QUESTION

22. In IR-2, Commission staff asked "*Has the current Plan achieved its intended purpose of reducing electricity consumption in the Province of Prince Edward Island?"* In response, PEIEC provided a table of reported energy and demand savings, but did not respond to the question posed by Commission staff.

Please provide a response to the question issued by Commission staff in IR-2, namely, has the current Plan achieved its intended purpose of reducing electricity consumption in the Province of Prince Edward Island. Please provide all supporting data, calculations and key assumptions.

RESPONSE

22. The table provided in response to IR-2 has been created with the intended purpose to illustrate the reduction of electricity consumption in the Province of Prince Edward Island. The table displays the energy and demand savings reported to the Commission as prepared by ePEI and PEIEC's measurement & verification consultant Econoler. The current EE&C Plan has been in place from 2018/19 to 2021/22.

The current Plan achieved a reduction of energy consumption and demand savings as outlined in the "net energy and demand savings" column of the table provided in response to IR 2. We acknowledge that actual energy savings for some programs did not achieve the target for the programs. However, the programs did achieve some level of energy consumption reduction and demand savings.

QUESTION

23. The *Electric Power Act* defines "energy efficiency and demand-side resource measures" to mean "*any activities, techniques, standards or programs that are or may be used by the public utility to reduce the consumption of electric energy **or** modify when electric energy is consumed*" [emphasis added]

(a) With respect to each program in the Proposed Plan, please identify whether it is intended to reduce the consumption of electric energy, or to modify when electric energy is consumed.

(b) Are there any programs in the proposed Plan that neither reduce the consumption of electric energy or modify when electric energy is consumed? If so, please provide justification for (1) including the Program in the Plan, and (ii) recovering the cost of the Plan from utilities and utility customers.

RESPONSE

23 (a). The following table includes a list of all the programs that are included in the proposed Plan.

Program	Measure	Reduce consumption or modify when energy is consumed
Energy Efficient Equipment Rebates	Mini-split Air Source Heat Pump (MSHPs)	Reduce consumption
Energy Efficient Equipment Rebates	Central Air Source Heat Pump	Reduce consumption
Energy Efficient Equipment Rebates	Ground Source (Geothermal) Heat Pump	Reduce consumption
Energy Efficient Equipment Rebates	Electric Thermal Storage Furnace - SS	Reduce consumption
Energy Efficient Equipment Rebates	Electric Thermal Storage Heater - SS	Reduce consumption
Energy Efficient Equipment Rebates	Electric Thermal Hot Water Heater - SS	Reduce consumption
Energy Efficient Equipment Rebates	Solar Thermal Hot Water Heater	Reduce consumption
Energy Efficient Equipment Rebates	Air Source Heat Pump Hot Water Heater	Reduce consumption
Energy Efficient Equipment Rebates	Heat/Energy Recovery Ventilator	Reduce consumption

Program	Measure	Reduce consumption or modify when energy is consumed
Energy Efficient Equipment Rebates	Biomass Stove	Reduce consumption
Energy Efficient Equipment Rebates	Biomass Boiler/Furnace	Reduce consumption
Energy Efficient Equipment Rebates	Mini-split Air Source Heat Pump (MSHPs)	Reduce consumption
Energy Efficient Equipment Rebates	Central Air Source Heat Pump	Reduce consumption
Energy Efficient Equipment Rebates	Ground Source (Geothermal) Heat Pump	Reduce consumption
Energy Efficient Equipment Rebates	Electric Thermal Storage Furnace - SS	Reduce consumption
Energy Efficient Equipment Rebates	Electric Thermal Storage Heater - SS	Reduce consumption
Energy Efficient Equipment Rebates	Electric Thermal Hot Water Heater - SS	Reduce consumption
Energy Efficient Equipment Rebates	Solar Thermal Hot Water Heater	Reduce consumption
Energy Efficient Equipment Rebates	Air Source Heat Pump Hot Water Heater	Reduce consumption
Energy Efficient Equipment Rebates	Heat/Energy Recovery Ventilator	Reduce consumption
Energy Efficient Equipment Rebates	Biomass Stove	Reduce consumption
Energy Efficient Equipment Rebates	Biomass Boiler/Furnace	Reduce consumption
Home Insulation Rebates	Home Insulation Rebates	Reduce consumption
Winter Warming	Caulking and Spray Foam	Reduce consumption
Winter Warming	Weather Stripping	Reduce consumption
Winter Warming	Electrical Outlet Gaskets	Reduce consumption
Winter Warming	Door Sweeps and Bumpers	Reduce consumption
Winter Warming	Attic Hatch	Reduce consumption
Winter Warming	Window Insulation Film	Reduce consumption
Winter Warming	Plug Covers	Reduce consumption
Winter Warming	LED Lamps	Reduce consumption
Winter Warming	Low-Flow Showerheads	Reduce consumption
Winter Warming	Programmable Thermostats	Reduce consumption

