



July 26, 2019

BY EMAIL

Bermuda Electric Light Co. Ltd.
P.O. Box HM 1026
Hamilton HM DX

Attn: David Faries, VP Finance & Financial Controller

Dear Mr. Faries,

Re: Fuel Adjustment Rate Filing –August 1, 2019 to August 31, 2019

The Regulatory Authority of Bermuda (the “Authority”) has reviewed the August 2019 FAR filing submitted by Bermuda Electric Light Co. Ltd. (“BELCO”) on 9 July 2019 requesting to maintain the existing Fuel Adjustment Rate (FAR) of \$0.1375.

Based on its review, the Authority approves the proposed FAR rate of \$0.1375.

Yours sincerely,

Markez Laws
Regulatory Finance Analyst

*Cc: Nigel Burgess – Senior Manager Electricity Analysis and Planning
Jozelle Opoku – Head of Regulatory Finance*

July 10, 2019

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

Attention: Mr. Denton Williams, 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"):

Maintain the existing rate of 13.75 cents per kilowatt-hour sold for August 2019.

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 30th June 2019 was \$391,039 over recovered as compared to the \$505,244 over recovery position projected in our last filing. The \$114,206 unfavorable variance is due to:

- The total actual barrels of fuel consumed in June were 939 barrels higher than projected, resulting in a negative impact on the recovery position of \$93,593;
- Net price variance positively impacted the recovery position by \$1,988; and
- Actual June electric sales were 164,372 KWH's lower than projected. This variance resulted in a net negative impact on the fuel recovery position of \$22,601.

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

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

Yours sincerely,

BERMUDA ELECTRIC LIGHT COMPANY LIMITED



Carolyn Dutton
Reporting Manager (Finance)

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BELCO



Bermuda Electric Light Company Limited

Fuel Adjustment Submission

FOR PUBLIC DISCLOSURE

August 2019

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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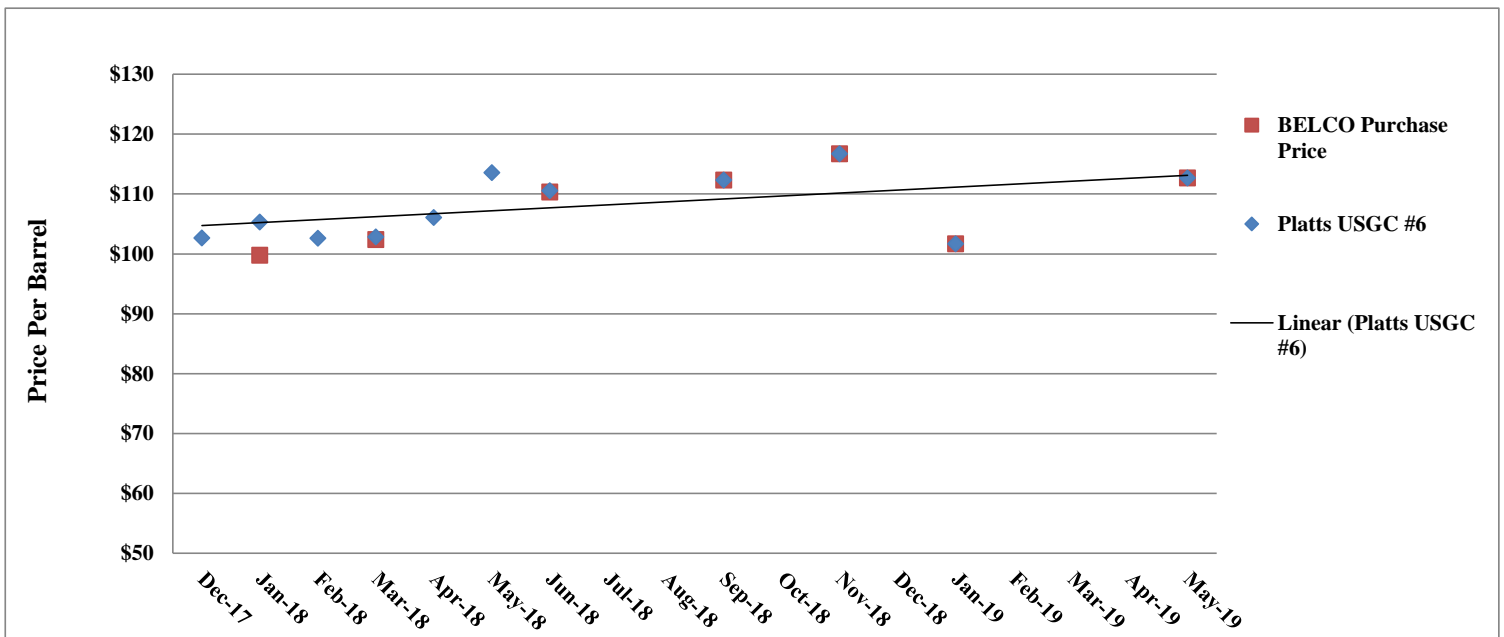


