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All the time.



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OCT 29 2021

The Island Regulatory  
and Appeals Commission

October 29, 2021

Island Regulatory & Appeals Commission  
PO Box 577  
Charlottetown PE C1A 7L1

Dear Commissioners:

Pursuant to Orders UE16-04, please find enclosed five copies of Maritime Electric's Application and Evidence in support of proposed revisions to the components of the interim Weather Normalization Mechanism and Reserve effective January 1, 2022. An electronic copy will follow.

If you require further information, please do not hesitate to contact me at 902-629-3701.

Yours truly,

MARITIME ELECTRIC

Michelle Francis  
Vice President,  
Finance & Chief Financial Officer

MF48  
Enclosures

**Maritime Electric**

---

**C A N A D A**

**PROVINCE OF PRINCE EDWARD ISLAND**

**BEFORE THE ISLAND REGULATORY  
AND APPEALS COMMISSION**

**IN THE MATTER** of Section 20 of the *Electric Power Act* (R.S.P.E.I. 1988, Cap. E-4) and  
**IN THE MATTER** of the Application of Maritime Electric Company, Limited for an order of the Commission approving revisions to the components of the interim Weather Normalization Mechanism and Reserve effective January 1, 2022 and for certain approvals incidental to such an order.

**Date: October 29, 2021**

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## SECTION 1

## **1      1.0      APPLICATION**

2 CANADA

## 5 PROVINCE OF PRINCE EDWARD ISLAND

## **BEFORE THE ISLAND REGULATORY AND APPEALS COMMISSION**

**IN THE MATTER** of Section 20 of the *Electric Power Act* (R.S.P.E.I. 1988, Cap. E-4) and **IN THE MATTER** of the Application of Maritime Electric Company, Limited for an order of the Commission approving revisions to the components of the interim Weather Normalization Mechanism and Reserve effective January 1, 2022 and for certain approvals incidental to such an order.

## Introduction

1. Maritime Electric Company, Limited (“Maritime Electric” or “the Company”) is a public utility subject to the Electric Power Act (the “Act”) engaged in the production, purchase, transmission, distribution and sale of electricity within Prince Edward Island.
  2. In recent years, Maritime Electric’s sales revenue and energy supply costs have become subject to greater volatility due to variations in temperature from historical averages and increases in the use of electricity for space heating. To mitigate this increasing volatility and the resulting uncertainty with respect to customer rates, the Company sought approval to adopt a Weather Normalization Mechanism and Reserve as part of its General Rate Application filed on October 28, 2015.
  3. On February 29, 2016, the Island Regulatory and Appeals Commission (“IRAC” or “the Commission”) issued Order UE16-04 which, among other things, approved the adoption of the proposed Weather Normalization Mechanism and Reserve on an interim basis, effective January 1, 2016 to February 28, 2019. The “Application” section

## **SECTION 1**

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37           of the approved Weather Normalization Mechanism and Reserve requires that  
38           revisions to the components of the formulas contained therein are to be submitted to  
39           the Commission for approval on or before October 31 of the year prior to the effective  
40           date of the change.

41

42       4. On September 27, 2019, IRAC issued Order UE19-08 which approved the Weather  
43           Normalization Mechanism and Reserve account on an interim basis until February 28,  
44           2022.

45

46       5. On December 19, 2019, IRAC issued Order UE19-10 which approved revisions to the  
47           components of the formulas of the interim Weather Normalization Mechanism and  
48           Reserve for the 2019 fiscal year.

49

50       6. On December 21, 2020, IRAC issued Order UE20-06 which approved revisions to the  
51           components of the formulas of the interim Weather Normalization Mechanism and  
52           Reserve for the 2020 fiscal year.

53

54       7. On June 7, 2021, IRAC issued Order UE21-03 which approved revisions to vary the  
55           components of the formulas of the interim Weather Normalization Mechanism and  
56           Reserve for the 2020 fiscal year. The Order also approved revisions to the components  
57           of the Weather Normalization Mechanism and Reserve for the 2021 fiscal year.

58

### **Application**

60       5. Maritime Electric hereby applies for an Order from IRAC approving revisions to the  
61           components of the interim Weather Normalization Mechanism and Reserve effective  
62           January 1, 2022 and for certain approvals incidental to such an Order.

63

64       6. The proposals contained in this Application represent a just and reasonable balance of  
65           the interests of Maritime Electric and those of its customers and will, if approved, allow  
66           the Company to continue to provide a high level of service to customers at a cost that  
67           is, in all circumstances, reasonable.

68

## **SECTION 1**

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69      **Procedure**

70      7.      Filed hereto is the Affidavit of T. Michelle Francis and Angus S. Orford which contains  
71                  the evidence on which Maritime Electric relies in this Application.

72

73      Dated at Charlottetown, Province of Prince Edward Island, this 29<sup>th</sup> day of October, 2021.

74

75

76

77

78                    
**D. Spencer Campbell, Q.C.**

79

80

81                  STEWART MCKELVEY  
82                  65 Grafton Street, PO Box 2140  
83                  Charlottetown PE C1A 8B9  
84                  Telephone: (902) 629-4549  
85                  Facsimile: (902) 892-2485  
86                  Solicitors of Maritime Electric Company, Limited

## SECTION 2

87 2.0 AFFIDAVIT

88

89 CANADA

90

## **91 PROVINCE OF PRINCE EDWARD ISLAND**

92

## **BEFORE THE ISLAND REGULATORY AND APPEALS COMMISSION**

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**IN THE MATTER** of Section 20 of the *Electric Power Act* (R.S.P.E.I. 1988, Cap. E-4) and **IN THE MATTER** of the Application of Maritime Electric Company, Limited for an order of the Commission approving revisions to the components of the interim Weather Normalization Mechanism and Reserve effective January 1, 2022 and for certain approvals incidental to such an order.

107 We, T. Michelle Francis of Emyvale and Angus Sumner Orford of Charlottetown, in Queens  
108 County, Province of Prince Edward Island, MAKE OATH AND SAY AS FOLLOWS:

109

110 1. We are the Vice President, Finance and Chief Financial Officer and Vice President,  
111 Corporate Planning and Energy Supply for Maritime Electric Company, Limited  
112 ("Maritime Electric" or the "Company"), respectively, and as such have personal  
113 knowledge of the matters deposed to herein, except where noted, in which case we  
114 rely upon the information of others and in which case we verily believe such information  
115 to be true.

116

117 2. Maritime Electric is a public utility subject to the provisions of the Electric Power Act  
118 (the “Act”) engaged in the production, purchase, transmission, distribution and sale of  
119 electricity within Prince Edward Island.

120

121 3. We prepared or supervised the preparation of the evidence and to the best of our  
122 knowledge and belief the evidence is true in substance and in fact. A copy of the  
123 evidence is attached to this Affidavit, and is collectively known as Exhibit "A", contained

## **SECTION 2**

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124 at Sections 4.0 through 5.0 and Appendices A through C inclusive.

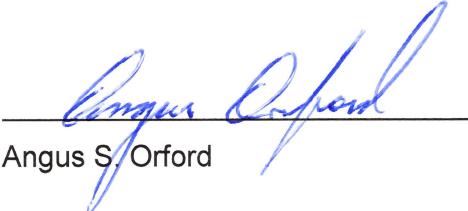
125  
126 4. Section 6.0 contains a Proposed Order of the Commission based on the Company's  
127 Application.

128  
129 SWORN TO SEVERALLY at  
130 Charlottetown, Prince Edward  
131 Island, the 29<sup>th</sup> day of October, 2021.  
132 Before me:

133  
134  
135 

---

T. Michelle Francis

136  
137  
138  
139 

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Angus S. Orford

140  
141  
142  
143 

---

144 A Commissioner for taking affidavits  
145 in the Supreme Court of Prince Edward Island.  
146

## **SECTION 3**

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147   **3.0   INTRODUCTION**

148

149   **3.1   Corporate Profile**

150   Maritime Electric Company, Limited (“Maritime Electric” or the “Company”) owns and  
151   operates a fully integrated system providing for the purchase, generation, transmission,  
152   distribution and sale of electricity throughout Prince Edward Island (“PEI”). The  
153   Company’s head office is located in Charlottetown with generating facilities in  
154   Charlottetown and Borden-Carleton. The Company has contractual entitlement to  
155   capacity and energy from NB Power’s Point Lepreau Nuclear Generating Station  
156   (“Point Lepreau”) and an agreement for the purchase of capacity and system energy  
157   from NB Power delivered via two submarine cables leased from the Province of PEI.  
158   The Company purchases 92.5 megawatts (“MW”) of wind powered energy under  
159   contract with the PEI Energy Corporation.

160

161   **3.2   Overview of Evidence**

162   Weather Normalization Mechanism and Reserves are common in approach throughout  
163   the utility industry and are part of a broader group of deferral reserves designed to  
164   mitigate volume or demand fluctuations. The purpose of a Weather Normalization  
165   Mechanism and Reserve is to stabilize electricity rates charged to customers by  
166   removing the volatility in sales and energy supply costs caused by temperature  
167   changes relative to historical averages. Where the Heating Degree Days<sup>1</sup> (“HDD”)  
168   variation is above normal (colder temperature than historical average), the Company  
169   will experience incremental marginal net revenue (revenue less energy costs) which  
170   would need to be returned to customers and when the HDD variation is below normal  
171   (warmer temperature than historical average) there will be a shortfall in net revenue  
172   which will need to be recovered from customers.