Program	Measure	Reduce consumption or modify when energy is consumed
Winter Warming	Smart Power Bars	Reduce consumption
Winter Warming	Voucher for free heating system cleaning	Reduce consumption
Instant Energy Savings	LED A-type Lamps	Reduce consumption
Instant Energy Savings	LED Non-A-Type Lamps - Decorative	Reduce consumption
Instant Energy Savings	LED Non-A-Type Lamps - Others	Reduce consumption
Instant Energy Savings	LED Recessed Downlights	Reduce consumption
Instant Energy Savings	Without Motion Sensor	Reduce consumption
Instant Energy Savings	With Motion Sensor	Reduce consumption
Instant Energy Savings	Dimmer Switches	Reduce consumption
Instant Energy Savings	Outdoor Motion Sensors	Reduce consumption
Instant Energy Savings	Indoor Motion Sensors	Reduce consumption
Instant Energy Savings	Outdoor Heavy Duty Timers	Reduce consumption
Instant Energy Savings	Indoor Occupancy Sensors with Dimmer	Reduce consumption
Instant Energy Savings	Power Bars and Smart Power Strips	Reduce consumption
Instant Energy Savings	Low-Flow Showerheads	Reduce consumption
Instant Energy Savings	Faucet Aerators	Reduce consumption
Instant Energy Savings	Programmable Thermostats	Reduce consumption
Instant Energy Savings	Smart Thermostats	Reduce consumption
Instant Energy Savings	Certified Dehumidifiers	Reduce consumption
Instant Energy Savings	Clothes Washers	Reduce consumption
Instant Energy Savings	Efficient Refrigerators	Reduce consumption
Instant Energy Savings	Weather Stripping	Reduce consumption
Instant Energy Savings	Outdoor Clotheslines and Clothes Dryers	Reduce consumption
New Home Construction	New Home Construction	Reduce consumption
Home Comfort	Home Comfort	Reduce consumption
Business Energy Rebates	Home Comfort	Reduce consumption
Business Energy Rebates	PTHPs	Reduce consumption
Business Energy Rebates	Linear Fixtures	Reduce consumption