Heavy Fuel Oil Purchased

Versus

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

Previous Twelve Months

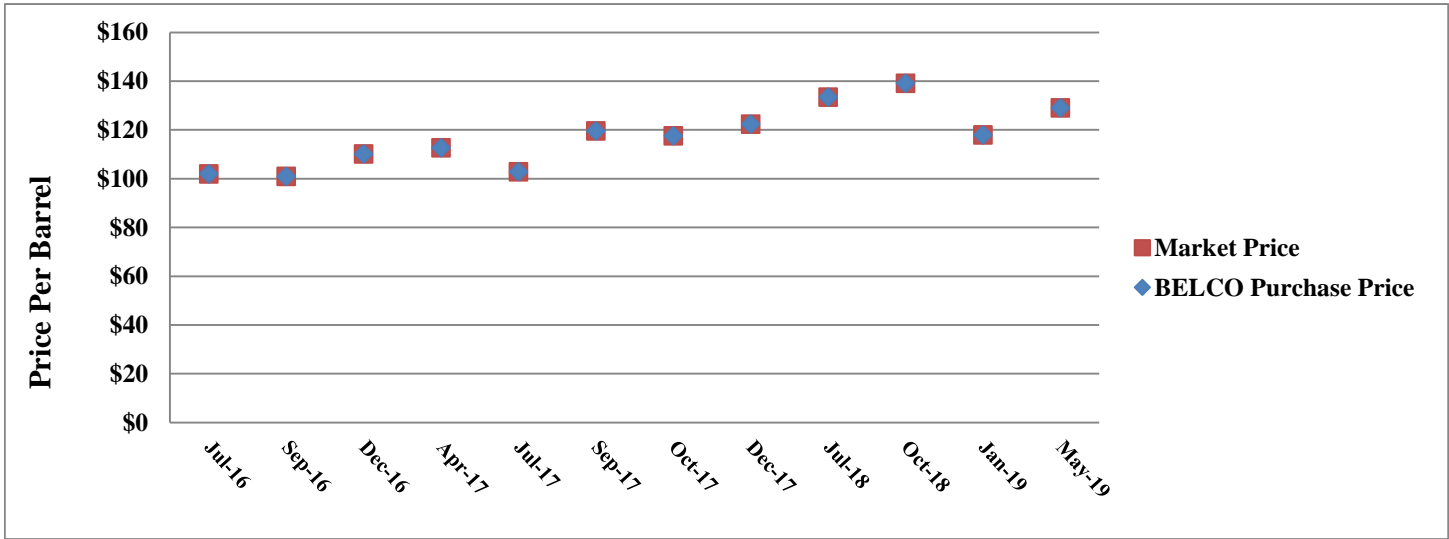


N.B. In accordance with the Fuel Supply Agreement for Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel Oil between BELCO and Shell Trading (US) Company, the contracted price is stipulated as the 30-day average for Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel Oil.



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

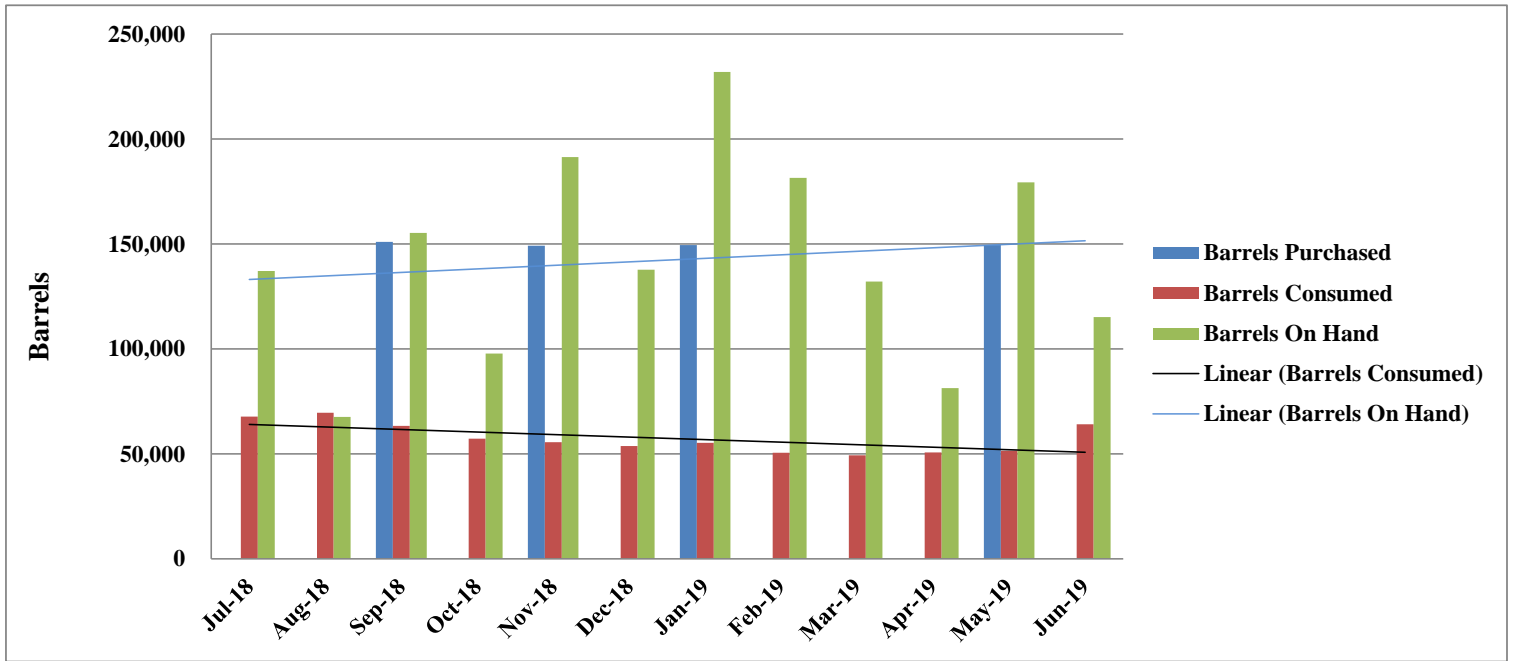
Previous Twelve Months

<u>Date</u>	<u>Barrels Purchased</u>	<u>Barrels Consumed</u>	<u>Barrels On Hand</u>
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
November, 2018	149,179.63	55,588.00	191,480.30
December, 2018		53,736.37	137,743.93
January, 2019	149,575.27	55,288.23	232,030.97
February, 2019	-	50,570.00	181,460.97
March, 2019	-	49,321.00	132,139.97
April, 2019	-	50,778.57	81,361.40
May, 2019	149,491.98	51,478.78	179,374.60
June, 2019	-	64,215.25	115,159.35