173

174   In recent years, Maritime Electric’s sales revenues and energy supply costs have  
175   become subject to greater volatility due to variations in the number of HDDs and

---

<sup>1</sup> [http://climate.weather.gc.ca/glossary\\_e.html](http://climate.weather.gc.ca/glossary_e.html) - Heating degree-days for a given day are the number of degrees Celsius that the mean temperature is below 18°C. If the temperature is equal to or greater than 18°C, then the number will be zero. For example, a day with a mean temperature of 15.5°C has 2.5 heating degree-days; a day with a mean temperature of 20.5°C has zero heating degree-days.

## **SECTION 3**

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176       increases in the use of electricity for space heating. To mitigate this increasing volatility  
177       and the resulting uncertainty with respect to customer electricity rates, the Company  
178       submitted a proposal to adopt a Weather Normalization Mechanism and Reserve as  
179       part of its General Rate Application filed on October 28, 2015.

180  
181       In Commission Orders UE16-04 and UE16-04R, the Commission granted interim  
182       approval to adopt a Weather Normalization Mechanism and Reserve for the period  
183       January 1, 2016 to February 28, 2019 but expressed concerns about the impact that it  
184       may have on the Rate of Return Adjustment ("RORA") account. As a result, the  
185       Commission also ordered the Company to provide the monthly balance of the Weather  
186       Normalization Mechanism and Reserve as part of its monthly reporting requirements  
187       to IRAC and to also file the year-end balance of the Weather Normalization Mechanism  
188       and Reserve on or before February 28 of each of 2017, 2018 and 2019. The  
189       Commission has indicated it will determine whether to approve a permanent Weather  
190       Normalization Mechanism and Reserve based on its review of these monthly and  
191       annual reports.

192  
193       The interim Weather Normalization Mechanism and Reserve states that "Revisions to  
194       the components of the [megawatt hour] MWh Variation from Average and Marginal Net  
195       Revenue formulas for a calendar year are to be submitted to the Commission for  
196       approval on or before October 31 of the year prior thereto".

197  
198       On November 30, 2018, the Company filed an application with the Commission to  
199       approve the rates, tolls and charges for electric service for the years March 1, 2019 to  
200       February 28, 2022, including approval of the Weather Normalization Mechanism and  
201       Reserve account for 2019 and future years. In Commission Order UE19-08, the  
202       Commission approved continuation of the Weather Normalization Mechanism and  
203       Reserve account on an interim basis until February 28, 2022 with no change to the  
204       method of calculation that has been used since 2016.

205  
206       On December 18, 2019, Grant Thornton LLP provided a report to the Commission on  
207       their review of the Company's Weather Normalization Mechanism and Reserve. Grant

## **SECTION 3**

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208 Thornton concluded that the 2019 variables were calculated in accordance with the  
209 approved definition and there were no material variances. In Commission Order UE19-  
210 10, the Commission approved revisions to the Weather Normalization Marginal Net  
211 Revenue Variables for the 2019 fiscal year and ordered the Company to file the  
212 proposed Weather Normalization Marginal Net Revenue Variables for 2020 with the  
213 Commission on or before January 31, 2020.

214

215 Pursuant to Commission Order UE19-08, the Company filed an application with the  
216 Commission on January 31, 2020, requesting approval of changes to the Schedule of  
217 Rates effective March 1, 2020 and March 2, 2021, including the proposed revisions to  
218 the variables of the Weather Normalization Mechanism and Reserve account for  
219 January 1, 2020. Further amendments to this application were filed on February 10,  
220 2020 and on February 14, 2020. Grant Thornton LLP, as engaged by the Commission  
221 to review the application including the proposed variables for the period January 1,  
222 2020 to December 31, 2020, issued a report on the application on October 14, 2020.

223

224 On December 21, 2020, IRAC issued Order UE20-06 which approved the variables for  
225 the 2020 fiscal period as proposed in the original application. However, no changes to  
226 customer rates or the Energy Cost Adjustment Mechanism ("ECAM") base rate were  
227 approved by the Commission in 2020 and the variables for the period January 1, 2020  
228 to December 31, 2020 approved by the Commission in Order UE20-06 were revised  
229 and subsequently approved in Order UE21-03. Also included in Order UE21-03 was  
230 the approval of revisions to the components of the interim Weather Normalization  
231 Mechanism and Reserve for the 2021 fiscal year.

232

233 Section 4.0 in this Application is filed in support of the proposed revisions to the  
234 components of the MWh Variation from Average and Marginal Net Revenue formulas  
235 for the period beginning January 1, 2022.

236

237 **3.3 Operation of Maritime Electric's Approved Interim Weather Normalization**  
238 **Mechanism and Reserve and its Components**

239 The balance of the Weather Normalization Mechanism and Reserve on the Company's

## SECTION 3

balance sheet represents the cumulative monthly change in the contribution of sales resulting from variations in HDDs from the normal ten-year average.

When HDDs in a month are higher than the normal ten-year average for that month, a marginal net revenue amount will be subtracted on the Company's income statement and added to the Reserve as an amount owing to the customer. However, when HDDs in a month are lower than the normal ten-year average for that month, a marginal net revenue amount will be added to the Company's income statement and subtracted from the Reserve as an amount recoverable from the customer. Appendix A provides the monthly balance of the Weather Normalization Mechanism and Reserve to September 30, 2021. The HDD as measured by Environment Canada for January 1, 2021 to September 30, 2021 is provided in Appendix B.

As a formula, the monthly contribution to the Weather Normalization Mechanism and Reserve is a product of the two components as expressed below:

Contributions to Weather Normalization Mechanism and Reserve = MWh Variation From Average X Marginal Net Revenue

Where,

MWh Variation from Average = (Actual HDD Value – Average HDD Value) X (MWh per HDD Coefficient)

Marginal Net Revenue = Forecast Unit Revenue per MWh – Forecast Unit Energy Cost per MWh

## **SECTION 4**

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266   **4.0 PROPOSED JANUARY 1, 2022 COMPONENTS OF THE WEATHER**  
267   **NORMALIZATION MECHANISM AND RESERVE**

268

269   **4.1 Overview of Proposed January 1, 2022 Components**

270   The proposed components to the Weather Normalization Mechanism and Reserve set  
271   out in this section reflect customer electricity rates effective January 1, 2021 approved  
272   by the Commission in Order UE20-06.

273

274   **4.2 MWh Variation from Average**

275   There are two elements of the MWH Variation from Average components that require  
276   revision for the period beginning January 1, 2022:

277

- 278       ■      Average HDD value; and
- 279       ■      MWh per HDD Coefficient.

280

281   **4.2.1 Average HDD Value**

282   The Average HDD Value is calculated using the rolling ten-year average HDD  
283   value based upon the most recent ten years of information available as  
284   measured by Environment Canada for the Charlottetown Airport weather  
285   station<sup>2</sup>.

286

287   The updated Average HDD Value proposed to be used for 2022 is 4,426 based  
288   upon the ten-year period from 2011 to 2020, as calculated in Appendix C –  
289   Schedule 1.

290

291   **4.2.2 MWh Per HDD Coefficient**

292   The determination of the MWh Per HDD Coefficient (the “Coefficient”) to be  
293   used for 2022 is calculated using econometric modelling with a linear regression

---

<sup>2</sup> The Environment Canada HDD source website URL is:  
[https://climate.weather.gc.ca/historical\\_data/search\\_historic\\_data\\_stations\\_e.html?searchType=stnProv&timeframe=1&lstProvince=PE&StartYear=2018&EndYear=2018&optLimit=specDate&Year=2018&Month=10&Day=1&selRowPerPage=25](https://climate.weather.gc.ca/historical_data/search_historic_data_stations_e.html?searchType=stnProv&timeframe=1&lstProvince=PE&StartYear=2018&EndYear=2018&optLimit=specDate&Year=2018&Month=10&Day=1&selRowPerPage=25). Where no data is available from Environment Canada for the Charlottetown Airport weather station, data available for the nearest weather station (for example, Harrington PEI weather station) is used.

## **SECTION 4**

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294                   analysis, consistent with prior years. The linear regression analysis identifies  
295                   the estimated change in MWh sales (customer usage) resulting from a unit  
296                   variation in HDD.

297

298                   The revised Coefficient proposed for 2022 is 73.00 MWh per HDD based upon  
299                   the data from October 2020 to May 2021 as calculated in Appendix C –  
300                   Schedule 2.

301

302                  **4.3 Marginal Net Revenue**

303                   The Marginal Net Revenue rate is calculated as the Forecast Unit Revenue per MWh  
304                   less the Forecast Unit Energy Cost per MWh. As a result, there are two elements of  
305                   the Marginal Net Revenue component that require revision for the period beginning  
306                   January 1, 2022:

307

- 308                  ▪       Forecast Unit Revenue per MWh; and  
309                  ▪       Forecast Unit Energy Cost per MWh.

