

November 8, 2018

Regulatory Authority of Bermuda  
Craig Appin House, 1<sup>st</sup> Floor  
8 Wesley Street  
Hamilton HM 11

**Attention: Mr. Aaron Smith, Chief Executive**

**TARIFF FILING**

Dear Sirs,

This is to advise you that we wish to make the following changes to the fuel adjustment rate ("FAR"):

**Decrease from the existing rate of 13.75 cents per kilowatt-hour sold for November 2018 to 13.00 cents per kilowatt-hour sold for December 2018.**

Our current submission is provided using the minimum filing report (MFR) format established by the former Energy Commission. Please note the Commercial Renewable System Excess Energy Rate (CRSEER) representing the rate BELCO would pay commercial owners for excess energy generated but not consumed and exported to BELCO no longer used has been calculated and included in our August 2018 FAR MFR submission as directed per Regulatory Authority letter dated 18 April 2017.

The actual fuel adjustment cost recovery position as at 31<sup>st</sup> October 2018 was \$436,903 over recovered as compared to the \$206,105 under recovery position projected in our last filing. The \$643,008 favorable variance is due to:

- The total actual barrels of fuel consumed in October were 8,094 barrels lower than projected, resulting in a positive impact on the recovery position of \$645,737;
- Net price variance negatively impacted the recovery position by \$22,379; and
- Actual October electric sales were 155,857 KWH's higher than projected. This variance resulted in a net positive impact on the fuel recovery position of \$19,650.

Our detailed working paper supporting this analysis has been included in the MFR (please refer to Page 17 "FAR Recovery Variance Analysis") as requested per the Authority's email dated 25 January 2017.



BELCO

441 295 5111

P.O. BOX HM 1026  
HAMILTON, HM DX  
BERMUDA

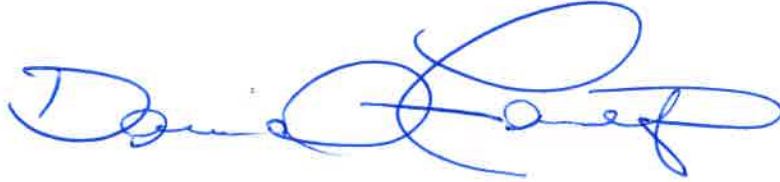
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HAMILTON, HM 07  
BERMUDA

BELCO.BM

Should you have any questions concerning the above, please do not hesitate to contact us.

Yours sincerely,

BERMUDA ELECTRIC LIGHT COMPANY LIMITED



David Faries, CPA, CA, JP  
Vice President, Finance & Group Controller

441.295.5111

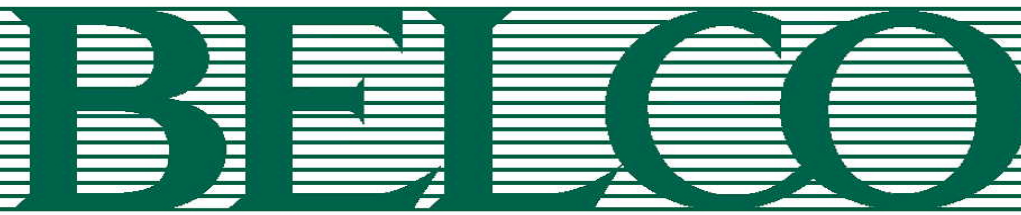
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HAMILTON, HM 07  
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BELCO



Bermuda Electric Light Company Limited

Fuel Adjustment Submission

**FOR PUBLIC DISCLOSURE**

December 2018

This submission is filed by Bermuda Electric Light Company Limited (“BELCO”) with the Regulatory Authority of Bermuda (the “Authority”) using the minimum filing requirements (“MFR”) format established by the Energy Commission in its directive letter sent to BELCO dated December 30, 2013.

In accordance with Section 33 of the Regulatory Authority Act 2011, BELCO claims confidentiality over certain information provided to the Authority. That information is therefore excluded from the redacted version of this filing on the grounds that disclosure of the information would have, or could reasonably be expected to have, an adverse effect on BELCO’s commercial interests

# Fuel Adjustment Submission

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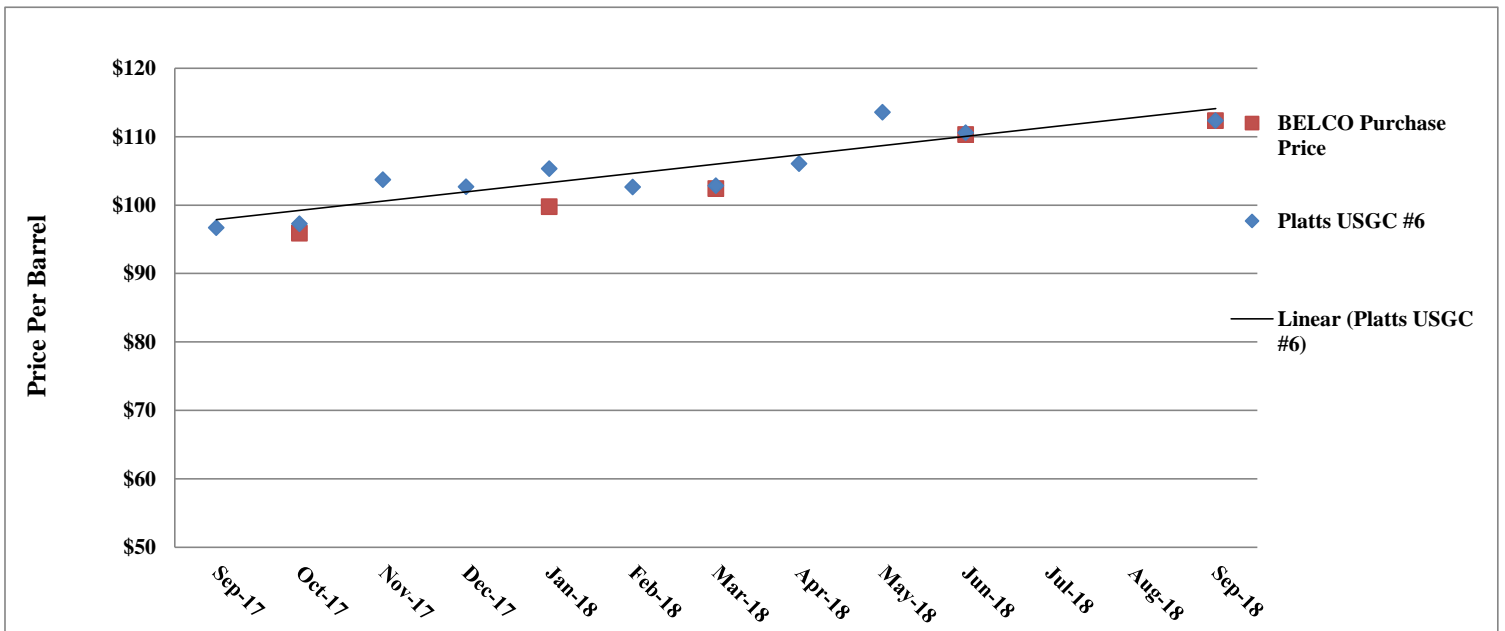


