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**The Island Regulatory
and Appeals Commission**

October 31, 2017

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

Dear Commissioners:

Pursuant to Order UE16-04, please find enclosed 10 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, 2018. An electronic copy will follow.

If you require further information, please do not hesitate to contact me at (902) 629-3696.

Yours truly,

MARITIME ELECTRIC



Jason C. Roberts
Vice President,
Finance & Chief Financial Officer

JCR15
Encl. as noted

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, 2018 and for certain approvals incidental to such an order.

Date: October 31, 2017

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October 31, 2017

2.0 APPLICATION

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, 2018 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 (“EPA” or “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.

October 31, 2017

SECTION 2 - APPLICATION

3. On February 29, 2016, IRAC 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. The “Application” section of the approved Weather Normalization Mechanism and Reserve requires that revisions to the components of the formulas contained therein are to be submitted to the Commission for approval on or before October 31st of the year prior to the effective date of the change.
4. On February 23, 2017, IRAC issued Order UE17-01 which approved revisions to the components of the formulas of the interim Weather Normalization Reserve for the 2017 fiscal year.

Application

5. Maritime Electric hereby applies for an Order of the Island Regulatory and Appeals Commission (“IRAC” or “the Commission”) approving revisions to the components of the interim Weather Normalization Mechanism and Reserve effective January 1, 2018 and for certain approvals incidental to such an Order.
6. The proposals contained in this Application represent a just and reasonable balance of the interests of Maritime Electric and those of its customers and will, if approved, allow the Company to continue to provide a high level of service to customers at a cost that is, in all circumstances, reasonable.

Procedure

7. Filed hereto is the Affidavit of Jason C. Roberts and Angus S. Orford which contains the evidence on which Maritime Electric relies in this Application.

October 31, 2017

SECTION 2 - APPLICATION

Dated at Charlottetown, Province of Prince Edward Island, this 31st day of October, 2017.



D. Spencer Campbell, Q.C.

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

October 31, 2017

3.0 AFFIDAVIT

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, 2018 and for certain approvals incidental to such an order.

We, Jason Christopher Roberts and Angus Sumner Orford of Charlottetown, in Queens County, Province of Prince Edward Island, MAKE OATH AND SAY AS FOLLOWS:

1. We are the Vice President, Finance and Chief Financial Officer and Vice President, Corporate Planning and Energy Supply for Maritime Electric Company, Limited (“Maritime Electric” or the “Company”) respectively and as such have personal knowledge of the matters deposed to herein, except where noted, in which case we rely upon the information of others and in which case we verily believe such information to be true.
2. Maritime Electric is a public utility subject to the provisions of the Electric Power Act (“EPA”) engaged in the production, purchase, transmission, distribution and sale of electricity within Prince Edward Island.

October 31, 2017

SECTION 3 - AFFIDAVIT

3. We prepared or supervised the preparation of the evidence and to the best of our knowledge and belief the evidence is true in substance and in fact. A copy of the evidence is attached to this our Affidavit, and is collectively known as Exhibit "A", contained at Sections 4 through 6 and Appendices A through C inclusive.

4. Section 7 contains a Proposed Order of the Commission based on the Company's Application.

SWORN TO SEVERALLY at
Charlottetown, Prince Edward
Island, the 31st day of October, 2017.
Before me:



Jason C. Roberts



Angus S. Orford



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

October 31, 2017

4.0 INTRODUCTION

4.1 Corporate Profile

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

4.2 Overview of Evidence

Weather normalization reserves are common in approach throughout the utility industry and are part of a broader group of deferral reserves designed to mitigate volume or demand fluctuations. The purpose of a Weather Normalization Reserve (the “Reserve”) is to stabilize electricity rates charged to customers by removing the volatility in sales and energy supply costs caused by temperature changes relative to historical averages. Where the Heating Degree Days¹ (“HDD”) variation is above normal (colder temperature than historical average), the Company will experience incremental marginal net revenue (revenue less energy costs) which would need to be returned to customers but when HDD variation is below normal (warmer temperature than historical average) there will be a shortfall in net revenue which will need to be recovered from customers.