310

311                  **4.3.1 Forecast Unit Revenue Per MWh**

312                   The revised Forecast Unit Revenue per MWh proposed for 2022 has been  
313                   updated with actual results to September 30, 2021 and reflects the 2021 rate  
314                   adjustments approved in Order UE20-06.<sup>3</sup> Using these inputs, the Forecast Unit  
315                   Revenue per MWh for 2022 is \$147.23 as detailed in Appendix C – Schedule 3.

316

317                  **4.3.2 Forecast Unit Energy Cost Per MWh**

318                   The Forecast Unit Energy Cost per MWh is the Commission approved base  
319                   rate for the ECAM for the particular year. The ECAM base rate of \$92.44 per  
320                   MWh was approved by the Commission in Order UE21-03 for the fiscal year  
321                   2021. As the Company is not anticipating a change in rates in 2022, the ECAM  
322                   base rate of \$92.44 per MWh will remain in effect for 2022.

---

<sup>3</sup> The Forecast Unit Revenue per MWh is based on sales for year-round Residential, General Service and Small Industrial rate classes as these are the only classes materially affected by variations in Heating Degree Days ("HDD"). Alternatively, Residential and General Service Seasonal sales, Large Industrial sales and Street Lighting/Unmetered sales are not included in the calculation of the Forecast Unit Revenue per MWh.

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## **SECTION 4**

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323           **4.3.3 Summary**

324           Using the Forecast Unit Revenue per MWh and Forecast Unit Energy Cost per  
325           MWh for 2022 as described above, the 2022 Marginal Net Revenue Rate is  
326           calculated to be \$54.79 per MWh as detailed in Appendix C – Schedule 3.

## **SECTION 5**

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327    **5.0    SUMMARY**

328

329        The Weather Normalization Mechanism and Reserve was approved by IRAC, on an  
330        interim basis, in Order UE16-04 effective for the period January 1, 2016 to February  
331        28, 2019. The Commission's interim approval was further extended to February 28,  
332        2022 in Order UE19-08.

333

334        The Company proposes that the Commission approve the revisions to the Weather  
335        Normalization Mechanism variables for 2022 as outlined in this application and  
336        summarized in the table below.

337

Summary of Proposed Revisions to Weather Normalization Mechanism and Reserve Variables		
	Approved UE21-03 January 1, 2021	Proposed January 1, 2022
Average HDD Value	4,394	4,426
MWH per HDD Coefficient	72.30	73.00
Forecast Unit Revenue per MWh	\$147.00	\$147.23
Forecast Unit Energy Cost per MWh	\$92.44	\$92.44 <sup>4</sup>

338

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<sup>4</sup> The existing ECAM base rate of \$92.44 to remain in effect for 2022.

## SECTION 6

**339      6.0      PROPOSED ORDER**

340

341 CANADA

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## **343 PROVINCE OF PRINCE EDWARD ISLAND**

344

## **BEFORE THE ISLAND REGULATORY**

346

## **AND APPEALS COMMISSION**

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**IN THE MATTER** of Section 20 of the *Electric Power Act* (R.S.P.E.I. 1988, Cap. E-4) and **IN THE MATTER** of the Application of Maritime Electric Company, Limited for an order of the Commission approving revisions to the components of the Weather Normalization Mechanism and Reserve, including the MWh Variation from Average and Marginal Net Revenue, for the period beginning January 1, 2022 and for certain approvals incidental to such an order.

360

361

362 UPON receiving an Application by Maritime Electric Company, Limited (the "Company") for  
363 approval of proposed revisions to the Weather Normalization Mechanism and Reserve;

364

365 AND UPON considering the Application and Evidence filed in support thereof;

366

367 NOW THEREFORE for the reasons given in the annexed Reasons for Order and pursuant to  
368 the Electric Power Act.

October 29, 2021

## **SECTION 6**

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369 IT IS ORDERED THAT

370

371 The revisions to the components of the interim Weather Normalization Mechanism and  
372 Reserve for the period beginning January 1, 2022 filed herein on October 29, 2021 and  
373 summarized below are approved.

374

<b>Approved Weather Normalization Mechanism and Reserve Variables</b>	
	<b>Effective Date January 1, 2022</b>
Average HDD Value	4,426
MWH per HDD Coefficient	73.00
Forecast Unit Revenue per MWh	\$147.23
Forecast Unit Energy Cost per MWh	\$92.44

375

376 DATED at Charlottetown this \_\_\_\_ day of \_\_\_\_, 2021

377

378 BY THE COMMISSION:

379 \_\_\_\_\_

380 Chair

381 \_\_\_\_\_

382 Commissioner

383 \_\_\_\_\_

384 Commissioner

385 \_\_\_\_\_

386 Commissioner

**APPENDIX A**

**Monthly Balance of the Weather Normalization Mechanism and Reserve  
Account to September 30, 2021**

Appendix A Monthly Balance of the Weather Normalization Mechanism and Reserve Account to September 30, 2021								
MM/YY	Heating Degree Days ( below 18 deg C )			Space heating load		Marginal Net Revenue (\$/MWh)	Weather Normalization Mechanism and Reserve	
	Actual HDD	10 Year Average Monthly HDD	Variation from 10 Year Average HDD	Coefficient (MWh/HDD)	Variation from Average ( MWh )		Increase (Decrease) (\$)	Adjusted Balance Owing (Recoverable) (\$)
	A	B	C = A - B	D	E = C X D		G = E X F	H = Sum of G
January, 2016	713.0	753.9	(40.9)	41.73	(1,707)	50.42	(86,055)	(86,055)
February, 2016	628.2	688.2	(60.0)	41.73	(2,504)	50.42	(126,242)	(212,296)
March, 2016	654.0	637.2	16.8	41.73	701	50.42	35,348	(176,949)
April, 2016	475.0	420.6	54.4	41.73	2,270	50.42	114,459	(62,490)
May, 2016	259.0	264.5	(5.5)	41.73	(230)	50.42	(11,572)	(74,062)
June, 2016	121.0	110.0	11.0	41.73	459	50.42	23,144	(50,917)
July, 2016	30.0	16.5	13.5	41.73	563	50.42	28,404	(22,513)
August, 2016	23.0	24.2	(1.2)	41.73	(50)	50.42	(2,525)	(25,038)
September, 2016	101.0	107.1	(6.1)	41.73	(255)	50.42	(12,835)	(37,872)
October, 2016	255.0	272.8	(17.8)	41.73	(743)	50.42	(37,452)	(75,324)
November, 2016	401.0	421.8	(20.8)	41.73	(868)	50.42	(43,764)	(119,088)
December, 2016	665.0	620.5	44.5	41.73	1,857	50.42	93,629	(25,459)
January, 2017	712.0	751.4	(39.4)	43.21	(1,702)	49.56	(84,375)	(109,833)
February, 2017	657.0	704.2	(47.2)	43.21	(2,040)	49.56	(101,078)	(210,912)
March, 2017	690.0	646.1	43.9	43.21	1,897	49.56	94,011	(116,900)
April, 2017	416.0	433.7	(17.7)	43.21	(765)	49.56	(37,904)	(154,805)
May, 2017	264.0	256.4	7.6	43.21	328	49.56	16,275	(138,529)
June, 2017	94.0	114.6	(20.6)	43.21	(890)	49.56	(44,115)	(182,644)
July, 2017	27.0	16.4	10.6	43.21	458	49.56	22,700	(159,944)
August, 2017	29.0	22.8	6.2	43.21	268	49.56	13,277	(146,667)
September, 2017	92.0	106.2	(14.2)	43.21	(614)	49.56	(30,409)	(177,076)
October, 2017	202.8	279.6	(76.8)	43.21	(3,319)	49.56	(164,466)	(341,542)
November, 2017	439.7	423.6	16.1	43.21	696	49.56	34,478	(307,064)
December, 2017	695.4	613.2	82.2	43.21	3,552	49.56	176,030	(131,034)
January, 2018	764.4	760.1	4.3	46.66	201	51.38	10,309	(120,725)
February, 2018	620.8	699.3	(78.5)	46.66	(3,663)	51.38	(188,195)	(308,920)
March, 2018	602.0	652.1	(50.1)	46.66	(2,338)	51.38	(120,109)	(429,030)
April, 2018	445.1	440.1	5.0	46.66	233	51.38	11,987	(417,043)
May, 2018	279.9	261.9	18.0	46.66	840	51.38	43,153	(373,890)
June, 2018	167.6	121.2	46.4	46.66	2,165	51.38	111,239	(262,651)
July, 2018	14.0	18.9	(4.9)	46.66	(229)	51.38	(11,747)	(274,398)
August, 2018	9.4	19.9	(10.5)	46.66	(490)	51.38	(25,173)	(299,571)
September, 2018	125.7	104.7	21.0	46.66	980	51.38	50,345	(249,225)
October, 2018	338.7	276.1	62.6	46.66	2,921	51.38	150,077	(99,149)
November, 2018	519.5	426.3	93.2	46.66	4,349	51.38	223,437	124,288
December, 2018	709.0	620.5	88.5	46.66	4,129	51.38	212,169	336,457
January, 2019	756.5	757.6	(1.1)	50.19	(55)	52.09	(2,876)	333,581
February, 2019	736.8	688.7	48.1	50.19	2,414	52.09	125,750	459,331
March, 2019	637.5	656.8	(19.3)	50.19	(969)	52.09	(50,457)	408,875
April, 2019	448.8	432.6	16.2	50.19	813	52.09	42,352	451,227
May, 2019	351.6	257.5	94.1	50.19	4,723	52.09	246,010	697,237
June, 2019	105.9	118.5	(12.6)	50.19	(632)	52.09	(32,941)	664,296
July, 2019	25.5	18.7	6.8	50.19	341	52.09	17,778	682,074
August, 2019	17.3	19.0	(1.7)	50.19	(85)	52.09	(4,444)	677,629
September, 2019	142.6	101.9	40.7	50.19	2,043	52.09	106,404	784,033
October, 2019	298.9	271.6	27.3	50.19	1,371	52.09	71,424	855,457
November, 2019	478.7	425.7	53.0	50.19	2,662	52.09	138,639	994,096
December, 2019	638.3	616.7	21.6	50.19	1,082	52.09	56,365	1,050,461
January, 2020	732.7	761.2	(28.5)	67.91	(1,938)	51.94	(100,668)	949,793
February, 2020	687.0	682.2	4.8	67.91	327	51.94	17,001	966,795
March, 2020	645.8	647.6	(1.8)	67.91	(122)	51.94	(6,349)	960,446
April, 2020	457.6	435.3	22.3	67.91	1,514	51.94	78,622	1,039,068
May, 2020	288.2	256.9	31.3	67.91	2,126	51.94	110,438	1,149,506
June, 2020	102.6	125.8	(23.2)	67.91	(1,573)	51.94	(81,691)	1,067,815
July, 2020	31.7	20.1	11.6	67.91	788	51.94	40,916	1,108,731
August, 2020	24.5	17.9	6.6	67.91	445	51.94	23,139	1,131,870
September, 2020	113.4	102.4	11.0	67.91	749	51.94	38,906	1,170,775
October, 2020	281.5	275.5	6.1	67.91	411	51.94	21,340	1,192,115
November, 2020	397.2	435.5	(38.3)	67.91	(2,602)	51.94	(135,164)	1,056,951
December, 2020	525.6	625.6	(100.0)	67.91	(6,794)	51.94	(352,866)	704,085
December 2019 Balance to RORA per UE20-06							(1,057,328)	(353,243)
January, 2021	659.4	750.3	(90.9)	72.30	(6,571)	54.56	(358,533)	(711,775)
February, 2021	652.5	689.5	(37.0)	72.30	(2,672)	54.56	(145,796)	(857,571)
March, 2021	599.3	643.9	(44.6)	72.30	(3,221)	54.56	(175,736)	(1,033,307)
April, 2021	405.5	438.2	(32.7)	72.30	(2,363)	54.56	(128,952)	(1,162,259)
May, 2021	295.7	267.6	28.2	72.30	2,035	54.56	111,043	(1,051,216)
June, 2021	51.9	126.2	(74.3)	72.30	(5,368)	54.56	(292,893)	(1,344,109)
July, 2021	40.6	18.5	22.2	72.30	1,601	54.56	87,375	(1,256,734)
August, 2021	12.2	16.7	(4.5)	72.30	(323)	54.56	(17,633)	(1,274,367)
September, 2021	68.6	103.1	(34.5)	72.30	(2,497)	54.56	(136,210)	(1,410,577)