**Heavy Fuel Oil Purchased**

**Versus**

**Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel Oil**

**Previous Twelve Months**

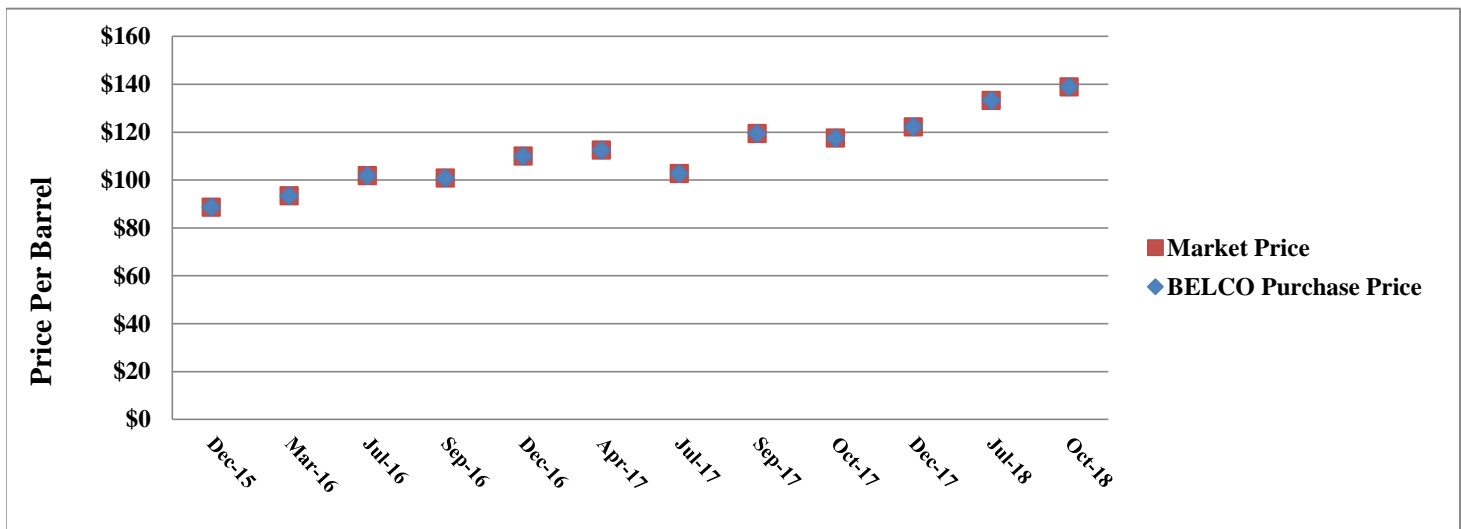


N.B. In accordance with the Fuel Supply Agreement for Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel Oil between BELCO and Shell Western Trading Limited, the contracted price is stipulated as the 30-day average for Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel Oil.



## Diesel Fuel Oil Purchased

### Previous Twelve Shipments



N.B. In accordance with the Fuel Supply Agreement for No. 2 Diesel Oil between BELCO and Coral Petroleum Company Limited, the contracted price is stipulated as the Platt's U.S. Gulf Coast Waterborne mid Ultra Low Sulfur Diesel, 3-day average center Bill of Lading Date which is the date the fuel is loaded on to the vessel. As BELCO does not enter into forward contracts for the supply of diesel fuel, the price BELCO pays is equal to the Platt's price.