Graph of Heavy Fuel Oil Inventory Activity

Previous Twelve Months





Diesel Fuel Oil Inventory Activity

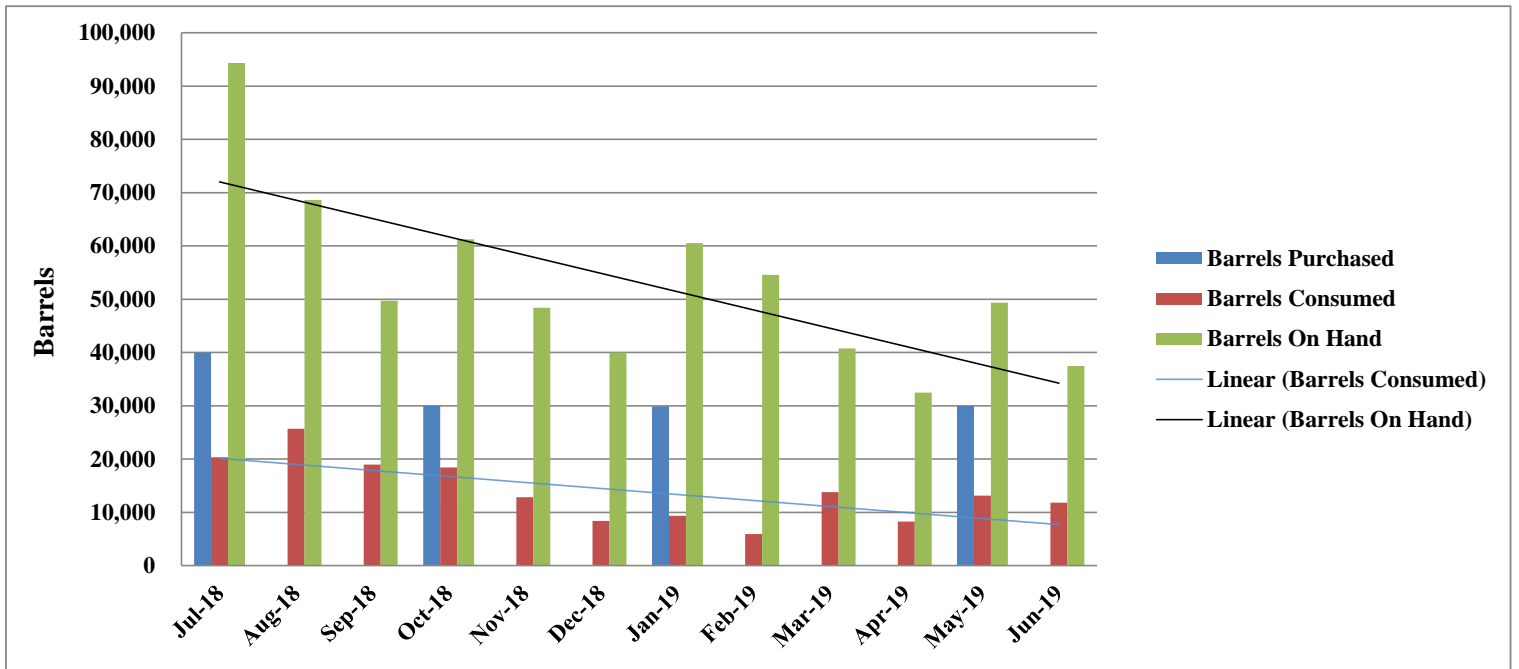
Previous Twelve Months

<u>Date</u>	<u>Barrels Purchased</u>	<u>Barrels Consumed</u>	<u>Barrels On Hand</u>
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
November, 2018		12,816.47	48,410.37
December, 2018		8,405.87	40,004.50
January, 2019	29,920.00	9,376.46	60,548.04
February, 2019	-	5,950.39	54,597.65
March, 2019	-	13,810.48	40,787.17
April, 2019	-	8,299.01	32,488.16
May, 2019	29,985.00	13,140.09	49,333.07
June, 2019	-	11,852.45	37,480.62



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.