Program	Measure	Reduce consumption or modify when energy is consumed
Business Energy Rebates	Linear Lamps	Reduce consumption
Business Energy Rebates	High Bay Luminaires - 10,000 - 19,999 lm	Reduce consumption
Business Energy Rebates	High Bay Luminaires - 20,000 - 39,999 lm	Reduce consumption
Business Energy Rebates	High Bay Luminaires - 40,000 - 54,999 lm	Reduce consumption
Business Energy Rebates	High Bay Luminaires - Other Lumen Ranges	Reduce consumption
Business Energy Rebates	Low Bay Luminaires - 5,000 - 9,999 lm	Reduce consumption
Business Energy Rebates	Downlight Luminaires - 400 - 999 lm	Reduce consumption
Business Energy Rebates	Downlight Luminaires - 1,000 - 2,999 lm	Reduce consumption
Business Energy Rebates	Downlight Luminaires - >= 3,000 lm	Reduce consumption
Business Energy Rebates	Full-Cutoff Wall Mounted Area Luminaires 300 - 1,999 lm	Reduce consumption
Business Energy Rebates	Full-Cutoff Wall Mounted Area Luminaires 2,000 - 4,999 lm	Reduce consumption
Business Energy Rebates	Full-Cutoff Wall Mounted Area Luminaires 5,000 - 14,999 lm	Reduce consumption
Business Energy Rebates	Outdoor Pole/Arm Mounted Area Luminaires 5,000 - 9,999 lm	Reduce consumption
Business Energy Rebates	Outdoor Pole/Arm Mounted Area Luminaires 10,000 - 24,999 lm	Reduce consumption
Business Energy Rebates	General Use Lamps	Reduce consumption
Business Energy Rebates	Reflector (Directional Lamps - Large >20 lm	Reduce consumption
Business Energy Rebates	Flood and Spot Luminaires - 1,000 - 4,999 lm	Reduce consumption
Business Energy Rebates	Flood and Spot Luminaires - 5,000 - 14,999 lm	Reduce consumption
Business Energy Rebates	Flood and Spot Luminaires - 15,000 - 29000 lm	Reduce consumption
Business Energy Rebates	Occupancy Sensors - Wall-Switch & Fixture Mounted	Reduce consumption

Program	Measure	Reduce consumption or modify when energy is consumed
Business Energy Rebates	Occupancy Sensors - ceiling or wall remote	Reduce consumption
Business Energy Rebates	Occupancy Sensors - exterior	Reduce consumption
Business Energy Rebates	Controls	Reduce consumption
Business Energy Rebates	ECMs for Walk-In Coolers	Reduce consumption
Business Energy Rebates	Decorative lamp	Reduce consumption
Business Energy Rebates	1X4 troffer	Reduce consumption
Business Energy Rebates	2X2 troffer	Reduce consumption
Business Energy Rebates	2X4 troffer	Reduce consumption
Business Energy Rebates	Linear ambient luminaire - 2,500 - 4,999 lm	Reduce consumption
Business Energy Rebates	Linear ambient luminaire - 5000 - 9,999 lm	Reduce consumption
Business Energy Rebates	Linear replacement lamp - 2ft	Reduce consumption
Business Energy Rebates	Linear replacement lamp - 4ft	Reduce consumption
Business Energy Rebates	Track or mono-point directional luminaires	Reduce consumption
Business Energy Rebates	Indoor Refrigerated case luminaire	Reduce consumption
Business Energy Rebates	Outdoor Case lighting for sign retrofit applications	Reduce consumption
Business Energy Rebates	Open to Closed Cooler Conversion	Reduce consumption
Business Energy Rebates	ECM for standalone retailer cooler	Reduce consumption
Business Energy Rebates	Door frame heater controls	Reduce consumption
Community Energy Solutions	Energy Management System (EMS)	Reduce consumption

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23(b) No – there are no programs in the proposed Plan which are not intended to reduce consumption of energy or modify when the energy is used.

NON-CONFIDENTIAL RESPONSE

QUESTION

24. In IR-4(a), Commission staff asked for a detailed analysis and thorough explanation (including supporting calculations and workbooks) as to why $2.01 million was over-collected from utility customers. In its response, PEIEC listed three factors that contributed to the over-collection, without any calculations or analysis as to what amount or portion of the over-collection was attributable to each factor.

Please provide this detailed analysis, including all supporting calculations and workbooks.

RESPONSE

24. In the supporting model provided titled “ePEI EEandC Model; 2022.04.01 Updated” tab “Summary” includes the calculation of the $2.01 million overcollection from utility customers. The table showing the calculation is shown below.

Tables follow on next page.