# BELCO

## Heavy Fuel Oil Inventory Activity

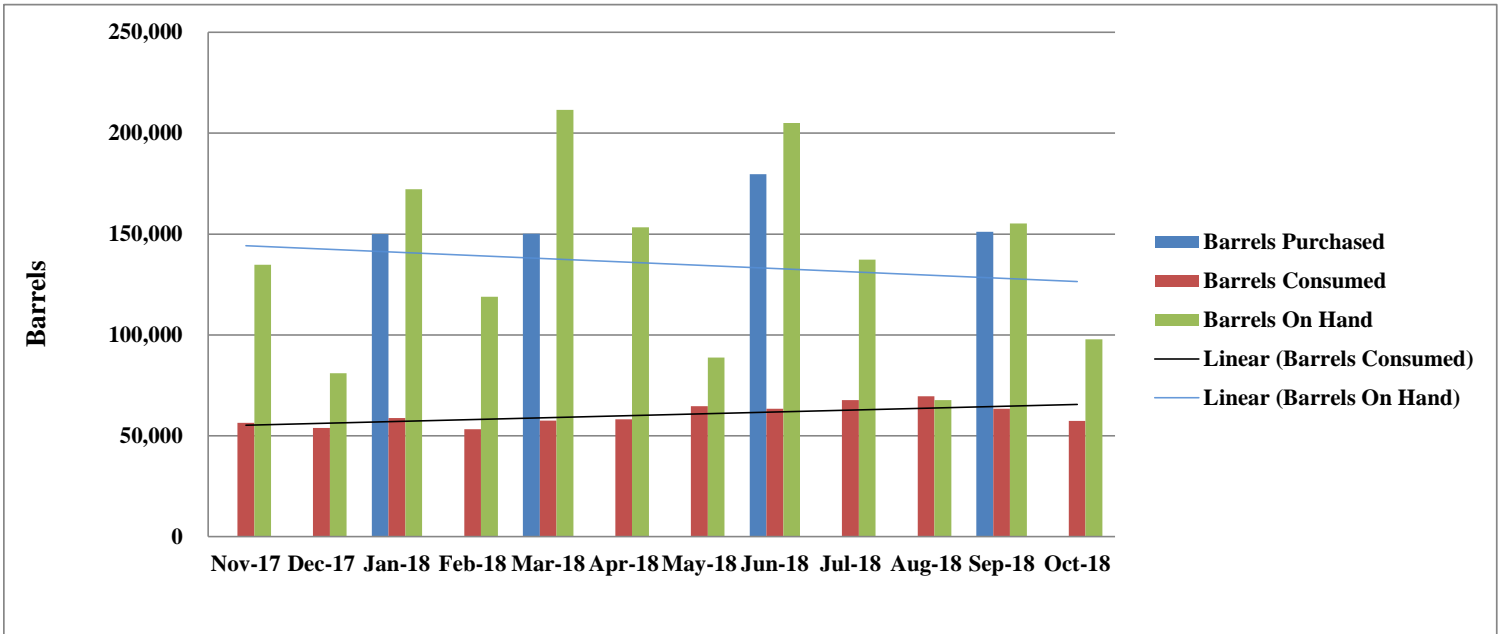
### Previous Twelve Months

<u>Date</u>	<u>Barrels Purchased</u>	<u>Barrels Consumed</u>	<u>Barrels On Hand</u>
November, 2017	-	56,357.00	134,848.76
December, 2017	-	53,872.50	80,976.26
January, 2018	150,085.77	58,870.00	172,192.03
February, 2018	-	53,291.00	118,901.03
March, 2018	150,091.50	57,494.00	211,498.53
April, 2018	-	58,121.00	153,377.53
May, 2018	-	64,615.00	88,762.53
June, 2018	179,633.98	63,386.00	205,010.51
July, 2018	-	67,766.00	137,244.51
August, 2018	-	69,598.00	67,646.51
September, 2018	151,041.71	63,446.00	155,242.22
October, 2018	-	57,353.55	97,888.67



## Graph of Heavy Fuel Oil Inventory Activity

### Previous Twelve Months







## Diesel Fuel Oil Inventory Activity

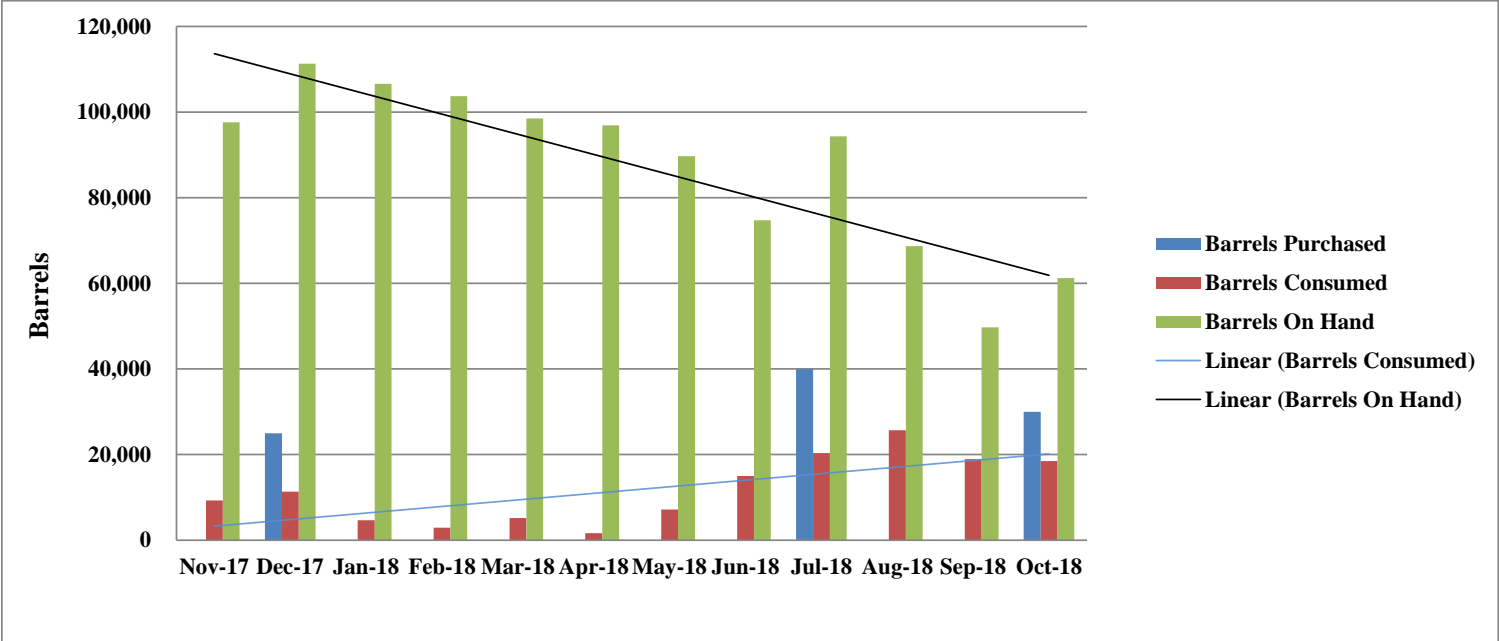
### Previous Twelve Months

<u>Date</u>	<u>Barrels Purchased</u>	<u>Barrels Consumed</u>	<u>Barrels On Hand</u>
November, 2017	-	9,292.15	97,618.66
December, 2017	24,991.00	11,332.18	111,277.48
January, 2018	-	4,642.56	106,634.92
February, 2018	-	2,951.47	103,683.45
March, 2018	-	5,150.31	98,533.14
April, 2018	-	1,650.35	96,882.79
May, 2018	-	7,154.97	89,727.82
June, 2018	-	15,027.01	74,700.81
July, 2018	39,967.59	20,336.75	94,331.65
August, 2018	-	25,676.02	68,655.63
September, 2018	-	18,960.72	49,694.91
October, 2018	29,993.15	18,461.22	61,226.84



### Graph of Diesel Fuel Oil Inventory Activity

#### Previous Twelve Months





## **Heavy Fuel Oil Costs Per Shipment**

In accordance with Part 4, Paragraph 26A Clause (1)(c)(i) of the Bermuda Energy Act 2009, certain information provided to the Bermuda Energy Commission has been designated as confidential on the grounds that it could result in material financial loss or gain to any person and therefore has been excluded.