¹ 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 4 – INTRODUCTION

In recent years, Maritime Electric’s sales revenues and energy supply costs have become subject to greater volatility due to variations in the number of HDDs and increases in the use of electricity for space heating. To mitigate this increasing volatility and the resulting uncertainty with respect to customer electricity rates, the Company submitted a proposal to adopt a Weather Normalization Reserve as part of its General Rate Application filed on October 28, 2015.

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

The interim Weather Normalization Reserve approved by the Commission is included as Appendix A of this evidence. As described in the Appendix, there are a number of variables used in calculating the monthly Reserve adjustment that are determined based upon the most recent data available which, at the time of initial filing, was comprised of 2014 and 2015 data.

The “Application” section of the interim Weather Normalization Reserve states that “Revisions to the components of the MWh Variation from Average and Marginal Net Revenue formulas for a calendar year are to be submitted to the Commission for approval on or before October 31st of the year prior thereto.” On October 31, 2016, the Company filed an application with the Commission to update the components of the Weather Normalization Reserve for the 2017 fiscal

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SECTION 4 – INTRODUCTION

year. On February 23, 2017, Commission Order UE17-01 approved this application as filed. The evidence in this Application is filed in support of the proposed revisions to these components for the period beginning January 1, 2018.

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SECTION 5 – REVISED COMPONENTS OF THE WEATHER NORMALIZATION RESERVE

5.0 PROPOSED REVISIONS TO COMPONENTS OF THE WEATHER NORMALIZATION RESERVE

5.1 Contribution to the Weather Normalization Reserve

The balance of the Weather Normalization Reserve on the Company’s balance sheet represents the cumulative monthly change in the contribution of sales resulting from variations in HDD from the normal ten year average.

When HDD 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 HDD 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 B provides the monthly change in the Reserve from January 1, 2016 to September 30, 2017.

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

$$\text{Contributions to Weather Normalization Reserve} = \frac{\text{MWh Variation From Average}}{\text{MWh Variation From Average}} \times \frac{\text{Marginal Net Revenue}}{\text{Marginal Net Revenue}}$$

Where,

$$\text{MWh Variation from Average} = (\text{Actual HDD Value} - \text{Average HDD Value}) \times (\text{MWh per HDD Coefficient})$$

$$\text{Marginal Net Revenue} = \text{Forecast Unit Revenue per MWh} - \text{Forecast Unit Energy Cost per MWh}$$

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5.2 MWh Variation From Average

There are two elements of the MWh Variation from Average components that require revision for the period beginning January 1, 2018:

- Average HDD value; and
- MWh per HDD Coefficient

5.2.1 Average HDD Value

The Average HDD Value is calculated using the rolling 10 year average HDD value based upon the most recent 10 years of information available as measured by Environment Canada for the Charlottetown Airport weather station.

For 2017, the Average HDD Value of 4,369 was calculated based upon the ten year period from 2006-2015. The revised average HDD Value proposed to be used for 2018 is 4,400 based upon the years 2007-2016 as calculated in Appendix C – Schedule 1.

5.2.2 MWh Per HDD Coefficient

The determination of the MWh Per HDD Coefficient (the “Coefficient”) to be used for the upcoming year is calculated using econometric modelling with a linear regression analysis. The linear regression analysis identifies the estimated change in MWh sales (customer usage) resulting from a unit variation in HDD.

For 2017, the Coefficient of 43.21 MWh per HDD was calculated based upon the data from October 2015 to May 2016. The revised Coefficient proposed for 2018 is 46.66 MWh per HDD based upon the data from October 2016 to May 2017 as calculated in Appendix C – Schedule 2.

SECTION 5 – REVISED COMPONENTS OF THE WEATHER NORMALIZATION RESERVE

5.3 Marginal Net Revenue

The Marginal Net Revenue rate is calculated as the Forecast Unit Revenue per MWh less the Forecast Unit Energy Cost per MWh. As a result, there are two elements of the Marginal Net Revenue component that require revision for the period beginning January 1, 2018:

- Forecast Unit Revenue per MWh; and
- Forecast Unit Energy Cost per MWh

5.3.1 Forecast Unit Revenue Per MWh

For 2017, the Forecast Unit Revenue per MWh of \$139.44 was based upon the forecast 2017 information filed with the Company's General Rate Application on October 28, 2015. The revised Forecast Unit Revenue per MWh proposed for 2018 has been updated with actual results to September 30, 2017 and reflects the 2018 rate adjustments approved by IRAC in Order UE16-04. Using these inputs, the Forecast Unit Revenue per MWh for 2018 is \$142.99 as detailed in Appendix C – Schedule 3.