Budget figures provided by ePEI

	Current Plan									
	2018-19		2019-20		2020-21		2021-22		Total	
Funding Source	**$**	**%**	**$**	**%**	**$**	**%**	**$**	**%**	**$**	**%**
Maritime Electric	540,000	31.6%	873,000	36.2%	1,080,000	46.2%	1,080,000	32.4%	3,573,000	36.5%
Summerside Electric	60,000	3.5%	97,000	4.0%	120,000	5.1%	120,000	3.6%	397,000	4.1%
Federal Government	1,035,397	60.6%	1,148,512	47.6%	831,784	35.6%	873,197	26.2%	3,888,890	39.7%
Provincial Government	74,084	4.3%	293,993	12.2%	307,587	13.1%	1,264,940	37.9%	1,940,604	19.8%
Total	**1,709,481**	**100.0%**	**2,412,505**	**100.0%**	**2,339,371**	**100.0%**	**3,338,137**	**100.0%**	**9,799,494**	**100.0%**
Total EE&C Actual Spending Attributable to Ratepayers									**1,959,899**	
Overcollection from Previous Plan									**2,010,101**	

It is difficult to quantify the amount of the overcollection that is attributed to each of the noted factors. However, the overcollection of funds was due largely in part to:

1) Lower program subscription rates than expected (particularly in Home Insulation Rebates, and early campaigns under Instant Energy Savings).
As an example, from page x of the Econoler 2018/2019 and 2019/2020 Home Insulation Rebates Program Evaluation report dated June 26, 2020 it compares target participants to the evaluation results for 2018/19 and 2019/2020. An excerpt of this report has been provided below to demonstrate the lower than targeted number of participants for the Home Insulation Rebates (HIR) program.

Table 1: Summary of Program Savings and Cost-Effectiveness Targets and Evaluated Results

Parameters	2018/2019 Targets	2018/2019 Evaluation Results	2019/2020 Targets	2019/2020 Evaluation Results
Program Participation				
Number of Participants	80	16	210	101

Date File

As a second example, from page xi of the Econoler 2018/2019 and 2019/2020 Instant Energy Savings Program Evaluation report dated June 29, 2020 it compares target number of products to the evaluation number of products. An excerpt of this report has been provided below to demonstrate the lower than targeted number of products for the Instant Energy Savings program.

Table 2: Summary of Program Savings and Cost-Effectiveness Targets and Evaluated Results

Parameters	2018/2019 Targets	2018/2019 Evaluation Results	2019/2020 Targets	2019/2020 Evaluation Results
Program Participation				
Number of Products	28,291	29,774	95,901	74,621

2) Significant delays in launching two of the commercial programs (Business Energy Solutions and Customer Energy Solutions)

3) Impacts related to COVID-19, due to decreased availability of workers/ability to do work in clients' homes and significant cost increases/shipping delays in building materials, causing clients to delay or even cancel planned upgrades and the cancellation of the Spring 2020 IES campaign.

QUESTION

25. As stated in IR-5, the Commission must be satisfied that the proposed Plan includes a reasonable estimate of the financial benefits of the proposed Plan for each utility and its customers. In response to IR-5, PEIEC provided a table showing the utility investment and the present value of avoided costs. PEIEC did not provide any evidence of the financial benefits to customers.

Please provide a breakdown that clearly shows the financial costs and financial benefit for each utility's residential and general service customers. For the purposes of the calculations, assume that the average residential customer consumers 650 kWh per month (7,800 kWh per years) and the average general service customer consumes 10,000 kWh/50 kW per month (120,000kWH/600kWh per year). Please provide all supporting calculations and assumptions.

RESPONSE

25. The below table uses the data presented in IR-5 as inputs into the net benefit calculation based on the assumed annual customer consumption requested.