## **Diesel Fuel Oil Costs Per Shipment**

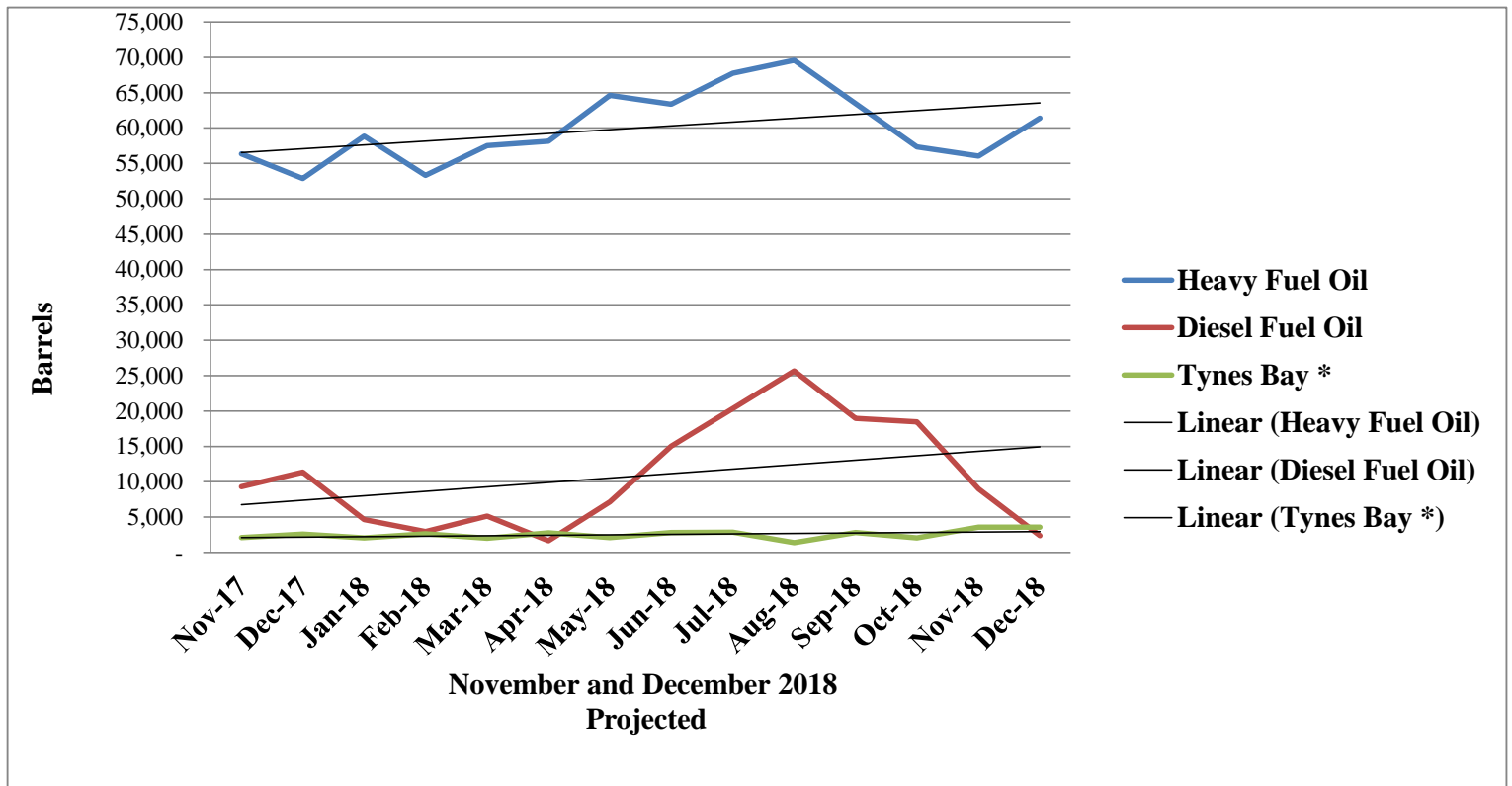
In accordance with Part 4, Paragraph 26A Clause (1)(c)(i) of the Bermuda Energy Act 2009, certain information provided to the Bermuda Energy Commission has been designated as confidential on the grounds that it could result in material financial loss or gain to any person and therefore has been excluded.



**Barrels of Fuel Consumed**

**Previous Twelve Months**

**Plus Two Month Forward Projection**



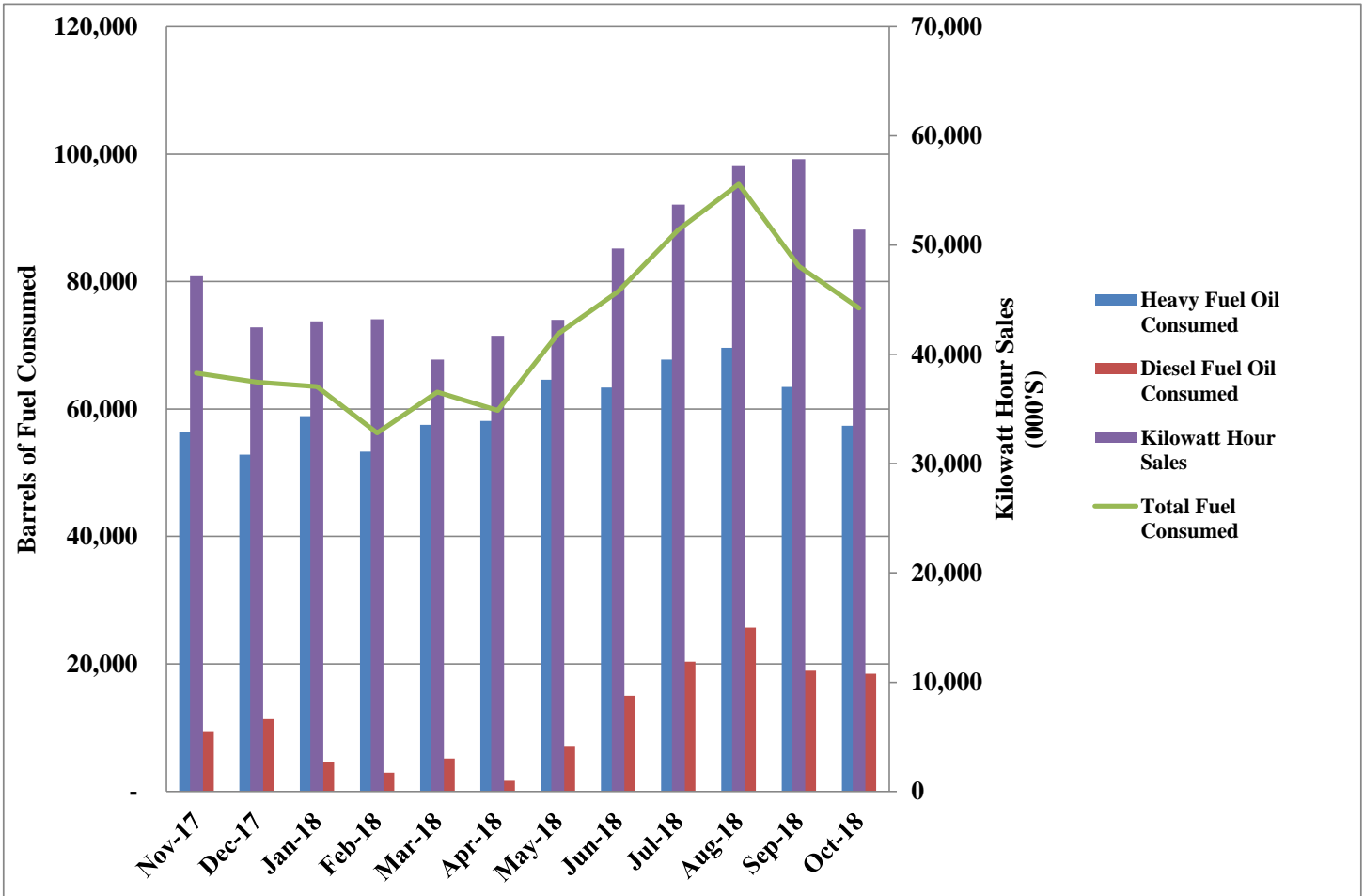
\* BELCO calculates an efficiency rating for its generators on a monthly basis. This is calculated as the estimated kilowatt hours that will be generated that month divided by the estimated number of barrels of fuel that will be used. Therefore, the equivalent barrels of fuel is calculated for Tynes Bay as the amount of kilowatt hours delivered by Tynes Bay to BELCO divided by this budgeted efficiency rating.