**APPENDIX B**

**January 1 to September 30, 2021 Heating Degree Data  
as Measured by Environment Canada**

## Charlottetown Airport 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag	
-63.12	46.29	CHARLOTTETOWN A	8300301	01/01/2021	2021	1	1		-2		-7.4		-4.7		22.7		0		0		0	T		M	0	T	30		42		
-63.12	46.29	CHARLOTTETOWN A	8300301	01/02/2021	2021	1	2		-0.6		-6.8		-3.7		21.7		0		0		27		M	0	T	3		61			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/03/2021	2021	1	3		-0.7		-3.7		-2.2		20.2		0		0		1.2		M	28		1		52			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/04/2021	2021	1	4		0.2		-3.8		-1.8		19.8		0		0		0	T	M	26		5		31			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/05/2021	2021	1	5		0.6		-1		-0.2		18.2		0		0		0	T	M	22		5		52			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/06/2021	2021	1	6		1		0		0.5		17.5		0		2.6		0	T	M	17		2		55			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/07/2021	2021	1	7		0.7		-1.6		-0.5		18.5		0		4.2		3.5		M	12		34		67			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/08/2021	2021	1	8		-1.6		-4		-2.8		20.8		0		0.2		0	T	M	11		31		55			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/09/2021	2021	1	9		-0.4		-3.5		-2		20		0		0		3.8		M	12		33		39			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/10/2021	2021	1	10		-0.8		-3.2		-2		20		0		0		0.8		M	13		35		50			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/11/2021	2021	1	11		-1.5		-8.9		-5.2		23.2		0		0		0		M	12		M		M			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/12/2021	2021	1	12		-1.7		-4.3		-3		21		0		0		2		1.2		12		M		M		
-63.12	46.29	CHARLOTTETOWN A	8300301	01/13/2021	2021	1	13		-0.5		-8.1		-4.3		22.3		0		0		0		M	12		M		M			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/14/2021	2021	1	14		-0.8		-3.9		-2.4		20.4		0		0		5.1		M	14		M		M			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/15/2021	2021	1	15		0.2		-8.8		-4.3		22.3		0		0		0		M	16		M		M			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/16/2021	2021	1	16		1.4		-4.1		-1.4		19.4		0		2		0		M	15		8		57			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/17/2021	2021	1	17		3.7		1.2		2.5		15.5		0		26.4		0	T	M	6		10		74			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/18/2021	2021	1	18		1.8		-3.4		-0.8		18.8		0		0		0	T	M	4		23		46			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/19/2021	2021	1	19		-3.7		-10.2		-7		25		0		0		0	T	M	4		28		44			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/20/2021	2021	1	20		-6.4		-11.5		-9		27		0		0		0		M	4		27		33			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/21/2021	2021	1	21		-7.1		-12.9		-10		28		0		0		0		M	7		30		33			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/22/2021	2021	1	22		-1.2		-10.6		-5.9		23.9		0		0		0		M	6		3		35			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/23/2021	2021	1	23		-3.4		-8		-5.7		23.7		0		0		0	T	M	6		25		35			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/24/2021	2021	1	24		-0.6		-9.8		-5.2		23.2		0		0		4.8		M	7		32		54			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/25/2021	2021	1	25		-0.1		-1.2		-0.7		18.7		0		0		1		1		12		31		58		
-63.12	46.29	CHARLOTTETOWN A	8300301	01/26/2021	2021	1	26		0.7		-0.8		-0.1		18.1		0		0.7		1.2		M	8		33		39			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/27/2021	2021	1	27		0.2		-3.9		-1.9		19.9		0		0		0	T	M	8		34		31			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/28/2021	2021	1	28		-3		-5.5		-4.3		22.3		0		0		0	T	M	8		M		M			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/29/2021	2021	1	29		-2.9		-6		-4.5		22.5		0		0		4		M	10		3		54			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/30/2021	2021	1	30		-4.2		-7.8		-6		24		0		0		0	T	M	8		34		44			
-63.12	46.29	CHARLOTTETOWN A	8300301	01/31/2021	2021	1	31		-0.9		-4.6		-2.8		20.8		0		0.8		0	T	M	6		32		41			
-63.12	46.29	CHARLOTTETOWN A	8300301	02/01/2021	2021	2	1		-2		-5.4		-3.7		21.7		0		0		0	T	0		M	6		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	02/02/2021	2021	2	2		4.9		-5		-0.1		18.1		0		7.5		6		M	6		11		81			
-63.12	46.29	CHARLOTTETOWN A	8300301	02/03/2021	2021	2	3		9		-0.7		4.2		13.8		0		10.6		0		M								