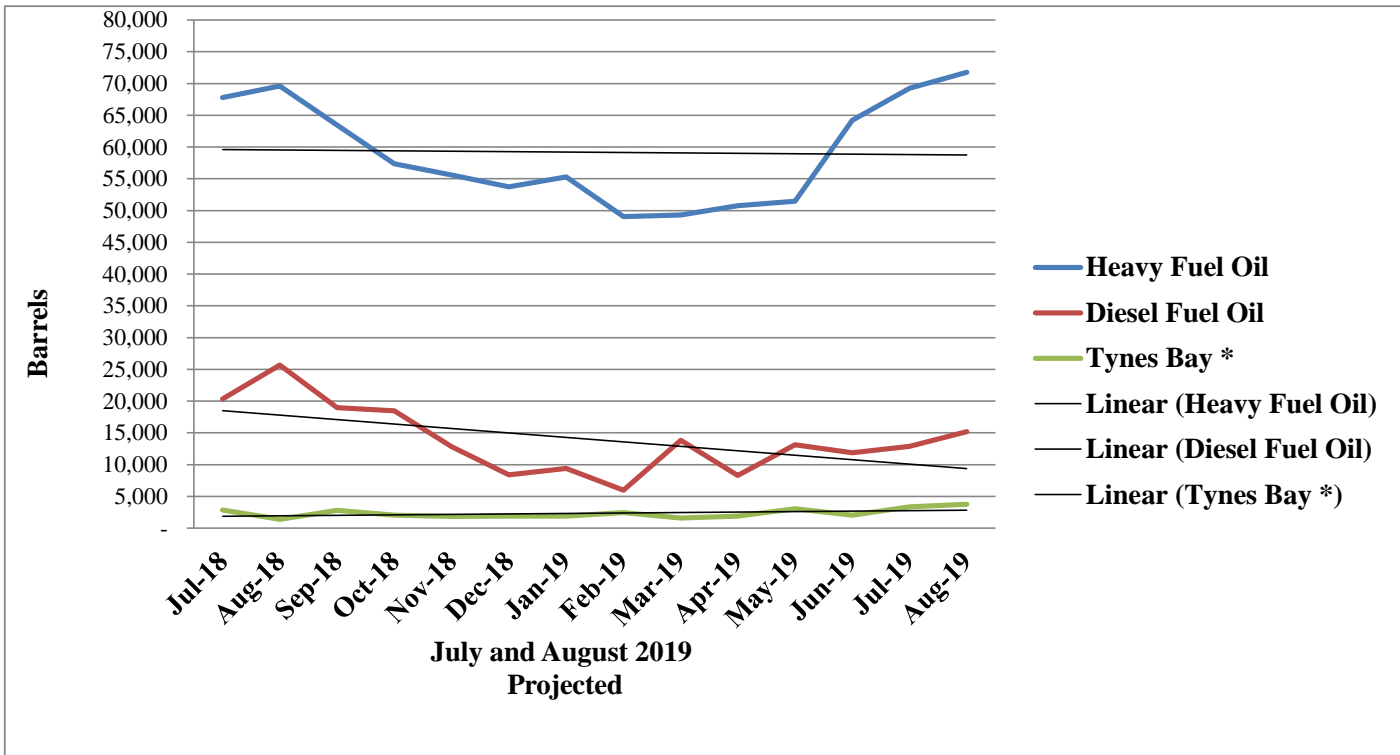


Diesel Fuel Oil Costs Per Shipment

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



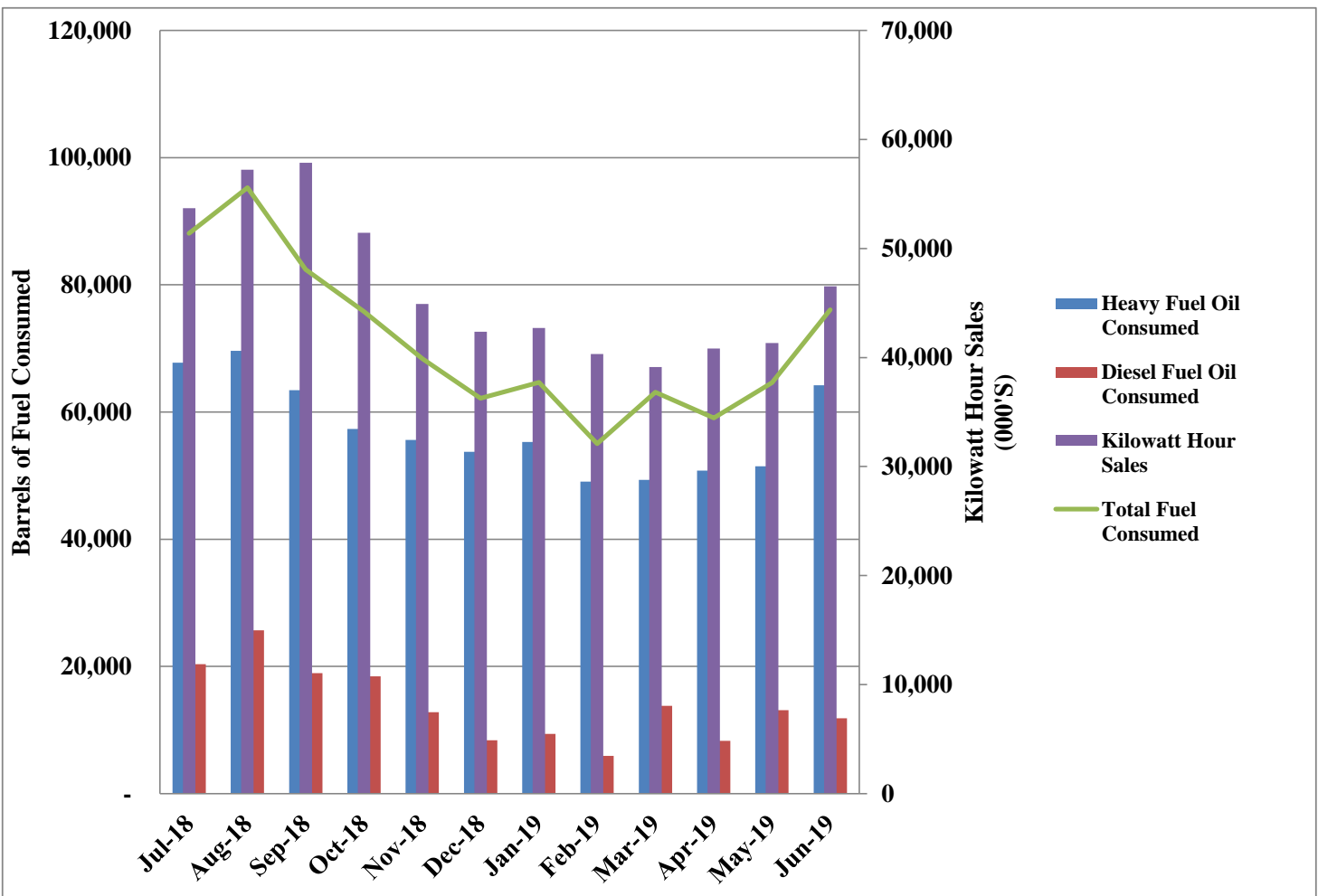
* BELCO calculates an efficiency rating for its generators on a monthly basis. This is calculated as the estimated kilowatt hours that will be generated that month divided by the estimated number of barrels of fuel that will be used. Therefore, the equivalent barrels of fuel is calculated for Tynes Bay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