**Fuel Consumption**

**Versus**

**Kilowatt Hour Sales**

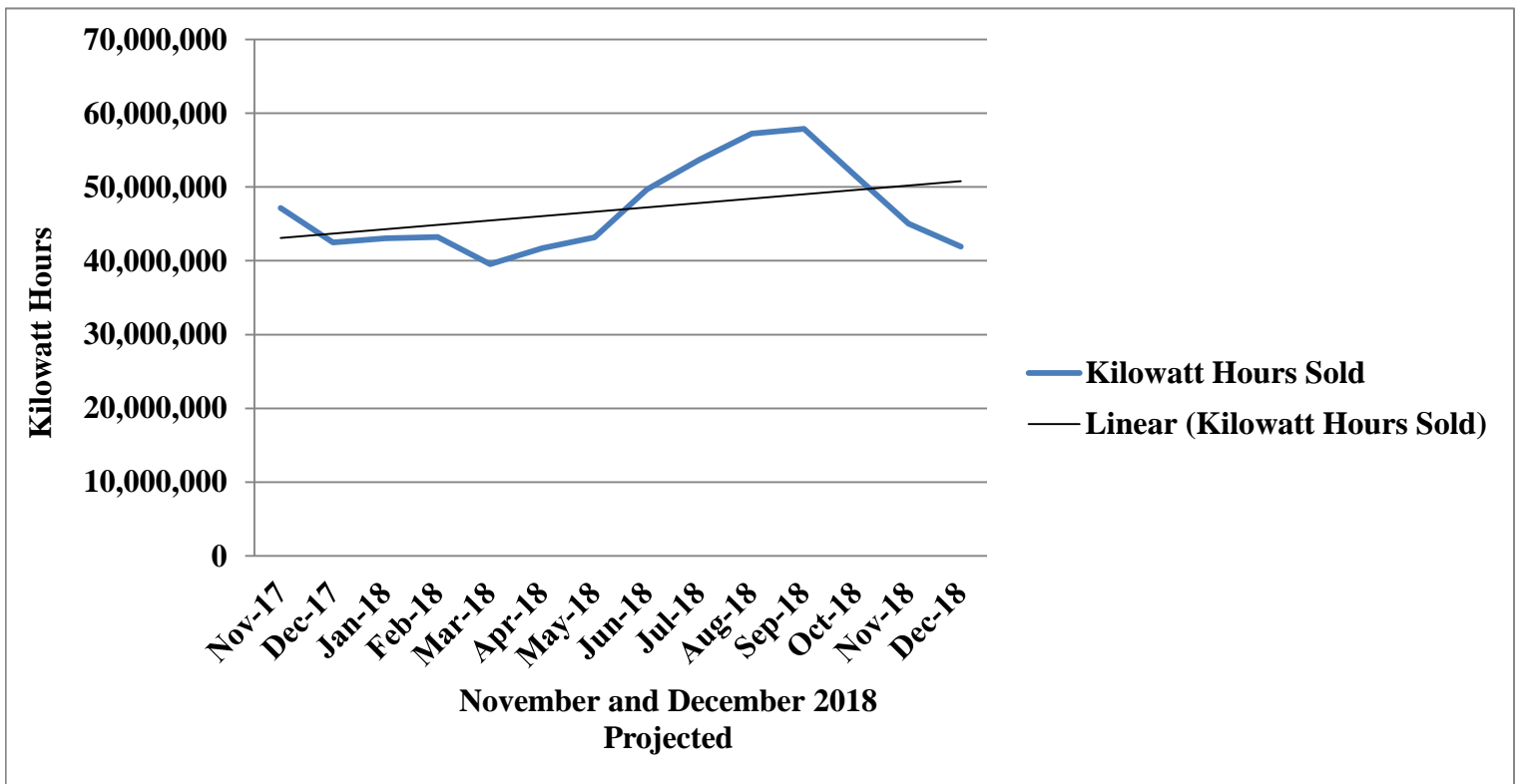


# BELCO

## Kilowatt Hour Sales

Previous Twelve Months

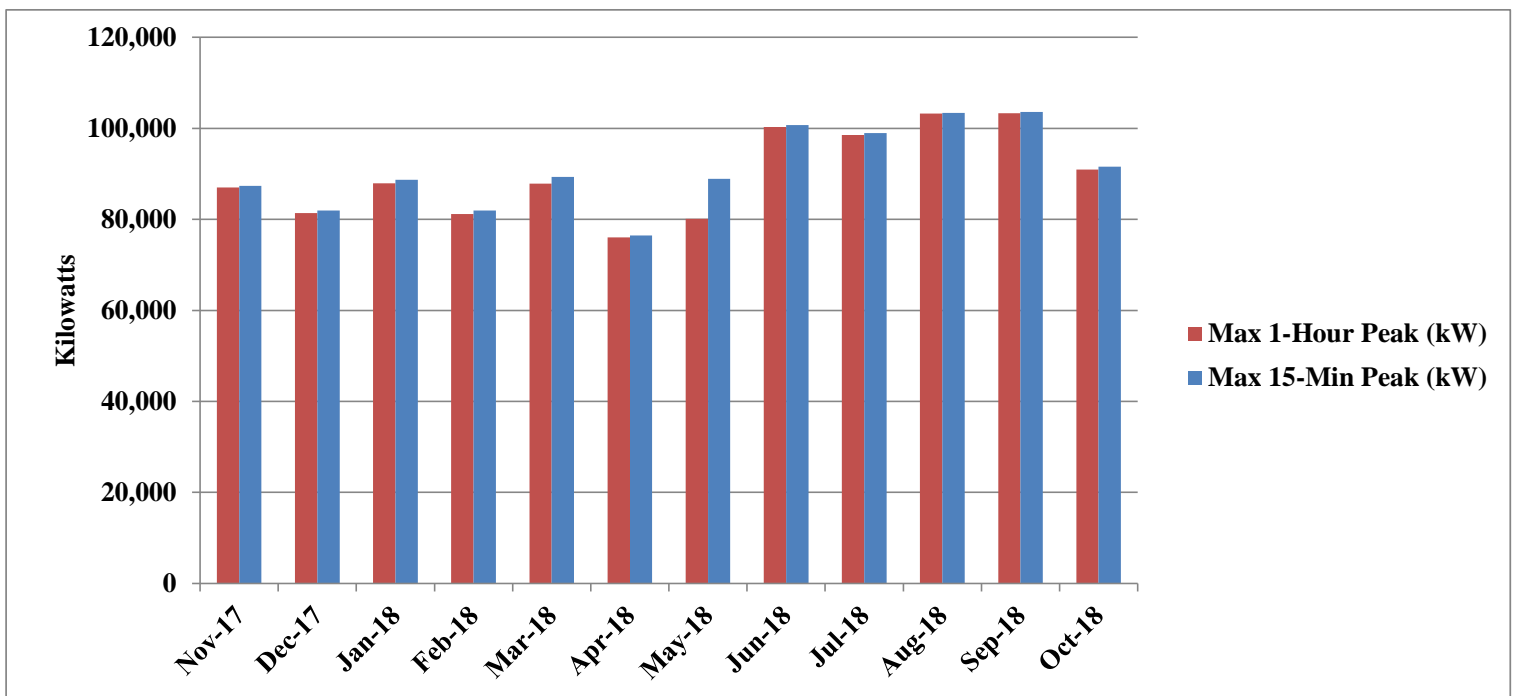
Plus Two Month Forward Projection





## Maximum 15-Minute & Hourly Peak Kilowatt Hour Demand

Previous Twelve Months



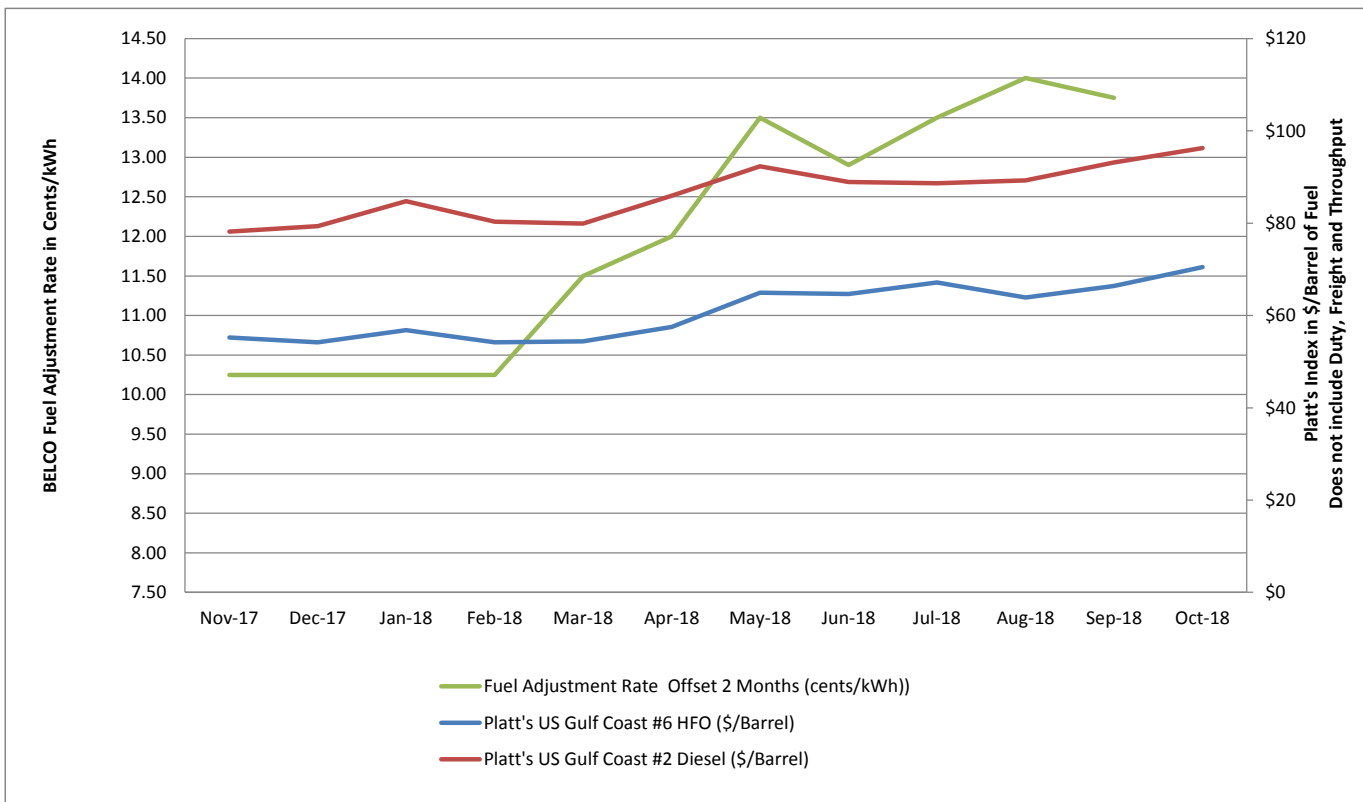




### Fuel Adjustment Rate

Versus

### Platt's Indices for Heavy and Diesel Fuel Oils



# BELCO

## Fuel Adjustment Over / (Under) Recovery

For the Month Ended 31 October 2018

	\$	\$	\$
<b>Opening Balance at 1 October 2018</b>			<b>(50,391)</b>
 <b><u>Fuel Consumption</u></b>			
Diesel - 9,727.32 @ \$122.3334	1,189,976		
Diesel - 8,733.90 @ \$133.3830	1,164,954		
Less: Fuel Consumption @ \$30/bbl	<u>(553,837)</u>	1,801,093	
Heavy - 4,200.51 bbls @ \$110.3247	463,420		
Heavy - 53,153.04 bbls @ \$112.3273	5,970,537		
Less: Fuel Consumption @ \$30/bbl	<u>(1,720,607)</u>	4,713,351	
Tynes Bay - 1,390,736 kWh @ \$0.185	257,286		
Less: (1,390,736 kWh /678.5) 2,049.72 bbls @ \$30/bbl	<u>(61,492)</u>	195,794	
		<u>6,710,238</u>	
Deduct: Fuel Adjustment Revenue		<u>7,197,531</u>	
October over / (under) recovery			487,293
<b>Ending Balance at 31 October 2018</b>			<b><u>436,903</u></b>





**Fuel Consumption Projections**

**Forward Three Months**

<b>Shipment Date</b>	<b>Type</b>	<b>Hedged</b>	<b>Amount (Barrels)</b>	<b>Total Cost/Barrel*</b>	<b>FADJ (less \$30/bbl)</b>
September 2018	Heavy	No	97,888.67	112.2732	82.2732
November 2018	Heavy	No	150,000.00	116.0000	86.0000
July 2018	Diesel	No	31,233.69	133.3830	103.3830
October 2018	Diesel	No	29,993.15	139.0572	109.0572

\*Cost for November 2018 shipment estimated