## Charlottetown Airport 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-63.12	46.29	CHARLOTTETOWN A	8300301	03/14/2021	2021	3	14		-4.9		-9.4		-7.2		25.2		0		0		3		2		10		31		42	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/15/2021	2021	3	15		-8.7		-11.9		-10.3		28.3		0		0		11.6		5.2		16		33		59	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/16/2021	2021	3	16		-9.6		-13.4		-11.5		29.5		0		0		3.8		1.1		25		32		56	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/17/2021	2021	3	17		4.8		-12.4		-3.8		21.8		0		0		0		0		11		23		36	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/18/2021	2021	3	18		4.2		-3.9		0.2		17.8		0		1.3		3		4.3		11		33		46	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/19/2021	2021	3	19		-4.2		-8.6		-6.4		24.4		0		0		4.4		3.2		16		32		54	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/20/2021	2021	3	20		5		-9.2		-2.1		20.1		0		0		0		0		16		26		31	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/21/2021	2021	3	21		11.2		-0.9		5.2		12.8		0		0		0		0		14		25		38	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/22/2021	2021	3	22		13.2		2.2		7.7		10.3		0		0		0		0		0		24		40	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/23/2021	2021	3	23		13.3		1.8		7.6		10.4		0		0		0		0		5		21		34	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/24/2021	2021	3	24		14.6		2.7		8.7		9.3		0		0		0		0		3		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/25/2021	2021	3	25		14.2		3.1		8.7		9.3		0		0		0		0		2		20		35	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/26/2021	2021	3	26		12.9		0		6.5		11.5		0		34.6		0		34.6		2		2		44	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/27/2021	2021	3	27		0.6		-3.3		-1.4		19.4		0		1		2.6		4.6		1		2		84	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/28/2021	2021	3	28		2.7		-3.2		-0.3		18.3		0		6.4		0	T	6.4		2		14		73	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/29/2021	2021	3	29		9		-2.1		3.5		14.5		0		3.2		0.2		3.6		1		30		75	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/30/2021	2021	3	30		5.6		-3.8		0.9		17.1		0		0		0		0		0	T	29		55	
-63.12	46.29	CHARLOTTETOWN A	8300301	03/31/2021	2021	3	31		15.7		0.6		8.2		9.8		0		0		0		0		0	T	17		45	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/01/2021	2021	4	1		14.7		7		10.9		7.1		0		9.8		0		9.8		0	T	16		65	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/02/2021	2021	4	2		9.1		-1.7		3.7		14.3		0		4.9		3		7.9		0	T	36		34	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/03/2021	2021	4	3		-0.2		-2.2		-1.2		19.2		0		0	T	0		0	T	4		35		46	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/04/2021	2021	4	4		1.7		-2		-0.2		18.2		0		19.2		1		20.2		1	E	1		62	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/05/2021	2021	4	5		10		0.3		5.2		12.8		0		0.6		0		0.6		0		2		38	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/06/2021	2021	4	6		7.7		0.6		4.2		13.8		0		0.3		0		0.3		0		35		32	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/07/2021	2021	4	7		7.9		-0.2		3.9		14.1		0		0	T	0		0	T	0		35		35	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/08/2021	2021	4	8		10.4		0.8		5.6		12.4		0		0		0		0		0		1		40	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/09/2021	2021	4	9		12.3		1.3		6.8		11.2		0		0		0		0		0		34		37	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/10/2021	2021	4	10		4.2		-3.2		0.5		17.5		0		0		0		0		0		2		42	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/11/2021	2021	4	11		4		-2.8		0.6		17.4		0		0	T	0		0	T	0		32		55	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/12/2021	2021	4	12		5.9		1.1		3.5		14.5		0		0.2		0		0.2		0		4		62	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/13/2021	2021	4	13		4.2		0.7		2.5		15.5		0		0		0	T	0	T	0	T	1		67	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/14/2021	2021	4	14		5.2		-1.5		1.9		16.1		0		0	T	0		0	T	0		3		49	
-63.12	46.29	CHARLOTTETOWN A	8300301	04/15/2021	2021	4	15		7.3		-3.3		2		16		0		0											

## Charlottetown Airport 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag		
-63.12	46.29	CHARLOTTETOWN A	8300301	05/25/2021	2021	5	25		18		7.7		12.9		5.1		0		0.8		0		0.8				24		71			
-63.12	46.29	CHARLOTTETOWN A	8300301	05/26/2021	2021	5	26		25.9		11.4		18.7		0		0.7		0	T	0		0		0		21		53			
-63.12	46.29	CHARLOTTETOWN A	8300301	05/27/2021	2021	5	27		18.9		4.8		11.9		6.1		0		0	T	0		0		0		36		50			
-63.12	46.29	CHARLOTTETOWN A	8300301	05/28/2021	2021	5	28		11		3.1		7.1		10.9		0		0		0		0		0		30		45			
-63.12	46.29	CHARLOTTETOWN A	8300301	05/29/2021	2021	5	29		10.8		0.6		5.7		12.3		0		0		0		0		0		3		31			
-63.12	46.29	CHARLOTTETOWN A	8300301	05/30/2021	2021	5	30		12.9		0.2		6.6		11.4		0		0.3		0		0		0.3		2		35			
-63.12	46.29	CHARLOTTETOWN A	8300301	05/31/2021	2021	5	31		20.5		8.1		14.3		3.7		0		28.7		0		28.7				16		41			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/01/2021	2021	6	1		17.9		9.2		13.6		4.4		0		0	T	0		0		0		27		45			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/02/2021	2021	6	2		24.5		11.4		18		0		0		0		0		0		0		30		45			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/03/2021	2021	6	3		24.5		12.2		18.4		0		0.4		1.1		0		1.1				21		47			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/04/2021	2021	6	4		22.5		13.8		18.2		0		0.2		2.1		0		2.1				24		41			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/05/2021	2021	6	5		25.6		13.5		19.6		0		1.6		0		0		0		0		22		60			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/06/2021	2021	6	6		17.1		10.6		13.9		4.1		0		0		0		0		0		2		36			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/07/2021	2021	6	7		30.4		11.9		21.2		0		3.2		0		0		0		0		23		58			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/08/2021	2021	6	8		30.6		13		21.8		0		3.8		1.9		0		1.9				2		46			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/09/2021	2021	6	9		21.8		7		14.4		3.6		0		2		0		2						M			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/10/2021	2021	6	10		11.7		3.4		7.6		10.4		0		0	T	0		0		0		33		75			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/11/2021	2021	6	11		17.7		3.7		10.7		7.3		0		0	T	0		0		0		22		46			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/12/2021	2021	6	12		19		9.3		14.2		3.8		0		0		0		0		0		20		41			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/13/2021	2021	6	13		16		3.4		9.7		8.3		0		0		0		0		0		1		35			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/14/2021	2021	6	14		24.5		4.6		14.6		3.4		0		0.4		0		0		0.4		19		44			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/15/2021	2021	6	15			M		M		M		M		M		33.8		0		33.8				15		45		
-63.12	46.29	CHARLOTTETOWN A	8300301	06/16/2021	2021	6	16		22		12.7		17.4		0.6		0		1.6		0		0		1.6				13		36	
-63.12	46.29	CHARLOTTETOWN A	8300301	06/17/2021	2021	6	17		19.6		11.2		15.4		2.6		0		0		0		0		0		0		23		55	
-63.12	46.29	CHARLOTTETOWN A	8300301	06/18/2021	2021	6	18		24.8		11.7		18.3		0		0.3		0		0		0		0		0		23		35	
-63.12	46.29	CHARLOTTETOWN A	8300301	06/19/2021	2021	6	19		24		11.8		17.9		0.1		0		6.8		0		6.8				20		53			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/20/2021	2021	6	20		25.1		15.8		20.5		0		2.5		0		0		0		0		23		35			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/21/2021	2021	6	21		27.5		15.3		21.4		0		3.4		0		0		0		0		18		39			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/22/2021	2021	6	22		23.9		19		21.5		0		3.5		0	T	0		0		0		16		51			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/23/2021	2021	6	23		20.7		13.1		16.9		1.1		0		2.7		0		2.7				35		48			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/24/2021	2021	6	24		22.6		12.2		17.4		0.6		0		0		0		0		0		19		31			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/25/2021	2021	6	25		23.1		11.2		17.2		0.8		0		0		0		0		0		18		39			
-63.12	46.29	CHARLOTTETOWN A	8300301	06/26/2021	2021	6	26		25.6		17.2		21.4		0		3.4															