5.3.2 Forecast Unit Energy Cost Per MWh

The Forecast Unit Energy Cost per MWh is to be revised based upon the Commission approved Base Rate for the Energy Cost Adjustment Mechanism for the particular year. In Order UE16-04, IRAC approved the Schedule of Inputs which included the 2017 Base Rate of \$89.88 per MWh that is currently used in the Marginal Net Revenue calculation. For 2018, the Schedule of Inputs approved in UE16-04 sets the Base Rate at \$91.61 per MWh. This rate is included in Appendix C – Schedule 3.

SECTION 5 – REVISED COMPONENTS OF THE WEATHER NORMALIZATION RESERVE

5.3.3 Summary

Using the Forecast Unit Revenue per MWh and Forecast Unit Energy Cost per MWh for 2018 as described above, the 2018 Marginal Net Revenue Rate is calculated to be \$51.38 per MWh as detailed in Appendix C – Schedule 3.

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SECTION 6 – SUMMARY

6.0 SUMMARY

The purpose of a Weather Normalization Reserve is to stabilize electricity rates charged to customers by removing the volatility in sales and energy supply costs caused by fluctuations in temperatures relative to historical averages. In recent years, Maritime Electric's sales revenues and energy supply costs have become subject to greater volatility due to variations in temperatures and increases in the use of electricity for space heating. Upon application by the Company, the Weather Normalization Mechanism and Reserve was approved by IRAC, on an interim basis, in Order UE16-04 effective for the period January 1, 2016 to February 28, 2019.

The formula to calculate the monthly contribution to the Reserve is based upon a number of variables which are to be updated annually in accordance with the interim approval granted by IRAC in UE16-04. The variables are presented in the table below with the currently approved and proposed revised amounts effective January 1, 2018.

Summary of Proposed Revisions to Weather Normalization Mechanism Variables		
	Approved January 1, 2017	Proposed January 1, 2018
<u>MWH Variation from Average</u>		
Average HDD Value	4,369	4,400
MWH per HDD Coefficient	43.21	46.66
<u>Marginal Net Revenue</u>		
Forecast Unit Revenue per MWh	139.44	142.99
Forecast Unit Energy Cost per MWh	89.88	91.61

October 31, 2017

7.0 PROPOSED ORDER

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 Weather Normalization Reserve, including the MWh Variation from Average and Marginal Net Revenue, for the period beginning January 1, 2018 and for certain approvals incidental to such an order.

UPON receiving an Application by Maritime Electric Company, Limited (the “Company”) for approval of proposed revisions to the Weather Normalization Reserve;

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

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

October 31, 2017

SECTION 7 - PROPOSED ORDER

IT IS ORDERED THAT

The revisions to the components of the interim Weather Normalization Reserve for the period beginning January 1, 2018 filed herein on October 31, 2017 and summarized below are approved:

Approved Weather Normalization Mechanism Variables		
	Effective Date	
	January 1, 2017	January 1, 2018
Average HDD Value	4,369	4,400
MWH per HDD Coefficient	43.21	46.66
Forecast Unit Revenue per MWh	139.44	142.99
Forecast Unit Energy Cost per MWh	89.88	91.61

DATED at Charlottetown this ____ day of ____, 2017

BY THE COMMISSION:

_____, Chair

_____, Commissioner

_____, Commissioner

_____, Commissioner

October 31, 2017

APPENDIX A

**Interim Weather Normalization Mechanism and Reserve
effective January 1, 2017**

Appendix A
Interim Weather Normalization Mechanism and Reserve
Effective January 1, 2017

Purpose

The purpose of a Weather Normalization Reserve is to stabilize electricity rates to customers by removing the volatility in sales and energy supply costs caused by temperature changes relative to historical averages. Where the Heating Degree Days¹ (HDD) variation is above normal, the Company will experience incremental marginal net revenue (revenue less energy costs) which would need to be returned to customers but when HDD variation is below normal there will be a shortfall in net revenue which will need to be recovered from customers.

Calculation of Contribution to the Reserve

The balance in the Weather Normalization Reserve on the Company's balance sheet represents the cumulative monthly change in contribution from sales resulting from variations in HDD from normal and should, over time, net to zero.