Fuel Consumption

Versus

Kilowatt Hour Sales

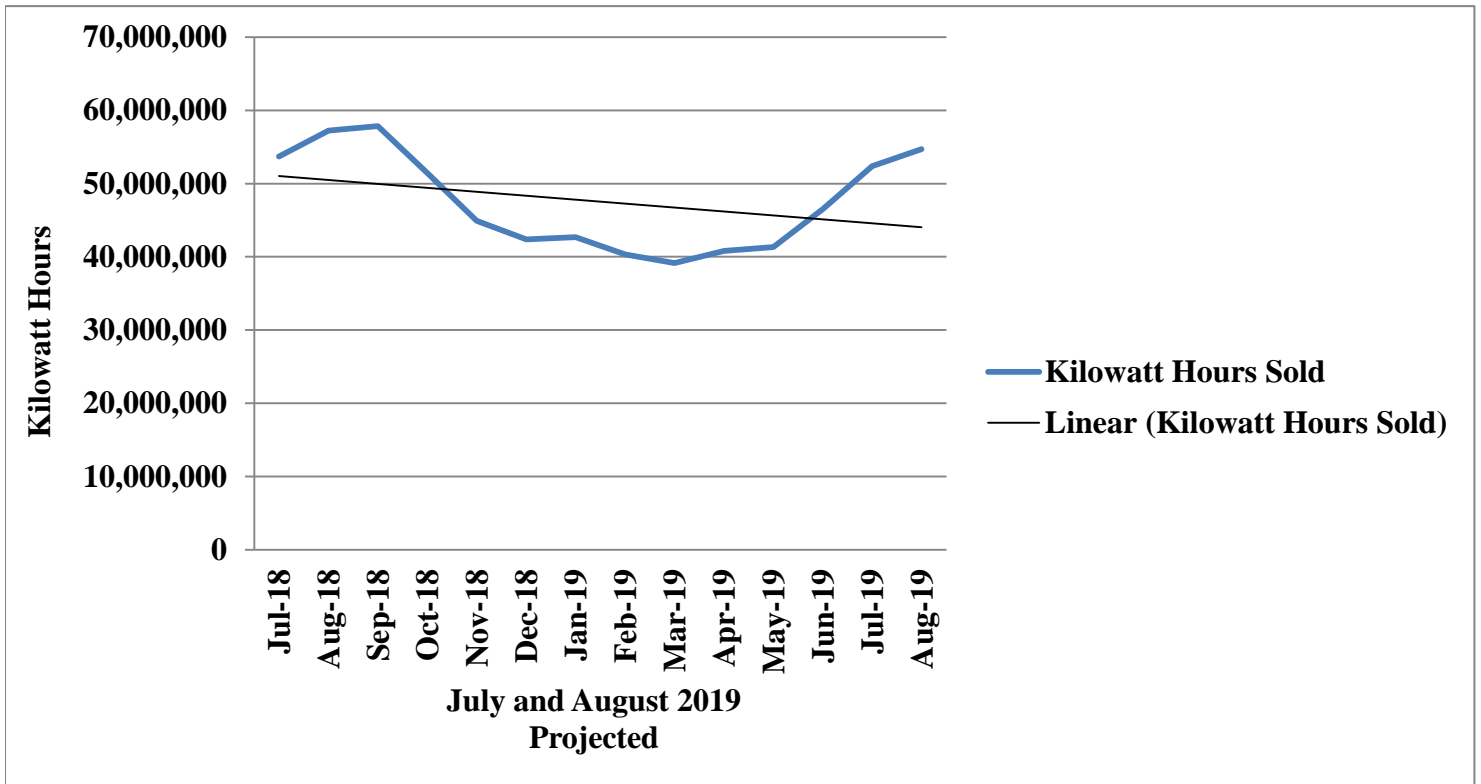


BELCO

Kilowatt Hour Sales

Previous Twelve Months

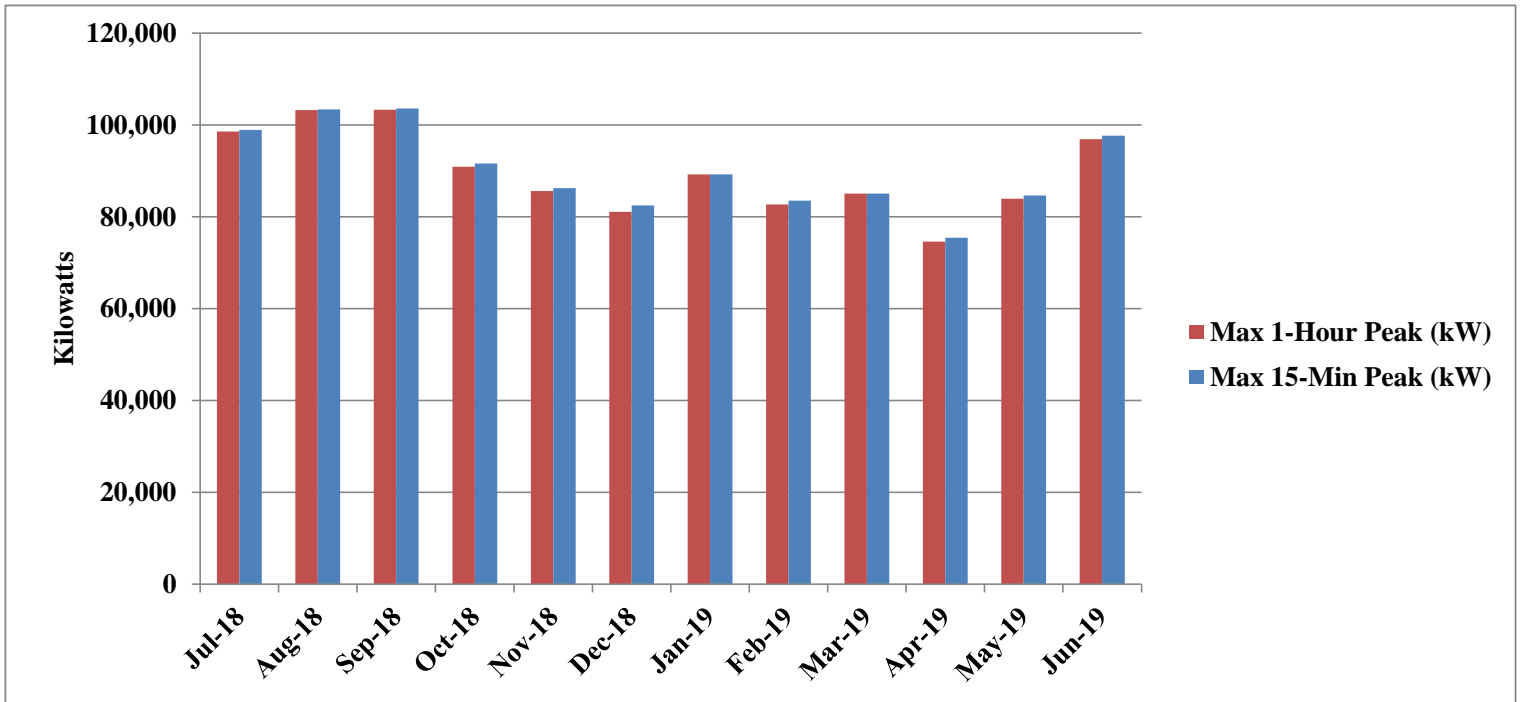
Plus Two Month Forward Projection





Maximum 15-Minute & Hourly Peak Kilowatt Hour Demand

Previous Twelve Months

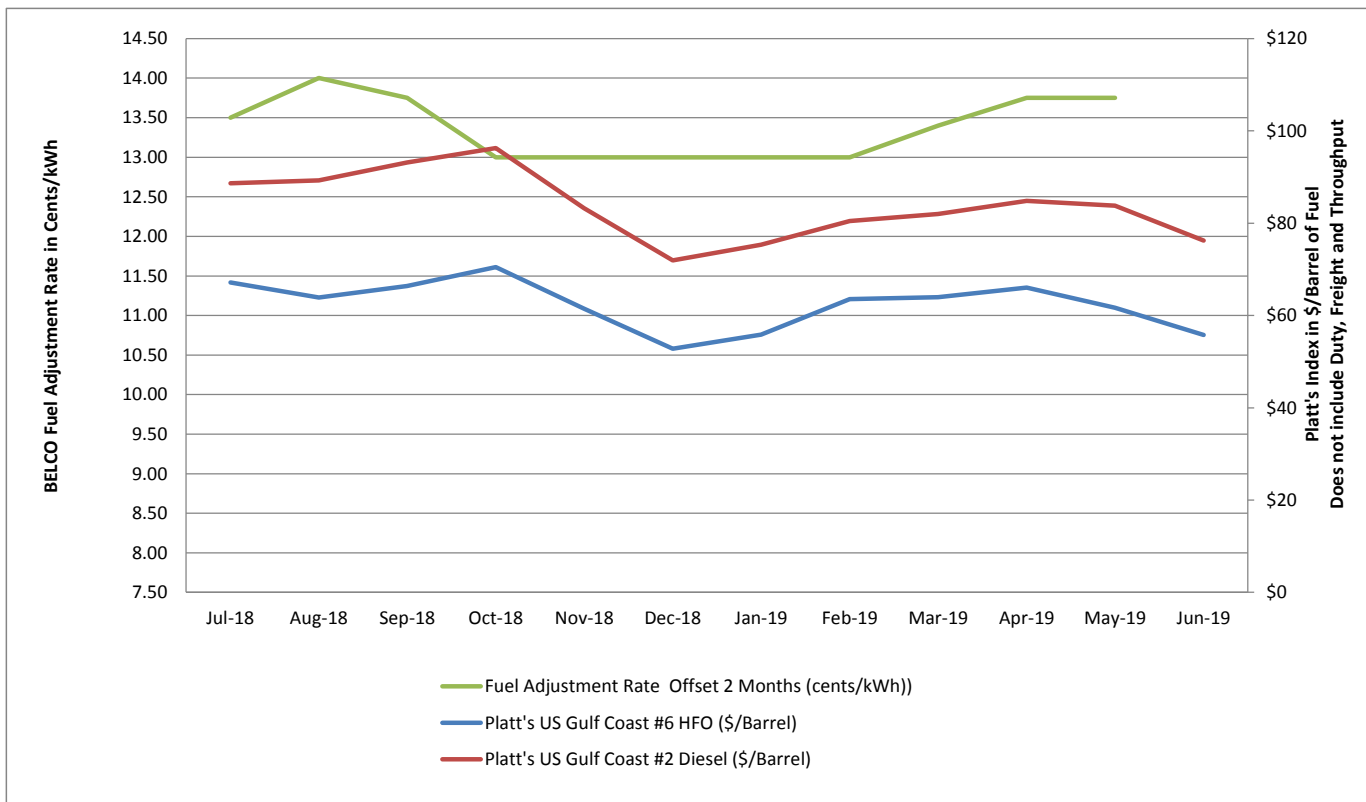




Fuel Adjustment Rate

Versus

Platt's Indices for Heavy and Diesel Fuel Oils



BELCO

Fuel Adjustment Over / (Under) Recovery

For the Month Ended 30 June 2019

	\$	\$	\$
Opening Balance at 1 June 2019			235,441
<u>Fuel Consumption</u>			
Diesel - 11,852.45 @ \$118.7798	1,407,832		
Less: Fuel Consumption @ \$30/bbl	<u>(355,574)</u>	1,052,258	
Heavy - 29,882.62 bbls @ \$101.6962	3,038,949		
Heavy - 34,332.63 bbls @ \$112.7011	3,869,325		
Less: Fuel Consumption @ \$30/bbl	<u>(1,926,458)</u>	4,981,817	
Tynes Bay - 1,467,672 kWh @ \$0.185	271,519		
Less: (1,467,672 kWh /713.83) 2,056.05 bbls @ \$30/bbl	<u>(61,682)</u>	209,837	
		6,243,912	
Deduct: Fuel Adjustment Revenue		<u>6,399,510</u>	
June over / (under) recovery			155,598
Ending Balance at 30 June 2019			<u>391,039</u>



Fuel Adjustment Over / (Under) Cost Recovery Variance Analysis

For the Month Ended 30 June 2019

Cost Analysis:

Projections:

	Diesel	Heavy	Tynes Bay	Total
Barrels	10,965	64,606	1,614	77,185
Total Fuel Adjustment Cost	\$ 973,471	\$ 5,014,132	\$ 164,705	\$ 6,152,307
Fuel Adjustment Cost / Barrel	\$ 88.78	\$ 77.61	\$ 102.06	\$ 79.71

Actual:

Barrels	11,852	64,215	2,056	78,124
Total Fuel Cost	1,407,832	\$ 6,908,273	\$ 271,519	\$ 8,587,624
Total Fuel Adjustment Cost	\$ 1,052,258	\$ 4,981,815	\$ 209,838	\$ 6,243,911
Fuel Adjustment Cost / Barrel	\$ 88.78	\$ 77.58	\$ 102.06	\$ 79.92

Sales Analysis:

FAR (cents/kwh)

13.75 Requested

13.75 Approved

Fuel Adjustment Sales

Projected:
Actual:
Variance
% Variance

Total KWH Sales	Total \$ Sales
46,706,261	\$ 6,422,111
46,541,889	\$ 6,399,510
(164,372)	\$ (22,601)
-0.35%	-0.35%

Summary - projected vs. actual variances:

	Diesel	HFO	Tynes Bay	Total (Rounded)
Quantity (Barrels):	(887)	391	(442)	(939)
Costs:				
Price variance	\$ -	\$ 1,990	\$ (2)	\$ 1,988
Quantity variance	\$ (78,788)	\$ 30,326	\$ (45,131)	\$ (93,593)
Total variance	\$ (78,788)	\$ 32,316	\$ (45,133)	\$ (91,605)
Sales:				\$ (22,601)
Total projected vs. actual variance (June 2019)				\$ (114,206)

Fuel Adjustment Over / (Under) Cost Recovery (General Ledger Account 24205)	Projected \$	Actual \$
Opening Balance at 1 June 2019	235,441	235,441
Projected change in over / (under) recovery position	269,804	269,804
Variance (Actual vs. Projected) - see above		(114,206)
Actual change in over / (under) recovery position	269,804	155,598
Ending Balance at 30 June 2019	505,245	391,039



Fuel Consumption Projections

Forward Three Months

Shipment Date	Type	Hedged	Amount (Barrels)	Total Cost/Barrel	FADJ (less \$30/bbl)
May 2019	Heavy	No	115,159.35	112.7011	82.7011
July 2019	Heavy	Yes	50,000.00	99.4651	69.4651
July 2019*	Heavy	No	100,000.00	102.0527	72.0527
January 2019	Diesel	No	7,495.62	118.7798	88.7798
May 2019	Diesel	No	29,985.00	128.9776	98.9776
July 2019*	Diesel	No	40,000.00	121.4636	91.4636

*estimated based on June 2019 Platt's average



Fuel Adjustment Over/(Under) Recovery Projections

At Existing Fuel Adjustment Rate

Three Months Forward

Over (Under) Recovery account as at end of previous month:					\$ 391,039
Projected kWh Sales - July 2019	52,400,904		FADJ	13.75	\$ 7,205,124
Projected fuel consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost
	Diesel	January 2019	7,496	\$ (88.78)	\$ (665,459.64)
	Diesel	May 2019	5,381	\$ (98.98)	\$ (532,636.34)
	Heavy	May 2019	69,245	\$ (82.70)	\$ (5,726,637.42)
	Tynes Bay	N/A	3,331	\$ (102.24)	\$ (340,529.40)
	Total Barrels		85,453		(60,139)
Projected Over (Under) Recovery account as at end of this month:					330,900
Projected kWh Sales - August 2019	54,695,632		FADJ	13.75	\$ 7,520,649
Projected fuel consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost
	Diesel	May 2019	15,190	\$ (98.98)	\$ (1,503,470.49)
	Heavy	May 2019	45,914	\$ (82.70)	\$ (3,797,167.09)
	Heavy	July 2019	25,837	\$ (69.47)	\$ (1,794,745.48)
	Tynes Bay	N/A	3,754	\$ (102.01)	\$ (382,895.10)
	Total Barrels		75,505		42,371
Projected Over (Under) Recovery account as at end of this month:					373,271
Projected kWh Sales - September 2019	56,228,311		FADJ	13.75	\$ 7,731,393
Projected fuel consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost
	Diesel	May 2019	9,414	\$ (98.98)	\$ (931,737.98)
	Diesel	July 2019	7,927	\$ (91.46)	\$ (725,066.71)
	Heavy	July 2019	24,163	\$ (69.47)	\$ (1,678,509.52)
	Heavy	July 2019	46,670	\$ (72.05)	\$ (3,362,674.29)
	Tynes Bay	N/A	3,086	\$ (103.81)	\$ (320,343.60)
	Total Barrels		91,260		713,061
Projected Over (Under) Recovery account as at end of this month:					1,086,332



Fuel Adjustment Over/(Under) Recovery Projections

At Requested Fuel Adjustment Rate

Three Months Forward

Over (Under) Recovery account as at end of previous month:						\$ 391,039
Projected kWh Sales - July 2019	52,400,904		FADJ	13.75	\$	7,205,124
Projected fuel consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost	
	Diesel	January 2019	7,496	\$ (88.78)	\$ (665,459.64)	
	Diesel	May 2019	5,381	\$ (98.98)	\$ (532,636.34)	
	Heavy	May 2019	69,245	\$ (82.70)	\$ (5,726,637.42)	
	Tynes Bay	N/A	3,331	\$ (102.24)	\$ (340,529.40)	
	Total Barrels		85,453		(60,139)	
Projected Over (Under) Recovery account as at end of this month:						330,900
Projected kWh Sales - August 2019	54,695,632		FADJ	13.75	\$	7,520,649
Projected fuel consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost	
	Diesel	May 2019	15,190	\$ (98.98)	\$ (1,503,470.49)	
	Heavy	May 2019	45,914	\$ (82.70)	\$ (3,797,167.09)	
	Heavy	July 2019	25,837	\$ (69.47)	\$ (1,794,745.48)	
	Tynes Bay	N/A	3,754	\$ (102.01)	\$ (382,895.10)	
	Total Barrels		75,505		42,371	
Projected Over (Under) Recovery account as at end of this month:						373,271
Projected kWh Sales - September 2019	56,228,311		FADJ	12.50	\$	7,028,539
Projected fuel consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost	
	Diesel	May 2019	9,414	\$ (98.98)	\$ (931,737.98)	
	Diesel	July 2019	7,927	\$ (91.46)	\$ (725,066.71)	
	Heavy	July 2019	24,163	\$ (69.47)	\$ (1,678,509.52)	
	Heavy	July 2019	46,670	\$ (72.05)	\$ (3,362,674.29)	
	Tynes Bay	N/A	3,086	\$ (103.81)	\$ (320,343.60)	
	Total Barrels		91,260		10,207	
Projected Over (Under) Recovery account as at end of this month:						383,478