**Fuel Adjustment Over/(Under) Recovery Projections**

**At Existing Fuel Adjustment Rate**

**Three Months Forward**

<b>Over (Under) Recovery account as at end of previous month:</b>						<b>\$ 436,903</b>
<b>Projected kWh Sales - November 2018</b>	45,036,595		FADJ	13.75		\$ 6,192,532
<b>Projected fuel consumed</b>		<b>Shipment Date</b>	<b>Barrels</b>	<b>FADJ Cost/Barrel</b>	<b>Total Cost</b>	
	<b>Diesel</b>	<b>July 2018</b>	8,986	\$ (103.38)	\$ (928,999.64)	
	<b>Heavy</b>	<b>September 2018</b>	56,038	\$ (82.27)	\$ (4,610,425.58)	
	<b>Tynes Bay</b>	<b>N/A</b>	3,581	\$ (103.26)	\$ (369,765.30)	
	<b>Total Barrels</b>		<b>68,605</b>			283,341
<b>Projected Over (Under) Recovery account as at end of this month:</b>						<b>720,244</b>
<b>Projected kWh Sales - December 2018</b>	41,936,229		FADJ	13.75		\$ 5,766,232
<b>Projected fuel consumed</b>		<b>Shipment Date</b>	<b>Barrels</b>	<b>FADJ Cost/Barrel</b>	<b>Total Cost</b>	
	<b>Diesel</b>	<b>July 2018</b>	2,376	\$ (103.38)	\$ (245,638.01)	
	<b>Heavy</b>	<b>September 2018</b>	41,851	\$ (82.27)	\$ (3,443,188.54)	
	<b>Heavy</b>	<b>November 2018</b>	19,531	\$ (86.00)	\$ (1,679,694.38)	
	<b>Tynes Bay</b>	<b>N/A</b>	3,589	\$ (102.95)	\$ (369,514.80)	
	<b>Total Barrels</b>		<b>67,347</b>			28,196
<b>Projected Over (Under) Recovery account as at end of this month:</b>						<b>748,440</b>
<b>Projected kWh Sales - January 2019</b>	43,048,112		FADJ	13.75		\$ 5,919,115
<b>Projected fuel consumed</b>		<b>Shipment Date</b>	<b>Barrels</b>	<b>FADJ Cost/Barrel</b>	<b>Total Cost</b>	
	<b>Diesel</b>	<b>July 2018</b>	3,447	\$ (103.38)	\$ (356,361.20)	
	<b>Heavy</b>	<b>November 2018</b>	61,545	\$ (86.00)	\$ (5,292,870.00)	
	<b>Tynes Bay</b>	<b>N/A</b>	2,253	\$ (104.38)	\$ (235,209.00)	
	<b>Total Barrels</b>		<b>67,245</b>			34,675
<b>Projected Over (Under) Recovery account as at end of this month:</b>						<b>783,115</b>