As illustrated in Schedule 1, in a year when HDD are higher than normal (2013 and 2014), a marginal net revenue amount will be subtracted on the Company's income statement and added to the Reserve. When HDD are lower than normal (2010 – 2012), a marginal net revenue amount will be added to the Company's income statement and subtracted from the Reserve. Over the ten year period, the variation from average HDD balances to zero as does the balance in the reserve account.

As a formula,

$$\text{Contribution to Weather Normalization Reserve} = \text{MWh Variation from Average} \times \text{Marginal Net Revenue}$$

¹ 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.

Appendix A
Interim Weather Normalization Mechanism and Reserve
Effective January 1, 2017

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

The following describes the components and operation of the Weather Normalization Reserve.

Determination of Average HDD Value

The first step in establishing the mechanics of the Weather Normalization Reserve is the determination of the Average HDD Value using the rolling 10 year average HDD value based upon the most recent 10 years of information available as measured by Environment Canada for the Charlottetown Airport weather station. As calculated in Schedule 2, the average annual HDD value to be used for 2016 is calculated to be 4,339 (2005-2014).

Calculation of MWh/HDD Coefficient

The next step is the determination of the annual MWh/HDD Coefficient (the “Coefficient”) to be used for the upcoming year using econometric modelling. As shown in Schedule 3, using a linear regression analysis the Coefficient for 2016 is calculated at 41.73 (based on October 2014 to May 2015 data), which is the estimated change in MWh sales (customer usage) resulting from a unit variation in HDD (i.e. 41.73 MWh per HDD). The calculation excludes from the analysis the data for the months of June to September as these months are primarily cooling months, which would distort the Coefficient calculation for HDD and reduce its accuracy. In addition, only sales for year round Residential, General Service and Small Industrial classes are used as these are the only classes materially affected by variations in HDD.

Appendix A
Interim Weather Normalization Mechanism and Reserve
Effective January 1, 2017

Calculation of Marginal Net Revenue

The final variable is the Marginal Net Revenue rate which is calculated as the forecast unit revenue per MWh less the forecast unit energy cost per MWh. For the same reason noted above, the unit revenue is comprised of only demand and energy charge revenues (i.e. excluding the service charge or site revenue) for Residential, General Service and Small Industrial classes as these are the only revenue factors and rate classes affected by variations in HDD. In addition, the energy cost per MWh for the year is set at the Base Rate in the ECAM for the particular year as approved by the Commission. Schedule 4 shows the calculation of the 2016 Marginal Net Revenue Rate of \$50.42/MWh.

Application

The determination of the Weather Normalization Reserve adjustment on the Company's balance sheet is to be calculated on a monthly basis as described above, effective January 1, 2016.

Revisions to the components of MWh Variation from Average and Marginal Net Revenue formulas for a calendar year are to be submitted to the Commission for approval on or before October 31 of the year prior thereto.

APPENDIX B

Monthly Change in Weather Normalization Reserve 2017

APPENDIX B

Monthly Change in Weather Normalization Reserve - January 1, 2016 to September 30, 2017

