

All our energy.  
All the time.



March 18, 2022

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 Additional Interrogatories from Synapse Energy Economics, Inc.**

Please find attached the Company's response to the additional Interrogatories filed by Synapse Energy Economics, Inc. 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

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

GCC12  
Enclosure



**Response to Additional Interrogatories  
regarding  
UE22503 – Application for an Order to  
Approve Stage 1 Rate Design Changes  
from  
Synapse Energy Economics, Inc.**

**Submitted March 18, 2022**

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- IR-1 Refer to MECL’s response to IR-28 from Synapse Energy Economics, Inc., submitted on October 1, 2021 that describes the 45 “Other Usage” customers with more than 5,000 kWh of consumption in January 2020. Please also refer to MECL’s rules and regulations, which defines a farm as “a holding on which agricultural operations are carried out. Agricultural operations include the production of field crops including grain, vegetables, seed and forage crops; animal and dairy products including milk, cream, eggs, meat and poultry products, poultry hatcheries, nurseries and greenhouses for the production of crops or bedding plants, fur farms, apiaries, fish hatcheries and fish farms.”
- Please explain whether “cannabis grow operations,” “fish farming,” and “agricultural related” customers in the table provided in response to IR-28 meet the definition of a “farm” according to MECL’s rules and regulations. If no, please explain why not.
  - Please explain why the cannabis, fish farm, and agricultural-related customers are not classified as farms in the Company’s Rate Design Application filed on May 14, 2021.
  - How were the cannabis, fish farm, and agricultural-related customers classified for the 2017 and 2020 cost allocation studies?

**Response:**

- Maritime Electric’s Schedule of Rates and General Rules and Regulations defines a farm as *“a holding on which agricultural operations are carried out. Agricultural operations include the production of field crops including grain, vegetables, seed and forage crops; animal and dairy products including milk, cream, eggs, meat and poultry products, poultry hatcheries, nurseries and greenhouses for the production of crops or bedding plants, fur farms apiaries, fish hatcheries and fish farms.”*

The two cannabis grow operations fall under the criterion of “greenhouses for the production of crops or bedding plants”.

The three fish farming operations fall under the criteria of “fish hatcheries and fish farms”.

The nine agricultural-related customers consist of:

- Two greenhouse-based operations that fall under the criterion of “greenhouses for the production of crops or bedding plants”;
  - Three agricultural operations (blueberries, organic vegetables and beef farming operations) that meet the definition of a farm;
  - A beef slaughterhouse that ceased operation since January 2020 and whose usage is now just domestic. This is an example of a business and a residence being served from the same meter, which is allowed under the Residential Rate as long as the usage for the business is not more than half of the total usage; and
  - Three grain-handling operations, which in retrospect should be served under the General Service or Small Industrial Rates instead of Residential.
- The primary purpose of the Farm Study was to assess the impact on farm customers of the potential elimination of the declining second block Residential energy rate. It was

decided that the Farm Study would focus on larger farm customers as they would be most affected by the potential rate change, and this targeted population would make the Farm Study more manageable. The majority of the larger farm customers are potato, dairy, hog or poultry operations. As a result, the two cannabis, three fish farm and nine agriculture-related customers were not included with farms in the Farm Study. The May 14, 2021 Rate Design Application used the Farm Study data set as the Farms cohort. It is the Company's position that their exclusion does not change the results of the analysis.

- c. The Farm Study data set was used for the Residential-Farm class in the 2020 Cost Allocation Study. Therefore, the two cannabis, three fish farm and nine agricultural-related customers were all treated as Residential-Year Round in the 2020 Cost Allocation Study. In the 2017 Cost Allocation Study, one cannabis and four agricultural-related customers were treated as Residential-Farm and the remainder were treated as Residential-Year Round.

2. Refer to MECL’s response to IR-28 from Synapse Energy Economics, Inc., submitted on October 1, 2021 that describes the 45 “Other Usage” customers with more than 5,000 kWh of consumption in January 2020.
  - a. For each of the six customer types in the table provided in response to IR-28, please provide the group’s average energy consumption (kWh) for each month of 2019, 2020, and 2021.
  - b. For each of the 9 “agricultural-related” customers, please provide the customer’s energy consumption (kWh) for each month of 2019, 2020, and 2021.
  - c. For each of the 11 “misc. commercial operations” customers, please provide the customer’s energy consumption (kWh) for each month of 2019, 2020, and 2021.
  - d. Please provide more details regarding the nature of electricity usage for the customers characterized as “misc. commercial operations” and explain why these customers meet the Company’s residential service rate guidelines.

**Response:**

- a. See IR-2 – Attachment 1 in the accompanying Excel workbook.
- b. See IR-2 – Attachment 2 in the accompanying Excel workbook.
- c. See IR-2 – Attachment 3 in the accompanying Excel workbook.
- d. The table below provides the information that is readily available in the Company’s billing system in regard to the nature of electricity usage by the 11 customers described as “miscellaneous commercial operations”.

<b>Miscellaneous Commercial Operations Nature of Electricity Usage</b>		
Customer	1	Seafoods
Customer	2	Store
Customer	3	Motor Vehicle Services
Customer	4	Other Personal and Household Services
Customer	5	Store
Customer	6	Construction
Customer	7	Boat Shop
Customer	8	Restoration
Customer	9	Construction
Customer	10	Shop
Customer	11	Workshop

Maritime Electric’s Residential Rate allows a business and a residence to be served from one meter as long as the electricity used for the business is no more than one half of the total electricity usage. The assessment of which category in which a new customer belongs is made at the time the customer is first connected to the electrical system. At that time, these customers would have met the definition of a Residential customer.