**Fuel Adjustment Over/(Under) Recovery Projections**

**At Requested Fuel Adjustment Rate**

**Three Months Forward**

<b>Over (Under) Recovery account as at end of previous month:</b>						<b>\$ 436,903</b>
<b>Projected kWh Sales - November 2018</b>	45,036,595		FADJ	13.75		\$ 6,192,532
<b>Projected fuel consumed</b>		<b>Shipment Date</b>	<b>Barrels</b>	<b>FADJ Cost/Barrel</b>	<b>Total Cost</b>	
	Diesel	July 2018	8,986	\$ (103.38)	\$ (928,999.64)	
	Heavy	September 2018	56,038	\$ (82.27)	\$ (4,610,425.58)	
	Tynes Bay	N/A	3,581	\$ (103.26)	\$ (369,765.30)	
	<b>Total Barrels</b>		<b>68,605</b>			283,341
<b>Projected Over (Under) Recovery account as at end of this month:</b>						<b>720,244</b>
<b>Projected kWh Sales - December 2018</b>	41,936,229		FADJ	13.00		\$ 5,451,710
<b>Projected fuel consumed</b>		<b>Shipment Date</b>	<b>Barrels</b>	<b>FADJ Cost/Barrel</b>	<b>Total Cost</b>	
	Diesel	July 2018	2,376	\$ (103.38)	\$ (245,638.01)	
	Heavy	September 2018	41,851	\$ (82.27)	\$ (3,443,188.54)	
	Heavy	November 2018	19,531	\$ (86.00)	\$ (1,679,694.38)	
	Tynes Bay	N/A	3,589	\$ (102.95)	\$ (369,514.80)	
	<b>Total Barrels</b>		<b>67,347</b>			(286,326)
<b>Projected Over (Under) Recovery account as at end of this month:</b>						<b>433,918</b>
<b>Projected kWh Sales - January 2019</b>	43,048,112		FADJ	13.00		\$ 5,596,255
<b>Projected fuel consumed</b>		<b>Shipment Date</b>	<b>Barrels</b>	<b>FADJ Cost/Barrel</b>	<b>Total Cost</b>	
	Diesel	July 2018	3,447	\$ (103.38)	\$ (356,361.20)	
	Heavy	November 2018	61,545	\$ (86.00)	\$ (5,292,870.00)	
	Tynes Bay	N/A	2,253	\$ (104.38)	\$ (235,209.00)	
	<b>Total Barrels</b>		<b>67,245</b>			(288,186)
<b>Projected Over (Under) Recovery account as at end of this month:</b>						<b>145,732</b>