MM/YY	Heating Degree Days (below 18 deg C)			Space heating load		Marginal Net Revenue (\$/MWh)	Weather Normalization Reserve	
	Actual HDD	10 Year	Variation	Coefficient (MWh/HDD)	Variation		Increase (Decrease) (\$)	Balance Owing (Recoverable) (\$)
		Average Monthly HDD	from 10 Year Average HDD		from Average (MWh)			
January, 2016	713	753.9	(40.9)	41.73	(1,707)	50.42	(86,055)	(86,055)
February, 2016	608	688.2	(80.2)	41.73	(3,347)	50.42	(168,743)	(254,798)
March, 2016	654	637.2	16.8	41.73	701	50.42	35,348	(219,450)
April, 2016	475	420.6	54.4	41.73	2,270	50.42	114,459	(104,991)
May, 2016	259	264.5	(5.5)	41.73	(230)	50.42	(11,572)	(116,563)
June, 2016	121	110.0	11.0	41.73	459	50.42	23,144	(93,419)
July, 2016	30	16.5	13.5	41.73	563	50.42	28,404	(65,014)
August, 2016	23	24.2	(1.2)	41.73	(50)	50.42	(2,525)	(67,539)
September, 2016	101	107.1	(6.1)	41.73	(255)	50.42	(12,835)	(80,374)
October, 2016	255	272.8	(17.8)	41.73	(743)	50.42	(37,452)	(117,825)
November, 2016	401	421.8	(20.8)	41.73	(868)	50.42	(43,764)	(161,589)
December, 2016	665	622.1	42.9	41.73	1,790	50.42	90,263	(71,327)
January, 2017	712	751.4	(39.4)	43.21	(1,702)	49.56	(84,375)	(155,701)
February, 2017	657	704.2	(47.2)	43.21	(2,040)	49.56	(101,078)	(256,779)
March, 2017	690	646.1	43.9	43.21	1,897	49.56	94,011	(162,768)
April, 2017	416	433.7	(17.7)	43.21	(765)	49.56	(37,904)	(200,672)
May, 2017	264	256.4	7.6	43.21	328	49.56	16,275	(184,397)
June, 2017	94	114.6	(20.6)	43.21	(890)	49.56	(44,115)	(228,512)
July, 2017	27	16.4	10.6	43.21	458	49.56	22,700	(205,812)
August, 2017	29	22.8	6.2	43.21	268	49.56	13,277	(192,535)
September, 2017	92	106.2	(14.2)	43.21	(614)	49.56	(30,409)	(222,944)
October, 2017	-	279.6						
November, 2017	-	423.6						
December, 2017	-	613.8						
			(104.7)		(4,474)			

APPENDIX C

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	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	10 year average (2007 - 2016)
Jan	737	728	866	686	744	715	812	771	829	713	760
Feb	763	686	664	608	697	700	672	717	858	608	697
Mar	643	694	675	556	621	572	603	760	743	654	652
Apr	491	418	420	367	420	379	441	453	537	475	440
May	308	286	245	262	259	224	235	308	233	259	262
Jun	121	95	102	114	150	119	107	120	163	121	121
Jul	29	0	42	13	21	12	13	1	28	30	19
Aug	38	20	30	21	14	5	17	28	3	23	20
Sep	120	121	135	107	90	76	106	118	73	101	105
Oct	248	300	345	290	249	240	291	228	315	255	276
Nov	446	421	392	429	397	424	472	461	420	401	426
Dec	733	620	643	515	569	589	750	582	545	665	621
	4,677	4,389	4,559	3,968	4,231	4,055	4,519	4,547	4,747	4,305	4,400
											Standard Deviation 259

**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
2016	Jul	31	30	1.0	75,159			
	Aug	31	23	0.7	78,408			
	Sep	30	101	3.4	80,110			
	Oct	31	255	8.2	76,730	2.52	5.8	2,558
	Nov	30	401	13.4	81,958	4.07	10.8	2,644
	Dec	31	665	21.5	94,674	5.21	17.4	3,156
2017	Jan	31	712	23.0	106,122	5.40	22.2	3,423
	Feb	28	657	23.5	103,123	4.53	23.2	3,327
	Mar	31	690	22.3	92,002	3.11	22.9	3,286
	Apr	30	416	13.9	93,732	1.53	18.1	3,024
	May	31	264	8.5	76,526	0.00	11.2	2,551
	Jun	30	94	3.1	77,445			

**Linear regression results:
(Oct 2016 - May 2017)**

HDD	Daylight hrs	b	
46.66	48.43	2069.12	coefficients
5.38	18.61	86.31	standard error coefficients
0.96	82.34	#N/A	R ² , standard error y
65.09	5.00	#N/A	F, degrees of freedom
882547.5	33896.22	#N/A	Regression SS, residual SS
8.67	2.60	23.97	t values

APPENDIX C - SCHEDULE 3**Calculation of Forecast Marginal Net Revenue Rate for 2018**

Rate Class	2018 (Forecast)		Unit Revenue (\$/MWh)
	Revenue (\$)	Sales (MWh)	
Residential	76,393,871	558,577	*
General Service	59,994,151	390,780	*
Small Industrial	14,151,881	103,418	
Total	150,539,902	1,052,775	\$ 142.99
ECAM Base Rate (Proposed)			<u>\$ (91.61)</u>
	Marginal Net Revenue Rate		<u>\$ 51.38</u>

* Excludes revenue and kWh sales from seasonal customers