IR-3 Refer to MECL’s rate design application filed on May 14, 2021, pages 5-6.

- a. Please confirm that none of the customers in Cohort 5 (domestic consumption >5,000 kWh for January 2020) or Cohort 7 (other consumption >5,000 kWh for January 2020) have meters capable of measuring monthly demand or hourly energy usage. If this is not the case, please describe the metering data available and provide the most granular data available for the most recent three years.
- b. Please confirm that the estimates of coincident peak (CP) and non-coincident peak (NCP) for Cohort 5 were developed using the CP and NCP data for Cohort 4.
- c. If no customers in Cohort 7 have interval metering, please explain how the Company developed CP and NCP estimates for Cohort 7.
- d. How many customers in Cohort 5 would require load research meters for a representative sample with an acceptable level of accuracy (e.g., +/- 10% at 90% confidence level)?
- e. How many customers in Cohort 7 would require load research meters for a representative sample with an acceptable level of accuracy (e.g., +/- 10% at 90% confidence level)?
- f. What is the cost (labor and materials) to add an additional load research meter?

**Response:**

- a. The table below shows a breakdown of the types of meters in use for customers in Cohorts 5 and 7.

Breakdown by Type of Metering					
	kW	KVD	kWD	ION	Total
Demand readings available?	No	Yes	No	Yes	
Numbers in Cohort 5	263	1	29		<b>293</b>
Numbers in Cohort 7	21	9	14	1	<b>45</b>

Monthly demand and energy readings for 2019 through 2021 for the 10 customers with kVD meters are in tab IR-3 – Attachment 1.

The ION meter provides hourly interval data, but we have not provided the data for a single customer for reasons of confidentiality.

- b. The CP and NCP loads for Cohort 5 were estimated by using the corresponding Cohort 4 loads for January 2020, multiplied by the ratio of the Cohort 5 kWh sales for that month to the Cohort 4 kWh sales for that month, as follows:

January 2020 Cohort 4 sales	19,738 MWh
January 2020 Cohort 5 sales	1,751 MWh
Cohort 4 CP and NCP	48.4 MW

Then Cohort 5 CP and NCP = 48.4 MW x 1,751 MWh / 19,738 MWh = 4.3 MW.

- c. The largest customer in Cohort 7 has hourly interval metering, and accounted for approximately 40 per cent of Cohort 7 usage during January 2020. The CP and NCP estimates for Cohort 7 were developed by using the CP and NCP loads for this largest customer, multiplied by the ratio of the Cohort 7 usage for January 2020 to the usage by this largest customer for January 2020.
- d. For Cohort 5, 45 randomly selected customers would require load research metering in order to estimate hourly loads with an accuracy of +/- 10 per cent and 90 per cent confidence.
- e. For Cohort 7, 17 load research meters would be required in order to estimate hourly loads with an accuracy of +/- 10 per cent and 90 per cent confidence. Five of the meters would be assigned to the second through sixth largest customers (the largest customer already has interval metering), and the other 12 meters would be randomly assigned to the remaining 39 customers.
- f. The cost (material plus installation) for an additional Residential load research meter is approximately \$200.



**IR-2 – Attachment 1, 2 and 3**

	Average monthly usage ( kWh )																																			
	2021 Dec	2021 Nov	2021 Oct	2021 Sep	2021 Aug	2021 Jul	2021 Jun	2021 May	2021 Apr	2021 Mar	2021 Feb	2021 Jan	2020 Dec	2020 Nov	2020 Oct	2020 Sep	2020 Aug	2020 Jul	2020 Jun	2020 May	2020 Apr	2020 Mar	2020 Feb	2020 Jan	2019 Dec	2019 Nov	2019 Oct	2019 Sep	2019 Aug	2019 Jul	2019 Jun	2019 May	2019 Apr	2019 Mar	2019 Feb	2019 Jan
2 Cannabis operations	500066	520848	518691	561868	488654	442858	486995	467802	481987	456071	460970	418479	411518	482338	480164	514227	502819	444806	377882	435306	534047	562681	569014	375264	216090	196502	172781	187677	328200	299400	325800	290400	347400	354000	408000	369000
3 Fish farms	58400	59120	55120	58320	55880	55120	60760	57000	59920	57360	62360	60360	56760	54840	49960	50480	44960	42040	44600	49120	53520	48760	52400	49320	45320	44920	42360	40240	43880	41600	44320	44800	44760	40680	44640	45560
9 Agricultural-related operations	31996	32909	19032	10810	8656	8644	7983	9921	17349	27317	39986	40498	34977	35326	18054	9040	8635	8974	9594	11886	18347	28999	33341	35462	28848	21310	7824	8053	8412	7735	8390	8032	10391	18368	26206	27058
16 Religious organizations	5798	3863	2797	2564	2563	2582	3114	4609	5559	6759	7792	7315	5933	5015	3525	2798	2925	2833	3429	5010	6126	7206	8563	8037	6751	4945	3388	2547	2497	2614	4041	5346	6548	7193	8283	8042
4 Government housing facilities	5458	4174	3545	4130	3688	3607	4328	5236	7081	7037	7358	6939	5620	4280	3428	3470	3730	4101	4379	5312	7211	7482	8409	8423	7137	5359	4261	4148	4361	4193	4746	5573	6664	7905	8903	8790
11 Miscellaneous commercial operations	5231	3546	2615	2429	2589	2383	2304	3524	5045	5761	5805	5466	3982	3400	2217	2083	2460	2403	2757	3645	5179	6458	6822	7144	6028	3867	2769	2235	2096	2159	2653	4678	5783	5335	6407	6140







**IR-3 – Attachment 1**

