Making for Net Zero*, which will be presented at the Electricity Canada Regulatory Forum 2023 in conjunction with CAMPUT 2023. This document is expected to consider the justification for weighing social responsibility as part of rate making principles as the industry transitions to Net Zero.

- IR-9** Maritime Electric has identified 45 “Other” Residential customers with consumption greater than 5,000 kWh. These 45 customers include two (2) cannabis grow operations, three (3) fish farms, and nine (9) agricultural related customers.
- a. Refer to the definition of farm in Maritime Electric’s General Rules and Regulations. Please explain why these 14 customers are not classified as “farms”.
 - b. Refer to MECL’s response to IR-1(c) issued by Synapse Energy Economics, Inc. (“Synapse”).²⁰ In the 2017 Cost Allocation Study, MECL identified these 14 customers as Residential-Farm. In the 2020 Cost Allocation Study, MECL re-classified these customers as Residential-Year Round. There was no change to the definition of “farm” in the General Rules and Regulations between 2017 and 2020. Please explain why MECL re-classified these customers in 2020.
 - c. Is MECL proposing that these 14 customers remain the Residential rate class? If so, please provide justification.
 - d. Refer to MECL’s response to IR-1(a) issued by Synapse.²¹ MECL states that, in retrospect, three grain-handling operations currently served under the Residential rate should be served under the General Service or Small Industrial rates. Is MECL is proposing to move these customers to either General Service or Small Industrial as part of this Application? Please explain.
 - e. Assuming these 14 customers are classified as farms and allocated to Cohort 6, please calculate the resulting RTC ratios for Cohorts 6 and 7.

Response:

- a. For the purposes of the Farm Study, the Residential Load Study, the 2020 Cost Allocation Study (“CAS”) and the Application, these 14 customers were treated as farms. However, their exclusion does not mean that these customers are not farms as defined in the Company’s General Rules and Regulations. In fact, all 14 customers have been and are treated as farms for billing purposes and are served under the Residential rate class.

The Application used the Farm Study as one of its inputs. First principles of preparing such a study is to identify a sample population that is representative of the larger group. In this context, the Farm Study focused on the larger farms because they would be the ones most affected by the elimination of the second energy block in the Residential rate. The majority of the larger farms were identified as being either potato, dairy, hog or poultry operations, and these four farming types account for most of the electricity usage by all farms on PEI. Thus, only potato, dairy, hog and poultry farms were analyzed in the Farm Study. The two cannabis, three fish farm and nine agriculture-related customers were considered outliers for the purpose of the Farm Study. In the Application, Cohort 6 (Farms

²⁰ See Exhibit M-7, pages 1-2.

²¹ See Exhibit M-7, page 1.

> 5,000 kWh) was used to represent those customers selected to be included in the Farm Study. Therefore, those 14 outliers were instead included in Cohort 7 (Other > 5,000 kWh), which had a total of 45 customers with non-domestic usage or farms other than potato, dairy, hog or poultry and having > 5,000 kWh billed for January 2020.

- b. The 14 customers referred to (i.e., two cannabis, three fish farm and nine agricultural-related customers) were not “re-classified” or moved to a different rate class for billing purposes. They were, however, treated differently for study purposes because better information was available at the time the 2020 CAS was completed compared to the information available when the 2017 CAS was completed.²²

The customers assigned to the Residential Farms category in the 2017 CAS were any Residential customer who had been assigned one of eight farming-related SIC codes in the Company’s billing system.²³ Of the 14 customers referred to, one of the cannabis operations and four of the agricultural-related operations were included in the Residential Farms category in the 2017 CAS based on their assigned SIC codes. Eight of the 14 customers were included in year round Residential because they had not been assigned either of the eight farming-related SIC codes. The final customer is the second cannabis operation who became a customer after the 2017 CAS was completed.

The customers assigned to the Residential Farms category in the 2017 CAS were used to provide a preliminary assessment of whether farms had a materially different RTC ratio than the remaining Residential class as a whole. The result, though preliminary, indicated that this might be the case and that a more detailed study (i.e., the Farm Study) was required to confirm this.