**Commercial Renewable System Excess Energy Rate ("CRSEER")**

**At Requested Fuel Adjustment Rate - Full Cost**

<b>Projected Over (Under) Recovery account as at end of August:</b>						<b>\$ 720,244</b>
<b>Projected kWh Sales - December 2018</b>	41,936,229		CRSEER	17.82	\$	7,473,036
<b>Projected fuel consumed</b>		<b>Shipment Date</b>	<b>Barrels</b>	<b>FADJ Cost/Barrel</b>	<b>Total Cost</b>	
	<b>Diesel</b>	<b>July 2018</b>	2,376	\$ (133.38)	\$ (316,918.01)	
	<b>Heavy</b>	<b>September 2018</b>	41,851	\$ (112.27)	\$ (4,698,708.64)	
	<b>Heavy</b>	<b>November 2018</b>	19,531	\$ (116.00)	\$ (2,265,634.28)	
	<b>Tynes Bay</b>	<b>N/A</b>	3,589	\$ (132.95)	\$ (477,189.00)	
	<b>Total Barrels</b>		<b>67,347</b>		(285,414)	
<b>Projected Over (Under) Recovery account as at end of this month:</b>						<b>434,830</b>
<b>Projected kWh Sales - January 2019</b>	43,048,112		CRSEER	17.68	\$	7,610,906
<b>Projected fuel consumed</b>		<b>Shipment Date</b>	<b>Barrels</b>	<b>FADJ Cost/Barrel</b>	<b>Total Cost</b>	
	<b>Diesel</b>	<b>July 2018</b>	3,447	\$ (133.38)	\$ (459,771.20)	
	<b>Heavy</b>	<b>November 2018</b>	61,545	\$ (116.00)	\$ (7,139,220.00)	
	<b>Tynes Bay</b>	<b>N/A</b>	2,253	\$ (134.38)	\$ (302,808.00)	
	<b>Total Barrels</b>		<b>67,245</b>		(290,893)	
<b>Projected Over (Under) Recovery account as at end of this month:</b>						<b>143,937</b>

Note: CRSEER is calculated to have no impact on the FAR over (under) recovery balance

912

(1,795)





**Generators Available for Service**

**October 2018**

<b>Generator</b>	<b>Available</b>	<b>Type of fuel Consumed</b>	<b>Barrels of Fuel Consumed</b>	<b>Efficiency Rating*</b>
E1	Yes	HFO	494	323748
E2	Yes	HFO	9358	6203679
E3	Yes	HFO	6448	4602898
E4	No	HFO	0	0
E5	Yes	HFO	11618	8303618
E6	Yes	HFO	11548	8354348
E7	Yes	HFO	10132	7429419
E8	Yes	HFO	10577	7776364
D3	Yes	LFO	2496	1551563
D8	Yes	LFO	2660	1661852
D10	Yes	LFO	4015	2493485
D14	Yes	LFO	928	559804
GT4	Yes	LFO	2993	1157321
GT5	Yes	LFO	3062	1235108
GT6	Yes	LFO	361	166342
GT7	Yes	LFO	552	254998
GT8	Yes	LFO	381	170539

\* Efficiency Rating = Amount of kilowatt hours generated per barrel consumed



**Generators Out of Service**

**October 2018**

<b>Unit</b>	<b>Category</b>	<b>Type</b>	<b>Forced Outage Details</b>	<b>Outage Date</b>	<b>Return Date</b>
D10	Instrumentation & Control System	FO (Immediate)	Governor actuator failure	10/30/18	10/31/18
E7	Auxiliary Systems	MO	Pipe welded and replaced.	10/30/18	10/31/18
E5	Auxiliary Systems	FO (Immediate)	2 radiator fans forced out, unit derated to 6.5Mws, opacity was too high to continue running unit.	10/26/18	10/26/18
E7	Main Engine	SE of PO	Follow up jobs	10/25/18	10/29/18
E3	Main Engine	MO	cylinder 1L replacement and FVCW leak repair	10/22/18	10/25/18
GT6	Main Engine	FO (Start-Up Failure)	Hydraulic start system failure	10/12/18	10/15/18
E2	Main Engine	FO (Postpone)	Unit forced out due to knocking noises	10/11/18	10/15/18
E2	Other Systems	FO (Immediate)	JCW bellow leak from T/C#2	10/5/18	10/5/18
E3	Main Engine	FO (Immediate)	Fuel leaks on cylinder 7L and ICW leaks on cylinder 2L and 8R.	10/3/18	10/3/18
E1	Main Engine	FO (Immediate)	Northern side moatti filter not moving causing high differential pressure.	10/2/18	10/2/18
E1	Main Engine	FO (Immediate)	E1 engine found to be making a knocking noise. Engine stopped and crankcase inspection found white metal and further inspection to continue.	10/2/18	N/A



**Scheduled Generator Maintenance**

**Nov-18**

<b>Generator</b>	<b>Maintenance Type</b>	<b>Outage Date</b>	<b>Return Date</b>
E4	13.5K Service	10/1/2018	11/8/2018
E8	18K Service	10/29/2018	12/7/2018



### **Other Events Affecting the Fuel Adjustment Rate**

- 1. Details of any insurance claims submitted by BELCO which directly impact the Fuel Adjustment Rate.**  
No insured losses have been incurred by BELCO during the filing period that would result in a potential insurance claim.
  
- 2. Any major events that have a direct impact on the Fuel Adjustment Rate.**  
None