## Charlottetown Airport 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag		
-63.12	46.29	CHARLOTTETOWN A	8300301	08/05/2021	2021	8	5		23.6		17.1		20.4		0		2.4		8.8		0		8.8				18		39			
-63.12	46.29	CHARLOTTETOWN A	8300301	08/06/2021	2021	8	6		26.4		18.3		22.4		0		4.4		2.7		0		2.7				19		45			
-63.12	46.29	CHARLOTTETOWN A	8300301	08/07/2021	2021	8	7		27.1		17.7		22.4		0		4.4		0		0		0		0		22		39			
-63.12	46.29	CHARLOTTETOWN A	8300301	08/08/2021	2021	8	8		20.7		9.2		15		3		0		0		0		0		0		2		36			
-63.12	46.29	CHARLOTTETOWN A	8300301	08/09/2021	2021	8	9		21.9		7.9		14.9		3.1		0		0		0		0		0		0		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/10/2021	2021	8	10		24.6		16.2		20.4		0		2.4		0		0		0		0		0		20		35	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/11/2021	2021	8	11		26.8		18.2		22.5		0		4.5		0		0		0		0		0		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/12/2021	2021	8	12		27.6		19.6		23.6		0		5.6		0.4		0		0		0.4				M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/13/2021	2021	8	13		30.6		21.3		26		0		8		0		0		0		0		0		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/14/2021	2021	8	14		30.1		20.8		25.5		0		7.5		2.4		0		2.4				16		137			
-63.12	46.29	CHARLOTTETOWN A	8300301	08/15/2021	2021	8	15		26.1		16.1		21.1		0		3.1		0		0		0		0		0		1		33	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/16/2021	2021	8	16		23.2		14.1		18.7		0		0.7		0		0		0		0		0		31		34	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/17/2021	2021	8	17		27.5		15.4		21.5		0		3.5		0		0		0		0		0		20		38	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/18/2021	2021	8	18		24.7		17		20.9		0		2.9		0	T	0		0		0		T		20		36	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/19/2021	2021	8	19		27.5		18.6		23.1		0		5.1		0		0		0		0		0		24		32	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/20/2021	2021	8	20		27.4		17.8		22.6		0		4.6		0		0		0		0		0		1		36	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/21/2021	2021	8	21		23.9		11.3		17.6		0.4		0		0		0		0		0		0		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/22/2021	2021	8	22		24.5		11.1		17.8		0.2		0		0		0		0		0		0		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/23/2021	2021	8	23		26.5		15.9		21.2		0		3.2		0	T	0		0		0		T		18		36	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/24/2021	2021	8	24		26.8		20.2		23.5		0		5.5		0.6		0		0		0.6				21		60	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/25/2021	2021	8	25		28.4		19		23.7		0		5.7		0		0		0		0		0		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/26/2021	2021	8	26		29.1		18.2		23.7		0		5.7		6.3		0		0		6.3				22		32	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/27/2021	2021	8	27		23.5		14.9		19.2		0		1.2		0		0		0		0		0		32		52	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/28/2021	2021	8	28		19.8		9.7		14.8		3.2		0		0		0		0		0		0		36		45	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/29/2021	2021	8	29		23.8		11.6		17.7		0.3		0		0		0		0		0		0		M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/30/2021	2021	8	30		20.4		12.4		16.4		1.6		0		2.8		0		0		2.8				20		41	
-63.12	46.29	CHARLOTTETOWN A	8300301	08/31/2021	2021	8	31		27.1		18		22.6		0		4.6		0		0		0		0		0		23		35	
-63.12	46.29	CHARLOTTETOWN A	8300301	09/01/2021	2021	9	1		23		12.6		17.8		0.2		0		0		0		0		0		0		8		63	
-63.12	46.29	CHARLOTTETOWN A	8300301	09/02/2021	2021	9	2		22.5		12		17.3		0.7		0		128.8		0		0		128.8				5		51	
-63.12	46.29	CHARLOTTETOWN A	8300301	09/03/2021	2021	9	3		18.4		10.4		14.4		3.6		0		0	T	0		0		0		T		29		59	
-63.12	46.29	CHARLOTTETOWN A	8300301	09/04/2021	2021	9	4		14.2		9.9		12.1		5.9		0		5.7		0		5.7				33		57			
-63.12	46.29	CHARLOTTETOWN A	8300301	09/05/2021	2021	9	5		16.1		10.8		13.5		4.5		0		0.3													

## Charlottetown Airport 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-63.12	46.29	CHARLOTTETOWN A	8300301	10/16/2021	2021	10	16		16.8		5.3		11.1		6.9		0		0.9		0		M				M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/17/2021	2021	10	17		17.4		13.4		15.4		2.6		0		8.5		0		M				13		63	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/18/2021	2021	10	18		14.7		8.1		11.4		6.6		0		1.1		0		1.1				25		31	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/19/2021	2021	10	19		10.7		1.5		6.1		11.9		0		0		0		M				22		33	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/20/2021	2021	10	20		12.9		0.9		6.9		11.1		0		0		0		M				31		31	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/21/2021	2021	10	21		14.2		8.3		11.3		6.7		0		0	T	0		M				24		32	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/22/2021	2021	10	22		20.7		9.5		15.1		2.9		0		2.4		0		2.4				18		38	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/23/2021	2021	10	23		16.6		12.6		14.6		3.4		0		2.5		0		M				M		M	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/24/2021	2021	10	24		12.7		6.4		9.6		8.4		0		20.5		0		M				32		52	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/25/2021	2021	10	25		9.8		0.8		5.3		12.7		0		0		0		M				29		57	
-63.12	46.29	CHARLOTTETOWN A	8300301	10/26/2021	2021	10	26																							
-63.12	46.29	CHARLOTTETOWN A	8300301	10/27/2021	2021	10	27																							
-63.12	46.29	CHARLOTTETOWN A	8300301	10/28/2021	2021	10	28																							
-63.12	46.29	CHARLOTTETOWN A	8300301	10/29/2021	2021	10	29																							
-63.12	46.29	CHARLOTTETOWN A	8300301	10/30/2021	2021	10	30																							
-63.12	46.29	CHARLOTTETOWN A	8300301	10/31/2021	2021	10	31																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/01/2021	2021	11	1																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/02/2021	2021	11	2																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/03/2021	2021	11	3																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/04/2021	2021	11	4																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/05/2021	2021	11	5																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/06/2021	2021	11	6																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/07/2021	2021	11	7																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/08/2021	2021	11	8																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/09/2021	2021	11	9																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/10/2021	2021	11	10																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/11/2021	2021	11	11																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/12/2021	2021	11	12																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/13/2021	2021	11	13																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/14/2021	2021	11	14																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/15/2021	2021	11	15																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/16/2021	2021	11	16																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/17/2021	2021	11	17																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/18/2021	2021	11	18																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/19/2021	2021	11	19																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/20/2021	2021	11	20																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/21/2021	2021	11	21																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/22/2021	2021	11	22																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/23/2021	2021	11	23																							
-63.12	46.29	CHARLOTTETOWN A	8300301	11/24/2021																										

## Charlottetown Airport 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-63.12	46.29	CHARLOTTETOWN A	8300301	12/27/2021	2021	12	27																							
-63.12	46.29	CHARLOTTETOWN A	8300301	12/28/2021	2021	12	28																							
-63.12	46.29	CHARLOTTETOWN A	8300301	12/29/2021	2021	12	29																							
-63.12	46.29	CHARLOTTETOWN A	8300301	12/30/2021	2021	12	30																							
-63.12	46.29	CHARLOTTETOWN A	8300301	12/31/2021	2021	12	31																							

2784.9

	ChTwn HDD	Missing (used Harrington)	Details	Total HDD
January	659.4			659.4
February	652.5			652.5
March	599.3			599.3
April	405.5			405.5
May	295.7			295.7
June	51.1	0.8	June 15/21	51.9
July	40.6			40.6
August	12.2			12.2
September	68.6			68.6
October				0
November				0
December				0
	2784.9			2785.7

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[ne=1&lstProvince=PE&StartYear=2018&EndYear=2018&optLimit=specDate&Year=2018&Month=10&Day=1&selRowPerPage=25](http://www.ec.gc.ca/climate normals/1stProvince=PE&StartYear=2018&EndYear=2018&optLimit=specDate&Year=2018&Month=10&Day=1&selRowPerPage=25)

## Harrington 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Min Temp (°C)	Mean Temp Flag	Mean Temp (°C)	Heat Deg Days	Cool Deg Days	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-63.17	46.34	HARRINGTON CDA CS	830P001	01/01/2021	2021	1	1		-2.1		-6.6		-4.4		22.4	0			0	0	0	0	31		39	
-63.17	46.34	HARRINGTON CDA CS	830P001	01/02/2021	2021	1	2		-0.7		-6.5		-3.6		21.6	0			7.8	1	1	2	53		53	
-63.17	46.34	HARRINGTON CDA CS	830P001	01/03/2021	2021	1	3		-0.7		-3.8		-2.2		20.2	0			0.7	16	16	36		50		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/04/2021	2021	1	4		-0.1		-4.1		-2.1		20.1	0			0	13	13					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/05/2021	2021	1	5		0.4		-0.5		0		18	0			0	11	11	5		46		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/06/2021	2021	1	6		0.8		0		0.4		17.6	0			2.4	10	10	1		55		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/07/2021	2021	1	7		0.7		-1.6		-0.5		18.5	0			3.7	6	6	36		57		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/08/2021	2021	1	8		-1.5		-4		-2.7		20.7	0			0.6	6	6					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/09/2021	2021	1	9		-0.5		-3.5		-2		20	0			3.6	8	8	36		41		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/10/2021	2021	1	10		-0.6		-3.1		-1.8		19.8	0			0.2	8	8	36		55		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/11/2021	2021	1	11		-1.7		-7.2		-4.5		22.5	0			0	6	6					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/12/2021	2021	1	12		-1.5		-6.1		-3.8		21.8	0			0.6	7	7					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/13/2021	2021	1	13		-0.5		-8.4		-4.5		22.5	0			0.3	8	8					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/14/2021	2021	1	14		0.5		-3.4		-1.4		19.4	0			2.5	7	7					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/15/2021	2021	1	15		-0.6		-5.9		-3.2		21.2	0			0.2	9	9					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/16/2021	2021	1	16		1.4		-4.3		-1.5		19.5	0			2.3	10	10	14		53		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/17/2021	2021	1	17		3.6		1		2.3		15.7	0			30.3	5	5	11		75		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/18/2021	2021	1	18		2		-3.5		-0.7		18.7	0			0	4	4	22		48		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/19/2021	2021	1	19		-3.5		-10.1		-6.8		24.8	0			0	3	3	31		41		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/20/2021	2021	1	20		-6.8		-11.8		-9.3		27.3	0			0	3	3					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/21/2021	2021	1	21		-6.9		-12.1		-9.5		27.5	0			0	3	3					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/22/2021	2021	1	22		-2		-11		-6.5		24.5	0			0	4	4	4		36		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/23/2021	2021	1	23		-3		-8		-5.5		23.5	0			0	4	4	25		36		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/24/2021	2021	1	24		-0.7		-9.8		-5.2		23.2	0			2.8	3	3	33		46		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/25/2021	2021	1	25		0		-1.2		-0.6		18.6	0			1.9	13	13	30		46		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/26/2021	2021	1	26		0.3		-0.7		-0.2		18.2	0			0.7	14	14	1		34		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/27/2021	2021	1	27		-0.2		-4		-2.1		20.1	0			0	14	14	35		31		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/28/2021	2021	1	28		-3		-5.4		-4.2		22.2	0			0.2	14	14					
-63.17	46.34	HARRINGTON CDA CS	830P001	01/29/2021	2021	1	29		-2.8		-5.9		-4.4		22.4	0			1.1	14	14	34		49		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/30/2021	2021	1	30		-4.2		-7.8		-6		24	0			0	14	14	32		43		
-63.17	46.34	HARRINGTON CDA CS	830P001	01/31/2021	2021	1	31		-1.2		-4.7		-3		21	0			0.5	14	14	35		36		
-63.17	46.34	HARRINGTON CDA CS	830P001	02/01/2021	2021	2	1		-2.1		-5.4		-3.8		21.8	0			0	14	14					
-63.17	46.34	HARRINGTON CDA CS	830P001	02/02/2021	2021	2	2		4.6		-5.2		-0.3		18.3	0			19.6	14	14	11		71		
-63.17	46.34	HARRINGTON CDA CS	830P001	02/03/2021	2021	2	3		7.5		-0.9		3.3		14.7	0			12.9	10	10	11		37		
-63.17	46.34	HARRINGTON CDA CS	830P001	02/04/2021	2021	2	4		-0.1		-1.8		-1		19	0			1.4	6	6					
-63.17	46.34	HARRINGTON CDA CS	830P001	02/05/2021	2021	2	5		0.7		-4.6		-1.9		19.9	0			0.8	9	9					
-63.17	46.34	HARRINGTON CDA CS	830P001	02/06/2021	2021	2	6		4.6		-3.5		0.5		17.5	0			14.4	5	5	26		60		