The primary focus of the Farm Study was to assess the impact on farms of eliminating the declining second block energy charge in the Residential rate. As discussed in part (a) of this response, only potato, dairy, hog and poultry farms were selected for the Farm Study. An examination in the initial stages of the Farm Study showed that many of these customers were small farming operations or were no longer farming at all.²⁴

At the time the 2020 CAS was completed, the Company had some preliminary results from the Farm Study, namely the energy consumption and usage patterns of farms, and the limitations of using the SIC codes alone to identify farming operations.

During the initial stages of the Farm Study, an examination of individual customers’ accounts indicated that many of the 2,094 Residential accounts with farm SIC codes identified in the 2017 CAS were small farming operations/hobby farms or were no longer farming at all.²⁵ Such accounts would not be impacted by eliminating the declining second block energy charge as their consumption patterns did not meet the 2,000 kWh per month

²² Note that the 14 customers referred to have been and are treated as farms for billing purposes.

²³ For the 2017 CAS, the use of the SIC codes was the best information available for identifying farms as a subset of the Residential rate class.

²⁴ Small farming operations are considered to have usage characteristics similar to a Residential customer with combined usage of a dwelling and business operation measured by one meter, where the connected load of the business operation, excluding space heating and air conditioning, is two kilowatts or less as defined under Section N-2 of the Company’s Rules and Regulations.

²⁵ SIC codes in the Company’s billing system are generally applied when a customer account is setup initially and changes usually occur only when initiated by the customer identifying a change to their operations.

threshold for the declining second block. Given that the primary focus of the Farm Study was to assess the impact on farms of eliminating the declining second block energy charge in the Residential Rate, these small or discontinued farming operations were not identified as farms for the purpose of preparing the 2020 CAS and instead were included in the Residential Year Round category in the 2020 CAS.

In addition, the Company identified over one hundred farms that had not be assigned either of the eight farm-related SIC costs. These farms were identified by cross referencing these accounts with member lists from industry organizations and a detailed review of information in the Company's billing system for larger usage Residential customers.²⁶

In summary, based on key learnings from the Farm Study, the Company concluded that the approach used to identify the subset of farms in the Residential class in the 2017 CAS was no longer appropriate for the 2020 CAS and adjusted the subset accordingly in the 2020 CAS.

- c. No, Maritime Electric is not proposing that these customers remain in the Residential rate class. As discussed on page 31 of the Application and shown on Table 6 on page 32 of the same, the Company expects a number of larger customers included in "Other > 5,000 kWh" (i.e., Cohort 7) to move to the Small Industrial rate class after Step 2 of eliminating the declining second block energy charge is implemented. This represents approximately 75 per cent of the consumption included in Cohort 7.
- d. As the Company moves through the four steps proposed to eliminate the declining second block energy charge, there will be ongoing communications with the both farm and non-farm customers most significantly impacted. Part of the discussion will be a one-on-one assessment of their operations to determine the most appropriate rate class going forward.
- e. Table 1 below shows the estimated RTC ratios when the 14 customers are reassigned from Cohort 7 to Cohort 6.

TABLE 1				
Cohort 7 - Other > 5,000 kWh				
		2017 Cohort 7	Less: 14 Accounts moved to Cohort 6	Revised Cohort 7
Allocated Costs (\$)	A	1,752	(1,385)	367
Base Revenue (\$)	B	1,140	(945)	195
RTC Ratio (%)	C = B/A	65.1%	68.2%	53.1%
Cohort 6 - Farms > 5,000 kWh				
		2017 Cohort 6	Plus: 14 Accounts moved from Cohort 7	Revised Cohort 6
Allocated Costs (\$)	D	5,663	1,385	7,048
Base Revenue (\$)	E	4,816	945	5,761
RTC Ratio (%)	F = E/D	85.0%	68.2%	81.7%

²⁶ There are hundreds of SIC codes in existence, several dozen of which relate to agriculture and related industries. Determination of the SIC code selected on a customer's account in the Company's billing system is subject to interpretation of the information provided by customers at the time the account is setup or updated.