Summary of average annual benefit to customers by utility and customer class

MECL	2022-23	2023-24	2024-25	Total
EE&C Funding	$ 1,360,203	$ 1,321,690	$ 1,732,045	$ 4,413,939
PV avoided cost	$ 27,471,636	$ 26,801,597	$ 27,500,709	$ 81,773,942
Net benefit to MECL customers	**$ 26,111,433**	**$ 25,479,907**	**$ 25,768,663**	**$ 77,360,003**

Energy Sales (GWh) - MECL Customers after EE&C Impacts	1,375.50	1,399.75	1,422.87
Net benefit per GWh	$ 18,983		
Covert to kWh	1,000,000		
Net benefit per kWh	0.02		

	kWh	Annual average benefit
Average residential customer	7,800	$ 154
Average general service customer	120,000	$ 2,370

SE	2022-23	2023-24	2024-25	Total
EE&C Funding	151,134	146,854	192,449	$ 490,438
PV avoided cost	3,052,404	2,977,955	3,055,634	$ 9,085,994
Net benefit to SE customers	**$ 2,901,270**	**$ 2,831,101**	**$ 2,863,185**	**$ 8,595,556**

Energy Sales (GWh) - SE Customers after EE&C Impacts	146.93	149.87	152.86
Net benefit per GWh	$ 19,746		
Covert to kWh	1,000,000		
Net benefit per kWh	0.02		

	kWh	Annual average benefit
Average residential customer	7,800	$ 154
Average general service customer	120,000	$ 2,370

QUESTION

26. In response to IR-7(b), PEIEC states that MECL customers will not be required to fund programs that are not available to them throughout the proposed Plan. However, PEIEC has also stated that utility funding is equivalent to approximately 20% of the overall Plan budget – the funding is not program specific.

Please explain this apparent discrepancy. Is the utility funding proposed by PEIEC determined based on program availability for each utility? If so, please provide all supporting calculations and key assumptions used to determine the funding required by each utility and its customers.

If not, then please explain how it is possible that utility customers will not pay for programs that are not available to them? What safeguards and adjustments are in place to ensure that each utility and its customers are only paying for programs that are available to them?

RESPONSE

26. To clarify, in response to IR-7 when PEIEC states that MECL customers will not be required to fund programs that are not available to them throughout the proposed Plan, what is meant is that all programs within the proposed Plan are offered to customers of MECL should they choose to apply. All utility customers are paying into a pool of funds, in which all utility customers are eligible to apply to, whether or not said customers choose to use the fund. As such, utility customers are paying to have a fund available to them, but it is as their discretion to choose to use it or not. There are no programs that exclude utility customers from applying. Therefore, all programs in relation to the proposed Plan are available to all utility customers, and there are no such programs that MECL utility customers would not be eligible to apply for. MECL customers will not be required to fund programs that are not available to them throughout the proposed plan as there is no such program that will not be available to them.

QUESTION

27. In response to IR-8, PEIEC states that it did not include utility costs in its cost-effectiveness screening. Has PEIEC discussed the operating and capital costs of implementing the proposed Plan with the affected utilities? If yes, please provide full particulars of these discussions. If not, please explain by PEIEC has not had these discussions with the affected utilities.

RESPONSE

27. PEIEC has not discussed the operating and capital costs of implementing the proposed Plan with the affected utilities. PEIEC has not had these discussions with the affected utilities because utility participation is subject to Pilot Programs. Because PEIEC does not yet know the outcomes of the Pilot Programs, it would be difficult to know what to discuss with the affected utilities. To further the rationale for not having these discussions with the affected utilities, refer to Appendix G of the submitted application entitled “Cost effectiveness testing”. Within Appendix G, operating and capital costs are not included within the definition of the “Total Resource Cost Test (“TRC”). Most programs, such as Energy Efficient Equipment Rebates Programs, Business Energy Rebates Programs, or Instant Energy Savings Programs, would have no impact on the utility. Pilot Programs for demand response will have an impact, but the results of the Pilot Program will have to be established before such conversations can occur. Ultimately, PEIEC desires the approval to proceed with the Pilot Program, and when such results are achieved, will have discussions with the affected utilities as they will have a better understanding of the outcomes.

QUESTION

28. What, if any, consultation occurred between PEIEC and the affected utilities in the development of the proposed Plan? Please provide full particulars.