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Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Min Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Cool Deg Days (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-63.17	46.34	HARRINGTON CDA CS	830P001	03/14/2021	2021	3	14		-4.8		-9.2	-7	25	0				0.4	21		1		43		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/15/2021	2021	3	15		-8.8		-11.9	-10.3	28.3	0				1.3	21		33		52		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/16/2021	2021	3	16		-9.5		-14.3	-11.9	29.9	0				0.7	24		35		53		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/17/2021	2021	3	17		4.7		-12.7	-4	22	0				0	23		24		35		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/18/2021	2021	3	18		4.3		-3.9	0.2	17.8	0				1.6	22		32		46		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/19/2021	2021	3	19		-3.8		-8.8	-6.3	24.3	0				1.6	22		35		50		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/20/2021	2021	3	20		5.1		-9.4	-2.1	20.1	0				0	27		25		32		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/21/2021	2021	3	21		10.9		-2.5	4.2	13.8	0				0	26		24		35		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/22/2021	2021	3	22		12.6		2.5	7.5	10.5	0				0	21		24		35		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/23/2021	2021	3	23		12.7		1.5	7.1	10.9	0				0	18		21		33		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/24/2021	2021	3	24		14.5		3.1	8.8	9.2	0				0	14						
-63.17	46.34	HARRINGTON CDA CS	830P001	03/25/2021	2021	3	25		13.5		3.5	8.5	9.5	0				0	8		20		33		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/26/2021	2021	3	26		12.1		0	6	12	0				34.1	1		6		43		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/27/2021	2021	3	27		0.5		-3.2	-1.3	19.3	0				2	0		1		65		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/28/2021	2021	3	28		2.5		-3.3	-0.4	18.4	0				4.2	0		14		78		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/29/2021	2021	3	29		9		-2.1	3.4	14.6	0				1.3	0		15		72		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/30/2021	2021	3	30		5.3		-3.8	0.7	17.3	0				0	0		30		44		
-63.17	46.34	HARRINGTON CDA CS	830P001	03/31/2021	2021	3	31		15.5		0.7	8.1	9.9	0				0	0		20		47		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/01/2021	2021	4	1		15		7.4	11.2	6.8	0				4.9	0		17		59		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/02/2021	2021	4	2		8.5		-1.7	3.4	14.6	0				2.1	0						
-63.17	46.34	HARRINGTON CDA CS	830P001	04/03/2021	2021	4	3		-0.2		-2.1	-1.2	19.2	0				0	1		36		45		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/04/2021	2021	4	4		1.3		-2	-0.4	18.4	0				5.2	0		35		38		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/05/2021	2021	4	5		7.9		0.3	4.1	13.9	0				0	0		7		39		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/06/2021	2021	4	6		5.2		0.4	2.8	15.2	0				0	0						
-63.17	46.34	HARRINGTON CDA CS	830P001	04/07/2021	2021	4	7		5.9		-0.4	2.8	15.2	0				0	0						
-63.17	46.34	HARRINGTON CDA CS	830P001	04/08/2021	2021	4	8		8.4		0.8	4.6	13.4	0				0	0		36		33		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/09/2021	2021	4	9		11.2		1.4	6.3	11.7	0				0	0		35		32		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/10/2021	2021	4	10		3.5		-2.9	0.3	17.7	0				0	0		36		41		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/11/2021	2021	4	11		3.1		-2.9	0.1	17.9	0				0	0		33		42		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/12/2021	2021	4	12		4.4		0.1	2.3	15.7	0				0	0		4		59		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/13/2021	2021	4	13		3.9		0.7	2.3	15.7	0				0	0		1		61		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/14/2021	2021	4	14		4.1		-1.1	1.5	16.5	0				0	0		6		45		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/15/2021	2021	4	15		5.4		-1.5	2	16	0				0	0		3		36		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/16/2021	2021	4	16		7.9		-2.7	2.6	15.4	0				0	0		4		38		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/17/2021	2021	4	17		2.6		0.5	1.5	16.5	0				4.2	0		4		37		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/18/2021	2021	4	18		2.7		0	1.4	16.6	0				15.2	0		36		45		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/19/2021	2021	4	19		6.4		0.2	3.3	14.7	0				3.5	3		31		39		
-63.17	46.34	HARRINGTON CDA CS	830P001	04/20/2021	2021	4	20		9.1		2.1	5.6	12.4	0				0	0						
-63.17	46.34	HARRINGTON CDA CS	830P001	04/21/2021	2021	4	21		15.8		3.7	9.7	8.3	0				0	0		18		43		

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Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days	Heat Deg Days Flag	Cool Deg Days	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag		
-63.17	46.34	HARRINGTON CDA CS	830P001	05/25/2021	2021	5	25		17.6		7.8		12.7		5.3		0							0				21		70		
-63.17	46.34	HARRINGTON CDA CS	830P001	05/26/2021	2021	5	26		25.3		11		18.2		0		0.2								0				21		49	
-63.17	46.34	HARRINGTON CDA CS	830P001	05/27/2021	2021	5	27		18.5		5.5		12		6		0								0.2				35		44	
-63.17	46.34	HARRINGTON CDA CS	830P001	05/28/2021	2021	5	28		10.4		2.9		6.7		11.3		0							0				24		42		
-63.17	46.34	HARRINGTON CDA CS	830P001	05/29/2021	2021	5	29		10.3		1.9		6.1		11.9		0							0								
-63.17	46.34	HARRINGTON CDA CS	830P001	05/30/2021	2021	5	30		12.4		2.3		7.4		10.6		0							0				6		31		
-63.17	46.34	HARRINGTON CDA CS	830P001	05/31/2021	2021	5	31		20.7		8		14.3		3.7		0							11.8				18		39		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/01/2021	2021	6	1		18.2		8.8		13.5		4.5		0							0				22		37		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/02/2021	2021	6	2		24.7		11.4		18		0		0							0				24		39		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/03/2021	2021	6	3		24.5		11.7		18.1		0		0.1							0.2				23		37		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/04/2021	2021	6	4		22.4		13.8		18.1		0		0.1							0				24		39		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/05/2021	2021	6	5		25.5		13		19.3		0		1.3							0				23		58		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/06/2021	2021	6	6		17.7		10.6		14.1		3.9		0							0				3		34		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/07/2021	2021	6	7		30.3		11.6		21		0		3							0				22		51		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/08/2021	2021	6	8		31.3		14.6		23		0		5							2.9				25		40		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/09/2021	2021	6	9		20.7		7.9		14.3		3.7		0							0.2								
-63.17	46.34	HARRINGTON CDA CS	830P001	06/10/2021	2021	6	10		11.8		3.6		7.7		10.3		0							0				32		62		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/11/2021	2021	6	11		18.2		3.9		11.1		6.9		0							0				21		39		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/12/2021	2021	6	12		19.3		9		14.1		3.9		0							0				21		32		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/13/2021	2021	6	13		14.9		5.8		10.4		7.6		0							0				1		31		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/14/2021	2021	6	14		24.7		5.5		15.1		2.9		0							0.2				18		40		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/15/2021	2021	6	15		21.8		12.5		17.2		0.8		0							24.9				17		46		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/16/2021	2021	6	16		22.4		11.9		17.1		0.9		0							0.6				14		39		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/17/2021	2021	6	17		19.2		10.8		15		3		0							0				25		49		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/18/2021	2021	6	18		25		11.1		18		0		0							0				25		40		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/19/2021	2021	6	19		23.9		11.7		17.8		0.2		0							16.1				18		48		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/20/2021	2021	6	20		24.8		15.3		20		0		2							0				24		35		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/21/2021	2021	6	21		27.4		15.4		21.4		0		3.4							0				19		34		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/22/2021	2021	6	22		24.4		19.1		21.7		0		3.7							0				20		46		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/23/2021	2021	6	23		20.5		12.8		16.7		1.3		0							1.3				36		40		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/24/2021	2021	6	24		23.1		12.4		17.8		0.2		0							0								
-63.17	46.34	HARRINGTON CDA CS	830P001	06/25/2021	2021	6	25		23.8		10.4		17.1		0.9		0							0				19		37		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/26/2021	2021	6	26		25.3		17.3		21.3		0		3.3							0				20		41		
-63.17	46.34	HARRINGTON CDA CS	830P001	06/27/2021	2021	6	27		22.8																							