The impact of moving these 14 customers from Cohort 7 to Cohort 6 is that the RTC ratios of both cohorts are lower. The supporting calculations for this table are provided in IR-9 (e) - Attachment 1.

IR-10 In response to IR-28 issued by Synapse,²⁷ MECL states that a significant portion of the 45 customers in Cohort 7 would be eligible for service under the Small Industrial rate class.

- a. Which of these customers should be classified as Small Industrial based on MECL's existing General Rules and Regulations?
- b. Please explain why MECL is not proposing to migrate these customers to the Small Industrial rate as part of this Application.

Response:

- a. In response to IR-28 issued by Synapse and on page 31 of the Application, the Company indicated a significant portion of customers would be eligible and would, therefore, move to the Small Industrial rate class after implementation of Step 2 of eliminating the declining second block energy charge. The Company would like to amend this statement to say that a significant portion, approximately 75 per cent, of the *total consumption* of Cohort 7 is expected to move to Small Industrial rate class after Step 2 of the eliminating the declining second block. This 75 per cent of the total consumption for Cohort 7 is made up of eight customers, namely two cannabis operations, three fish farming operations and three grain handling facilities.

The two cannabis operations are essentially greenhouses, which are specifically allowed under the definition of a farm and, therefore, qualify for service under the Residential rate class in the existing General Rules and Regulations. For these operations to qualify for service under the Small Industrial rate, the proposed changes to the Company's General Rules and Regulations discussed in the response to IR-4 would need to be approved by the Commission.²⁸

With the addition of the SIC code for Horticultural Specialties to the Large Industrial rate class, as discussed in response to IR-4, these two cannabis operations could also move to the Large Industrial rate class if their energy consumption is high enough.

The three fish farming operations are currently eligible for service under both the Residential and Small Industrial rate classes, as fish hatcheries are specifically identified under the definitions for both of these rate classes. The Company believes that these customers, based on their load, will be incentivized to move from Residential to Small Industrial after Step 2 of eliminating the declining second block.

The three grain handling facilities may have been classified as Residential under a broad interpretation of the definition of a farm at the time they became customers. If a new grain handling facility were to request service, it would be classified as Small Industrial under the existing rules. Maritime Electric believes that moving a customer from one rate class to another requires consultation with and education of the customer so they understand why a different rate is necessary, particularly if the rate class change will result in higher

²⁷ See Exhibit M-2, page 31.

²⁸ With the proposed addition of the SIC code 016, Horticultural Specialty, the two cannabis operations could qualify for service under the Small Industrial and Large Industrial rate classes as proposed in the response to IR-4.

bills for the customer. The Company is therefore proposing that these customers be moved as part of the overall process of moving large Residential customers with little or no domestic use to Small Industrial after Step 2 of the elimination of the declining second block.

- b. As discussed on page 31 and as illustrated in Tables 6, 7 and 8 of the Application, Maritime Electric is proposing that the two cannabis operations, three fish farming operations, and three grain handling operations move to Small Industrial after Step 2 of the elimination of the declining second block.

IR-11 Refer to MECL's response to IR-6(a) issued by Synapse.²⁹ MECL states that it has changed its approach to how it classifies farms in its billing system. As a result, the number of farms in MECL's billing system has decreased from 2,094 in the 2017 Cost Allocation Study, to 523 in the 2020 Cost Allocation Study.

- a. There has been no change to the definition of "farm" in MECL's General Rules and Regulations between 2017 and 2020. Please explain on what basis MECL has changed the classification of farms.
- b. Do the 523 farms identified in the 2020 CAS only include farms in the Residential rate class that use more than 5,000 kWh per month?
- c. In the Application, MECL is proposing certain rate design changes for "farms". Will these changes apply to the 2,094 farms identified in the 2017 CAS, or the smaller subset of 523 identified in the 2020 CAS?

Response:

- a. In response to IR-6(a), Maritime Electric did not mean to imply that the classification of farms in the Company's billing system had changed in the period between the 2017 CAS and the 2020 CAS. There has been no change in how farms are classified in the billing system.

Response to IR-9 part (b) discusses why some farms were classified differently between the 2017 CAS and 2020 CAS.