RESPONSE

28. Stakeholders were engaged during the development of the proposed Plan with the use of stakeholder workshops to create a collaborative approach for designing effective programs for utility customers. Appendix D of the submitted application entitled “Stakeholder engagement summary” describes the EE&C Plan Stakeholders List, including who was consulted and what was discussed. We worked with the utility by getting the load forecast to help with the EE&C planning. PEIEC had open lines of communication with the utilities to discuss the development of the plan and invited the utilities to stakeholder workshops to provide feedback on the proposed plan.

QUESTION

29. PEIEC's responses to IR-11 are not responsive to the specific questions issued by Commission staff. Please provide responses to IR-11(a), (b) and (c).

RESPONSE

IR-11 (a), (b), and (c)

(a) What is the net impact on peak demand of the entire proposed Plan (not limited to the 8 Demand Response Programs)?

29 (a). PEI's system has a relatively flat load curve with an evening peak as well as a second peak in the morning as noted in the Dunsky Potential Study[1], which is not uncommon in winter-peaking jurisdictions with a significant penetration of electric heating. It is difficult and unrealistic to calculate and to translate to peak reduction savings as this would be linked to consumer behaviour during the day. However, please see the below table for the results of the net impact on peak demand of the entire proposed Plan. Totals based off of incremental gross or net demand savings at generator (MW):

Year	Incremental Gross Demand Savings at Generator (MW) - A	Incremental Net Demand Savings at Generator (MW) - B	Demand Response Totals (MW) - C	Total – A + C	Total – B + C
2022-2023	7.09	5.71	1.25	**8.34**	**6.96**
2023-2024	7.17	5.52	5.25	**12.42**	**10.77**
2024-2025	7.29	5.62	14.00	**21.29**	**19.62**
Total	**21.56**	**16.85**	**20.50**	**42.05**	**37.35**

(b) In comments submitted by Roger King dated March 25, 2022, Mr. King expresses concerns about the Heat Pump Program and its impact on peak demand. Mr. King submits that the heat pump peak load demand increase is significant, and is almost three times the EE&C program savings. Does PEIEC agree with this statement? Please explain.

29 (b). As with all incentive programs offered through ePEI, the Energy Efficient Equipment Program (EEER) provides incentives for installing the most efficient version of each type of equipment covered under the program. For air source heat pumps (ASHPs), this means ENERGY STAR Most Efficient or Northeast Energy Efficiency Partnership (NEEP) cold climate, ASHP qualified heat pumps.

[1] Prince Edward Island Energy Efficiency Potential Study, Volume I, Dunsky – page 56

The goal of these programs is to change customer behaviour, e.g. if a client was going to install an air source heat pump regardless of the availability of our incentive, our incentive is designed to ensure the heat pump installed is the most efficient unit possible.

The assessed Net to Gross (NTG) ratio (provided by measurement & verification consultant Econoler) for air source heat pumps under the EEER program is 0.77, meaning 23% of applicants would have installed the most efficient system without our incentive, and the remaining 77% would have installed systems that are less efficient than those specified under the EEER Program minimum requirements. While Mr. King submits that the heat pump load demand increase is significant, in the former situation, the increases to demand would have occurred without the program, and in the latter, the increases in demand are reduced compared to what they would have been without the program. Thus, PEIEC disagrees with Roger King's statement that the heat pump peak demand increase is almost three times the EE&C savings. Without the EE&C savings and the Heat Pump Program, the likely increase in the peak load would have been greater than what has been actually experienced with these programs.

(c). Mr. King also states that the continued deployment of heat pumps suggests that the net potential increase in the annual peak load demand could be in excess of 10% (36MW) by2025. Does PEIEC agree with this statement? Please explain.

29 (c) Mr. King states that continued deployment of heat pumps suggest that the net potential increase in the annual peak load demand could be in excess of 10% by 2025, PEIEC acknowledges that electrification in general (of space heating, water heating, transportation, etc.) will continue to increase energy and demand into the future. However, PEIEC disagrees with Mr. King as the energy efficiency programs delivered by ePEI are designed to manage and reduce future increases, not eliminate them entirely. To accurately consider the impact on the annual peak load, Mr. King would need to compare the forecasted annual peak load without the EE&C savings to the forecasted annual peak load with the EE&C savings.