Commercial Renewable System Excess Energy Rate ("CRSEER")

At Requested Fuel Adjustment Rate - Full Cost

Projected Over (Under) Recovery account as at end of May: \$						330,900
Projected kWh Sales - August 2019	54,695,632		CRSEER	18.47		\$ 10,102,283
Projected fuel consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost	
	Diesel	May 2019	15,190	\$ (128.98)	\$ (1,959,170.49)	
	Heavy	May 2019	45,914	\$ (112.70)	\$ (5,174,597.59)	
	Heavy	July 2019	25,837	\$ (99.47)	\$ (2,569,844.98)	
	Tynes Bay	N/A	3,754	\$ (132.01)	\$ (495,504.00)	
	Total Barrels		75,505			(96,834)
Projected Over (Under) Recovery account as at end of this month:						234,066
Projected kWh Sales - September 2019	56,228,311		CRSEER	17.37		\$ 9,766,858
Projected fuel consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost	
	Diesel	May 2019	9,414	\$ (128.98)	\$ (1,214,146.58)	
	Diesel	July 2019	7,927	\$ (121.46)	\$ (962,888.11)	
	Heavy	July 2019	24,163	\$ (99.47)	\$ (2,403,410.02)	
	Heavy	July 2019	46,670	\$ (102.05)	\$ (4,762,763.79)	
	Tynes Bay	N/A	3,086	\$ (133.81)	\$ (412,920.00)	
	Total Barrels		91,260			10,729
Projected Over (Under) Recovery account as at end of this month:						244,795

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

BELCO

Generators Available for Service

June 2019

Generator	Available	Type of fuel Consumed	Barrels of Fuel Consumed	Efficiency Rating*
E1	Yes	HFO	9,197	692
E2	Yes	HFO	10,558	691
E3	Yes	HFO	7,419	704
E4	Yes	HFO	5,327	708
E5	Yes	HFO	11,569	704
E6	No	HFO	-	NA
E7	Yes	HFO	11,773	731
E8	No	HFO	12,257	739
D3	Yes	LFO	3,087	610
D8	Yes	LFO	3,360	627
D10	Yes	LFO	2,712	600
D14	Yes	LFO	212	573
GT5	No	LFO	484	409
GT6	No	LFO	498	444
GT7	Yes	LFO	130	437
GT8	Yes	LFO	229	430

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



Generators Out of Service

June 2019

Unit	Category	Type	Forced Outage Details	Outage Date	Return Date
GT7	Other Systems	FO (Postpone)	Testing for metal particles in the morning	6/28/19	6/28/19
GT6	Main Engine	FO (Immediate)	Failed start due to shaft not turning	6/27/19	6/27/19
GT7	Main Engine	FO (Immediate)	Contamination HI Hi LO alarm	6/27/19	6/28/19
E5	Main Engine	MO	cylinder 3A low temperature. injector replacement	6/27/19	6/28/19
GT8	Instrumentation & Control System	MO	Beacon alarm, ground fault.	6/25/19	6/25/19
GT8	Instrumentation & Control System	MO	Fire system beacon repair.	6/24/19	6/24/19
E4	Main Engine	PO	E4 planned outage	6/23/19	7/8/19
GT6	Main Engine	FO (Immediate)	System Fault, Common Trip Alarm Activated.	6/22/19	6/23/19
E3	Main Engine	FO (Immediate)	Unit forced out for a fuel leak.	6/22/19	6/22/19
E1	Main Engine	FO (Immediate)	Cylinder #6 not firing	6/15/19	6/15/19
D10	Main Engine	SE of MO	Final inspection	6/14/19	6/14/19
D8	Main Engine	FO (Immediate)	Pedestal Bearing supply line failed. Crack in the supply line.	6/14/19	6/14/19
GT6	Main Engine	FO (Immediate)	Turbine failed to rotate start failure.	6/14/19	6/15/19
E8	Main Engine	FO (Immediate)	Cylinder 5L injector failure	6/13/19	6/13/19
D3	Other Systems	MO	fuel leak on cylinder 1L	6/9/19	6/9/19
E2	Main Engine	FO (Immediate)	Knocking noise could be heard coming from the chain casing area between cyl 4 and 5.	6/8/19	6/9/19
E3	Auxiliary Systems	MO	Turning gear motor replaced.	6/7/19	6/8/19
E7	Main Engine	FO (Immediate)	Bolt blew out from cooler B bank	6/6/19	6/6/19
E3	Instrumentation & Control System	MO	To fix Barring gear and Governor	6/6/19	6/6/19
E7	Main Engine	MO	To refit nutshell pot	6/5/19	6/6/19
E5	Main Engine	MO	To repair the B-bank Nut shell line and A-bank Nut shell canister	6/4/19	6/5/19



Scheduled Generator Maintenance

Jul-19

Generator	Maintenance Type	Outage Date	Return Date
E6	12k Service	2/28/2019	7/31/2019
E4	4.5K Service	6/24/2019	7/8/2019
D8	4.5K Service	7/15/2019	7/21/2019



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