- b. No, the farms identified in the 2020 CAS do not only include farms in the Residential rate class that use more than 5,000 kWh per month.

The 523 referenced in the 2020 CAS represents the average number of monthly bills of the 528 farms identified in the Farm Study as a subset of the Residential class and consists of four groups:

1. 418 farms that used more than 5,000 kWh in January 2020, which was the month in which the peak load occurred in 2020.
2. 71 farms that used less than 5,000 kWh in January 2020 but used more than 5,000 kWh in one or more other months.³⁰
3. 23 farms that used more than 5,000 kWh in a month in 2019 but not in 2020.
4. 16 farms that used less than 5,000 kWh per month and were included for completeness as they had been identified as full-time farming operations.³¹

²⁹ See Exhibit M-6, pages 6-7.

³⁰ For example, one farm is a potato warehouse whose warehouse was full in the fall and energy consumption exceeded 5,000 kWh for that period. However, this farm's energy consumption was less than 5,000 kWh in January 2020 because most of the potatoes had been delivered for processing or retail sale.

³¹ For example, 15 additional dairy farms were included in the study to ensure the total number of dairy farms in the Study was representative of the actual number of dairy farms in the industry.

- c. The elimination of the declining second block energy charge will apply to all Residential customers, including the 2,094 accounts identified as farms for the 2017 CAS.

IR-12 In response to IR-6(d) issued by Synapse, MECL states that “*small farm system usage was captured in the Residential Load Study*”.³² Has MECL included farms in its Residential Load Study? If so, please explain and justify.

Response:

As discussed in the response to IR-9 (b), an examination in the initial stages of the Farm Study of some of the 2,094 Residential accounts with farming-related SIC codes were small farming operations or were no longer farming at all.³³ These accounts were considered to have similar usage characteristics to all other Residential customers and, therefore, included in the population from which a sample was taken to perform the Residential Load Study.

³² See Exhibit M-6, page 8.

³³ Small farming operations are considered to have usage characteristics that meet the Residential customer with combined usage of a dwelling and business operation measured by one meter, where the connected load of the business operation, excluding space heating and air conditioning, is two (2) kilowatts or less as defined under Section N-2 of the Company’s Rules and Regulations.

REPORT PREPARED BY SYNAPSE ENERGY ECONOMICS³⁴

IR-13 In Table 2 at page 7 of the Synapse Report, Synapse estimates the coincident peak and non-coincident peak load factors for Cohorts 5 and 7. Does MECL agree with these estimates? Please explain.

Response:

Yes, Maritime Electric agrees with Synapse's estimates.

³⁴ See Exhibit C-4, filed May 13, 2022 ("Synapse Report")

IR-14 Refer to Table 3 at page 8 of the Synapse Report. Eliminating the declining block rate is not, in itself, sufficient to bring moderate to high usage Residential customers within the target RTC ratio of 95 to 105. Synapse states that “*additional rate changes would be required to generate the needed revenues*”.³⁵ Please propose additional changes to MECL’s rate structure to bring moderate and high usage Residential customers within the target range of 95 to 105.

Response:

In Section 8.8 of the Application, the Company indicated that a second stage of rate design changes will be required to close the remaining gap in the RTC ratios for the Residential and General Service classes. In Table 9 on page 9 of the Application, the Company forecast the additional adjustments that may be required in Stage 2 to bring the RTC ratio of the General Service class within the expected range of 95/105 based.³⁶

In Section 8.9 of the Application, the Company identified several reasons why it is not appropriate to propose Stage 2 rate design changes at this time. The primary reason is the expectation that the next cost allocation study will result in a lower apportionment of costs to the Residential class, which will have an impact on the RTC ratio. Instituting changes in Stage 1, before the results of the next CAS are known, to bring the Residential RTC within the approved range may result in an overcorrection.