## Harrington 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days	Heat Deg Days Flag	Cool Deg Days	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag				
-63.17	46.34	HARRINGTON CDA CS	830P001	08/05/2021	2021	8	5		23.3		16.5		19.9		0		1.9								9.6				20		36			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/06/2021	2021	8	6		25.7		17.9		21.8		0		3.8										5.4				20		45	
-63.17	46.34	HARRINGTON CDA CS	830P001	08/07/2021	2021	8	7		26.4		17		21.7		0		3.7									0				21		36		
-63.17	46.34	HARRINGTON CDA CS	830P001	08/08/2021	2021	8	8		20		11.3		15.7		2.3		0								0				2		34			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/09/2021	2021	8	9		21.2		10.9		16.1		1.9		0								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/10/2021	2021	8	10		25.1		15.5		20.3		0		2.3								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/11/2021	2021	8	11		26.7		18.5		22.6		0		4.6								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/12/2021	2021	8	12		27.6		19.4		23.5		0		5.5								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/13/2021	2021	8	13		30.6		21.7		26.2		0		8.2								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/14/2021	2021	8	14		29.8		20.6		25.2		0		7.2								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/15/2021	2021	8	15		24.8		16		20.4		0		2.4								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/16/2021	2021	8	16		22.8		15		18.9		0		0.9								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/17/2021	2021	8	17		27.1		14.9		21		0		3								0				22		32			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/18/2021	2021	8	18		25		16.5		20.7		0		2.7								0				22		35			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/19/2021	2021	8	19		27.8		18.4		23.1		0		5.1								0				21		31			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/20/2021	2021	8	20		28.3		18.3		23.3		0		5.3								0				3		34			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/21/2021	2021	8	21		23.4		14.4		18.9		0		0.9								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/22/2021	2021	8	22		24.9		13.2		19.1		0		1.1								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/23/2021	2021	8	23		26.6		15.7		21.1		0		3.1								0				17		32			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/24/2021	2021	8	24		26.2		20		23.1		0		5.1								0.2				22		49			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/25/2021	2021	8	25		26.7		19.1		22.9		0		4.9								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/26/2021	2021	8	26		29.4		18.1		23.7		0		5.7								5.6				16		33			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/27/2021	2021	8	27		22.4		15.3		18.9		0		0.9								0				12		56			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/28/2021	2021	8	28		19.6		11.4		15.5		2.5		0								0				14		44			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/29/2021	2021	8	29		23		10.8		16.9		1.1		0								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	08/30/2021	2021	8	30		20.1		13.3		16.7		1.3		0								2.3				18		39			
-63.17	46.34	HARRINGTON CDA CS	830P001	08/31/2021	2021	8	31		26.9		17.4		22.1		0		4.1								0				26		33			
-63.17	46.34	HARRINGTON CDA CS	830P001	09/01/2021	2021	9	1		22.4		13.7		18.1		0		0.1								0									
-63.17	46.34	HARRINGTON CDA CS	830P001	09/02/2021	2021	9	2		21.6		13.2		17.4		0.6		0							114.8				7		51				
-63.17	46.34	HARRINGTON CDA CS	830P001	09/03/2021	2021	9	3		18.2		9.7		14		4		0							0.2				25		50				
-63.17	46.34	HARRINGTON CDA CS	830P001	09/04/2021	2021	9	4		14		9.8		11.9		6.1		0							5.6				35		53				
-63.17	46.34	HARRINGTON CDA CS	830P001	09/05/2021	2021	9	5		14.6		11.3		13		5		0							0.3										
-63.17	46.34	HARRINGTON CDA CS	830P001	09/06/2021	2021	9	6		18.6		13.9		16.2		1.8		0							29.3				18		52				
-63.17	46.34	HARRINGTON CDA CS																																

## **Burrington 2021 Daily Weather**

## Harrington 2021 Daily Weather

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days	Heat Deg Days Flag	Cool Deg Days	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-63.17	46.34	HARRINGTON CDA CS	830P001	12/27/2021	2021	12	27																							
-63.17	46.34	HARRINGTON CDA CS	830P001	12/28/2021	2021	12	28																							
-63.17	46.34	HARRINGTON CDA CS	830P001	12/29/2021	2021	12	29																							
-63.17	46.34	HARRINGTON CDA CS	830P001	12/30/2021	2021	12	30																							
-63.17	46.34	HARRINGTON CDA CS	830P001	12/31/2021	2021	12	31																							

**APPENDIX C**

**Proposed Components of 2022 Weather Normalization Mechanism  
and Reserve Account**

Schedule 1 – Calculation of 10 Year Average HDD

Schedule 2 – Calculation of MWh/HDD Coefficient

Schedule 3 – Calculation of Forecast Marginal Net Revenue Rate

Appendix C Schedule 1 Calculation of 10-Year Average HDD												
Month	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10 year average (2011 - 2020)
January	744	715	812	771	829	713	712	764	757	733	659	755
February	697	700	672	717	858	628	657	621	737	687	653	697
March	621	572	603	760	743	654	690	602	638	646	599	653
April	420	379	441	453	537	475	416	445	449	458	406	447
May	259	224	235	308	233	259	264	280	352	288	296	270
June*	150	119	107	120	163	121	94	168	106	103	52	125
July	21	12	13	1	28	30	27	14	26	32	41	20
August	14	5	17	28	3	23	29	9	17	25	12	17
September*	90	76	106	118	73	101	92	126	143	113	69	104
October*	249	240	291	228	315	255	203	339	299	282	0	270
November	397	424	472	461	420	401	440	520	479	397	0	441
December	569	589	744	582	545	665	695	709	638	526	0	626
	4,231	4,055	4,513	4,547	4,747	4,325	4,319	4,596	4,638	4,288	2,786	4,426
												Standard Deviation 215

\* 2018 Data updated to reflect HDD per Grant Thornton Review of 2019 Variables.

**Appendix C**  
**Schedule 2**  
**Calculation of MWh/HDD Coefficient**

Year	Month	Days in month	Actual HDD	HDD per day	Reported sales (MWh)	Fewer hours of daylight	Average HDD per day	Average MWh per day
2020	Jul	A 31	B 31.7	C = B / A 1.0	D 78,952	E	F = (C + C of Prior Month)/2	G = F / A of Prior Month
	Aug	31	24.5	0.8	85,707			
	Sep	30	113.4	3.8	78,822			
	Oct	31	281.5	9.1	78,360	2.52	6.4	2,612
	Nov	30	397.2	13.2	90,559	4.07	11.2	2,921
	Dec	31	525.6	17.0	97,655	5.21	15.1	3,255
2021	Jan	31	659.4	21.3	115,187	5.40	19.1	3,716
	Feb	29	652.5	22.5	114,994	4.53	21.9	3,709
	Mar	31	599.3	19.3	107,094	3.11	20.9	3,693
	Apr	30	405.5	13.5	99,908	1.53	16.4	3,223
	May	31	295.7	9.5	88,838	0.00	11.5	2,961
	Jun	30	51.9	1.7	78,072			

**Linear regression results:**  
**(Oct 2020 - May 2021)**

HDD	Daylight hrs	b
* 73.00	24.53	2062.19 coefficients
6.40	18.19	96.18 standard error coefficients
0.97	82.73	#N/A R^2, standard error y
86.81	5.00	#N/A F, degrees of freedom
1188178	34218.04	#N/A Regression SS, residual SS
11.41	1.35	21.44 t values

\* This coefficient is the estimated change in sales (in MWh) for a change of 1 HDD.

**Appendix C**  
**Schedule 3**  
**Calculation of Forecast Marginal Net Revenue Rate for 2022**

Rate Class	2022 (Forecast)		
	Revenue (\$)	Sales (MWh)	Unit Revenue (\$/MWh)
	A	B	
Residential	96,861,029	686,297	*
General Service	62,458,316	392,390	*
Small Industrial	<u>13,278,366</u>	<u>93,591</u>	
Total	172,597,711	1,172,278	\$ 147.23 C = A / B
Forecast Unit Energy Cost per MWh			<u>(92.44)</u> D
Marginal Net Revenue Rate			\$ <u>54.79</u> E = C + D

\* Excludes revenue and kWh sales from seasonal customers.