QUESTION

30. With respect to IR-5, are all utility customers required to fund all of the proposed programs – even those that they may not be eligible to participate in? If yes, please provide justification for utility customers to pay for programs that they are not eligible to participate in.

RESPONSE

30. All utility customers are required to fund all of the proposed programs – even those that they may not be eligible to participate in because increases in energy demand impacts all customers regardless if the direct response impacts them. All utility customers are contributing to growth in the load; therefore, all are required to pay for the fund to foster such growth, regardless if they are eligible. If utility customers were only required to pay for such programs that they are eligible for, there would be extreme administrative costs that could potentially make the program cost prohibited,

QUESTION

31. In response to IR-20, PEIEC states that Econoler will assess the effectiveness of demand response activities *"by determining if the value of the peak load benefits to the utilities would exceed the cost of setting up and running the program."* What costs are included in the assessment? Does PEIEC intend to include utility costs in the assessment of demand response effectiveness?

RESPONSE

31. The costs included in the assessment and whether PEIEC intends to include utility costs in the assessment of demand response effectiveness is dependent the Pilot Programs selected, and the results achieved by such programs. Without knowing what demand responses will be, it is difficult to comment without direct certainty.

QUESTION

32. In response to IR-21, PEIEC did not provide any explanation for programs that did not perform as anticipated. Please refer to the table filed by PEIEC in response to IR-21, and provide an explanation for any program that did not perform as expected.

RESPONSE

32. Programs that did not perform as anticipated included:

- the Home Insulation Rebates (HIR) a residential program and
- the Community Energy Solutions (CES) a commercial program.

Some programs not aligning with the anticipated energy and demand savings targets is expected given the nature of estimating utility customer response to programs. In the previous plan this was amplified by the fact that it was the first iteration of the EE&C under it's existing administration model and the operation of the Plan overall was impacted by the global COVID-19 pandemic. While PEIEC and ePEI believe that the forecasted participation rates—and consequently program costs—will be more accurate for the proposed plan, it is inherently difficult to achieve precision in these sorts of estimates when the outcomes are largely determined by forces outside the control of the program administrator/ or the associated utilities.

Participation in programs are at the core determined by human behaviour, which in turn are influenced by an extremely wide range of variables, which themselves are very hard (or in some cases impossible) to predict and are interactive in nature. Industry capacity, supply chain issues, material costs, fuel prices, weather trends, and the public engagement all directly or indirectly affect program uptake. When the price of fuel increases significantly and quickly, this can drive more participation in programs, if the weather is mild this can curtail activity, etc.

Based upon the more specific (local) and recent data used to determine participation rates, and relying on expert consultants to provide guidance on future activities such as enhanced enabling measures to increase participation, PEIEC and ePEI feel the projections are a reasonably accurate forecast of program expenditures and thus funding required by the utilities/ratepayers.

If asked to be more specific PEIEC would draw your attention to the Econoler 2018/2019 and 2019/2020 home insulation rebates program evaluation report dated June 26, 2020. However, while Econoler found the program to be very cost effective as noted on page ix of their report participant levels where less than expected in the current plan. To address this in the current plan partipation levels have been based on actual program participation levels experienced in 2019-2020 PEIEC's estimate of program performance in 2020-21 which was incomplete at the time the proposed Plan was filed, and a growth factor of 15% annually. PEIEC believes this is achievable given the expansion of program enabling strategies in the proposed Plan.

Furthermore, as outlined in the Q3 Electricity Efficiency & Conservation Report - 2020 Quarter Three Activity for the period October 1 to December 31, 2020 filed in February 2021 the business energy solutions program and the customer energy solutions program were combined into the community energy solutions program in August of 2020. This program was aimed at helping larger operations including farms, institutions, business and community facilities. However, the timing of this program change contributes to the actual versus planned results outlined in the table presented in response to IR-21.