At the end of Section 8.9, the Company provides the following recommendations with respect to Stage 2:³⁷

1. Continue to review and analyze the metering data from the load study participants to improve load study results and the impacts of Stage 1 on customer consumption, with any material results incorporated in the final recommendations for Stage 2;
2. Complete a 2023 Cost Allocation Study to be filed with the Commission in 2024. This study will assess the impact of the first two steps of the Stage 1 rate changes on the RTC ratios and more accurately measure the remaining gaps to be addressed by Stage 2; and
3. On or before December 31, 2024, the Company will file specific rate recommendations for Stage 2 for Commission approval to be implemented beginning in 2026.

³⁵ See Exhibit C-4, at page 9.

³⁶ Table 9 is based on the results of the 2017 Cost Allocation Study adjusted to reflect the forecast impact of the proposed Stage 1 rate design changes.

³⁷ The dates for specified were based on the proposed March 1, 2022 implementation of the Company's Stage 1 Application changes and should be advanced to reflect the final implementation date approved by the Commission.

IR-15 Synapse determined that the usage, load factor and load curves of farms differs from Residential, General Service and Small Industrial customers. As a result, Synapse recommends that farms be separated into a new rate class. Please propose a new rate class (or classes) for farms based on the load data currently available. Please provide the resulting RTC ratios.

Response:

Table 1 provides the details of a potential Farm rate class.³⁸ This rate was developed using available load data from the Farm Study and Residential Load Study.

TABLE 1 Potential Farm Class Rate		
Demand Charge	Per kW of billing demand	\$ 8.80
First Block Energy Charge	Per kWh for first 200 kWh per kW of billing demand per month	\$ 0.1246
Second Block Energy Charge	Per kWh for balance of kWh per month	\$ 0.0825

The rate has been developed based on 2020 allocated costs to these customers and, therefore, the RTC ratio of the potential Farm rate is 1.00, as shown in Table 2.

TABLE 2 Estimated RTC Ratio of Potential Farm Class		
Customer Related Costs (\$000s)	A	\$ 166
Demand Related Costs (\$000s)	B	3,263
Energy Related Costs (\$000s)	C	5,108
Total Costs Allocated to Farm Class	D = A + B + C	\$ 8,537
Revenue from Demand Charges	E	1,797
Revenue from First Block Energy Charge	F	4,821
Revenue from Second Block Energy Charge	G	1,919
Total Revenue from Farm Class	H = E + F + G	\$ 8,537
RTC	I = H / D	1.00

The calculations in the above tables are based on the following assumptions:

- Small farms will remain in the Residential class because 50 per cent or more of their load is for domestic use, similar to the treatment of other small businesses that operate out of a home.
- Customer-related costs are recovered through the demand charge instead of a separate monthly service charge, because customer-related costs are a small portion (less than 2 per cent) of the total cost of service.

³⁸ The potential Farm class rate is based on the Residential farm subset within the 2020 CAS plus seven other Residential customers (i.e., two cannabis operations, three fish farm operations and two greenhouse facilities). It is assumed that these seven other Residential customers would qualify for service under this potential Farm class.

- Half of the demand-related costs are recovered through the demand charge with the remaining half recovered through the first block energy charge. This provides fairer treatment of customers with a very low load factor. An example of such a customer is an irrigation pump that is turned on for only a few hours in a month. This customer is unlikely to contribute to the monthly system peak and, therefore, should not be charged based on a full share of demand-related costs.
- The first block energy charge is intended to recover half of the demand-related costs plus a full share of energy-related costs. The “200 kWh/kW of demand” sizing factor for first block energy is based on recovering half of the demand-related costs over the first 200 hours of a customer’s operations during a month. This sizing is representative of a factory operating for one eight-hour shift per day for five days a week, which equates to approximately 200 hours per month. This is similar to a dairy farmer who requires three hours to milk the herd plus clean up two times per day, which equates to 180 hours per month.
- The second block energy charge is based on recovering the full share of energy-related costs and assumes that the costs incurred by the utility are largely energy-related beyond the first 200 hours of service in a month. Because the customer’s demand-related costs have been fully recovered through a combination of the demand charge and the first block energy charge, this also sends the correct price signal to customers such as a factory that is considering adding a second shift or a dairy farmer considering increasing the size of his herd.

Instituting this potential Farm rate would result in an estimated 14.5 per cent increase in revenue from those customers, as shown in Table 3. This indicates that a multi-year phased in approach would be recommended to avoid undue hardship on the impacted customers.

Current Revenue from Farm Customers under Residential Rate	A	7,454
Estimated Revenue from Farm Customers under Potential Farm Rate	B	8,537
Increase in Revenue	C = B-A	1,083
% Increase	D = C/A	14.5

It is worth noting that the total estimated revenue of \$8,537 from Farm customers under the potential Farm rate, per Table 3, is not materially different than the revenue of \$8,587 from Farm customers if they were serviced under the Small Industrial rate class, which is shown in Table 4. Given the small number of customers that would qualify for a separate Farm rate, Maritime Electric believes it remains most appropriate to include them in the Small Industrial rate class.

For comparative purposes, Table 4 provides the estimated RTC ratio of moving this same group of customers from the Residential to the Small Industrial rate class, which is proposed in the Application.

TABLE 4		
Estimated RTC Ratio of Farms Moving to Small Industrial		
Customer Related Costs (\$000s)	A	\$ 166
Demand Related Costs (\$000s)	B	3,263
Energy Related Costs (\$000s)	C	5,108
Total Costs Allocated to Farm Class	D = A + B + C	\$ 8,537
Revenue from Demand Charges	E	1,523
Revenue from First Block Energy Charge	F	3,348
Revenue from Second Block Energy Charge	G	3,716
Total Revenue from Farm Class	H = E + F + G	\$ 8,587
RTC Ratio	I = H / D	1.01

The primary difference between the two rates presented in Tables 2 and 4 is the threshold at which the first block energy charge applies. For the existing Small Industrial rate, the first block rate applies to the first 100 kWh per kW of billing demand per month rather than the 200 kWh per kW of billing demand per month in the potential Farm rate. The Small Industrial rate threshold is a carryover from adopting NB Power +10 rates in the early 1990s.

The supporting calculations to this response are provided in electronic format as IR-15 - Attachment 1.

IR-16 Synapse determined that MECL’s monthly Residential service charge is “among the highest residential customer charges of investor-owned utilities in North America”.³⁹

- a. Please calculate the Residential service charge using the basic customer method as defined by Synapse. Please calculate the resulting change in the Residential basic rate, as well as the RTC for each Residential cohort identified in Table 2 of the Synapse Report. Assume that the Residential declining block rate is eliminated.
- b. If MECL does not agree with using the basic customer method to calculate the Residential service charge, please propose an alternate manner of determining the service charge. Please include justification and the calculations request in (a) above.

Response:

- a. Maritime Electric’s calculation of the Residential service charge, using the basic customer method, agrees to the calculation provided in Table 10 of the Synapse Report and is provided in IR -16 (a) - Attachment 1.

The following table provides the revenue-to-cost (“RTC”) ratios for the various cohorts within the Year Round Residential rate class, comparing the current RTC ratios to those reflecting the use of the basic customer method for determining the service charge, assuming the Residential declining block is eliminated.

Impact of Revised Service Charge on RTC Ratio for Year Round Residential ⁴⁰		
Cohorts	2017 RTC Ratios ⁴¹	Revised RTC Ratios
1. Usage 0 to 575 kWh	102.0	99.0
2. Usage 576 to 1,200 kWh	95.2	93.5
3. Usage 1,201 to 2,300 kWh	95.1	94.6
4. Usage 2,301 to 5,000 kWh	81.9	82.9
5. Domestic > 5,000 kWh	70.7	76.7
6. Farms > 5,000 kWh	85.0	101.3
7. Other > 5,000 kWh	65.1	96.7
Total	91.7	91.7

The scenario presented above shifts the recovery of a portion of fixed costs from customers via the service charge to the energy charge. The RTC ratio decreases for those cohorts with lower energy consumption and increases for those cohorts with higher energy consumption, which is also being influenced by the elimination of the declining second block rate.

³⁹ See Exhibit C-4, at page 21.

⁴⁰ Detailed calculations for this table is provided in IR – 16 (a) Attachment 1.

⁴¹ These RTC ratios are as reported in Table 3 in Appendix C, Preliminary Residential Class Load Study Results, of the Stage 1 of Rate Design Application submitted on May 14, 2021.

Maritime Electric would like to point out that this scenario makes the cross subsidization of net metering customers worse. As indicated in the Application, net metering customers avoid paying for the portion of the Company's fixed costs that are allocated to the energy charge.⁴² By shifting even more of the Company's fixed costs from the service charge to the energy charge, the impact of the cross-subsidization is worsened.

- b. As explained under the heading "Recommendations Regarding the Residential Service Charge" in Maritime Electric's response to the Synapse Report, filed with the Commission on August 5, 2022, Maritime Electric does not believe the basic customer method is an appropriate methodology given the Company's facts and circumstances.⁴³ However, in that same response, Maritime Electric did agree with Synapse's recommendation to analyze its costs and resulting allocations, and indicated its intent to engage an expert as part of the second stage of rate design.

Therefore, Maritime Electric respectfully requests an opportunity to include a review of the customer and demand classification percentages for the distribution system as part of the Company's next cost allocation study, which would then be incorporated into the development of the second stage of the Rate Design Application.

⁴² Per Appendix D, Residential Net Metering Impact on Rates, of the Stage 1 of Rate Design Application submitted on May 14, 2021.

⁴³ See Exhibit M-8, Maritime Electric response to Synapse Report, pages 3 to 5.

IR-17 On page 18 of the Synapse Report, at footnote 40, Synapse states that the average monthly usage for a Residential customer is approximately 800 kWh. Does MECL agree with this estimate?

Response:

Maritime Electric agrees that the average monthly usage for a Residential customer is approximately 800 kWh. The following table shows an average monthly usage of 800 kWh for cohorts 1 and 2 combined (i.e., 772 kWh) and an average monthly usage for all year round Residential customers is approximately 850 kWh (i.e., 851 kWh).⁴⁴

Average Monthly Usage for Year Round Residential Customers March 2019 to February 2020			
Cohorts (based on January 2020 usage)	Number of Customers	12 month Energy Sales (GWh)	Average Monthly Usage (kWh)
1 (up to 2,300 kWh)	53,474	410.1	639
2 (2,301 to 5,000 kWh)	7,017	150.6	1,789
1 and 2 combined	60,491	560.7	772
3, 4 and 5 (> 5,000 kWh)	756	64.6	7,121
All combined	61,247	625.3	851

Maritime Electric uses an average monthly usage of 650 kWh as an indicative value when estimating the impact of a rate increase on Residential customers' bills, based on cohort 1. The majority (i.e., more than 85 per cent) of customers are in cohort 1, with an average monthly usage of 639 kWh. Therefore, an average monthly usage of 650 kWh is considered more representative for the majority of Residential customers.

⁴⁴ The table is based on data from Table 3 on page 24 of Maritime Electric's May 14, 2021 Application for an Order Approving Stage 1 of Rate Design Changes.

IR-18 Please provide the names, addresses, and monthly consumption level (in kWh) for each of MECL's customers in the Residential rate class who consumed more than 5,000 kWh per month in 2021. This includes both farm and non-farm customers within the Residential rate class. The Commission asks that the information be broken down by month, and that farms (as classified in the 2017 Cost Allocation Study) and net metering customers be clearly identified by MECL.

Response:

The Company has provided the requested customer information in an electronic format labelled IR-18 – CONFIDENTIAL - Attachment 1.



IR-9 (e) – Attachment 1

Table 1			
Cohort 7 - Other > 5,000 kWh			
	2017 Cohort 7	Less: 14 Accounts moved to Cohort 6	Revised Cohort 7
Allocated Costs (\$)	1,752	(1,385)	367
Base Revenue (\$)	1,140	(945)	195
RTC Ratio (%)	65.1%	68.2%	53.1%
Cohort 6 - Farms > 5,000 kWh			
	2017 Cohort 6	Plus: 14 Accounts moved from Cohort 7	Revised Cohort 6
Allocated Costs (\$)	5,663	1,385	7,048
Base Revenue (\$)	4,816	945	5,761
RTC Ratio (%)	85.0%	68.2%	81.7%

Table IR-9e: Reassignment of 14 accounts

Cohort 7 - Other > 5,000 - March 2019 to February 2020					
From Table IR-16a-1	Subtract 14 accounts		Revised		
	2017		2017	2017	
Cost allocators	allocated costs (\$000)	Cost allocators	allocated costs (\$000)	allocated costs (\$000)	
Number of customers	45	13	(14)	(4)	9
1CP (kW)	3.3	615	(2.4)	(443)	173
NCP (kW)	4.7	251	(4.0)	(215)	36
Energy sales (GWh)	10.5	872	(8.7)	(722)	149
		1,752		(1,385)	367
2017 base revenue (\$000)		1,140		(945)	195
RTC ratio (%)		65.1			53.2

Cohort 6 - Farms > 5,000 - March 2019 to February 2020					
From Table IR-16a-1	Add 14 Cohort 7 accounts		Revised		
	2017		2017	2017	
Cost allocators	allocated costs (\$000)	Cost allocators	allocated costs (\$000)	allocated costs (\$000)	
Number of customers	418	123	14	4	128
1CP (kW)	7.8	1,439	2.4	443	1,882
NCP (kW)	10.7	576	4.0	215	791
Energy sales (GWh)	42.5	3,525	8.7	722	4,248
		5,663		1,385	7,048
2017 base revenue (\$000)		4,816		945	5,761
RTC ratio (%)		85.0			81.7

Year	Farms > 5,000 kWh NCPs				Premise 92365	Total group of 14			Combined NCP kW
	Month	Day	hr ending	kW	kW	Month kWh	Month kWh	Estimated kWh	
2019	Dec	9	9:00	10,588	646	423527	1,032,120	1,574	12,162
2020	Jan	3	9:00	10,692	1,219	757628	1,551,748	2,497	13,189
2020	Jan	31	8:00	8,443	1,971	757628	1,551,748	4,037	12,480

System 1CP - hour ending 18:00 January 17, 2020 (for Mar 2019 to Feb 2020)
 Premise 92365: 1,410 kW for 1CP hour 727628 kWh metered at start of Feb 1, 2020
 727,628 kWh for January
 Total group of 14: 1,217,647 kWh for January
 2,360 estimated kW for 1CP hour

Year	Farms > 5,000 kWh NCPs				Premise 92365	Total group of 14			Combined NCP kW
	Month	Day	hr ending	kW	kW	Month kWh	Month kWh	Estimated kWh	
2019	Dec	9	9:00	10,588	646	423527	1,032,120	1,574	12,162
2020	Jan	3	9:00	10,692	1,219	757628	1,551,748	2,497	13,189
2020	Jan	31	8:00	8,443	1,971	757628	1,551,748	4,037	12,480

System 1CP - hour ending 18:00 January 17, 2020 (for Mar 2019 to Feb 2020)
 Premise 92365: 1,410 kW for 1CP hour 727628 kWh metered at start of Feb 1, 2020
 727,628 kWh for January
 Total group of 14: 1,217,647 kWh for January
 2,360 estimated kW for 1CP hour



IR-16 (a) – Attachment 1

Table IR-16a - Basic customer method of classifying costs as customer-related
(from Table 10 of Synapse May 13, 2022 Report)

Distribution System Category	Residential customer- related costs (\$000s)	Residential customer- related costs (\$000s)	Farms customer- related costs (\$000s)	% classified as customer- related
Primary Lines	-	-	-	-
Distribution Transformers	-	-	-	-
Secondary Lines	-	-	-	-
Service Lines	4,400	683	161	100
Meter assets	955	129	35	100
Meter Reading	655	45	24	100
Billing	721	54	26	100
Remittance & Collection	523	39	19	100
Uncollectibles & Damage Claims	357	47	13	100
Service Connections	(266)	(27)	(10)	100
Late Payments	(485)	(15)	(18)	100
	<u>6,860</u>	<u>955</u>	<u>250</u>	A
Average number bills per month	57,286	7,504	2,094	B
Average monthly cost	9.98	10.61	9.95	C = A / B / 12