#### BERMUDA ELECTRIC LIGHT COMPANY LIMITED

PO, BOX HM 1026, HAMILTON HM DX, BERMUDA
TELEPHONE: (441) 295-5111
FAX: EXECUTIVE (441) 292-8975
CUSTOMER SERVICE (441) 292-7832
EMAIL: info@belco.bm
WEBSITE: www.belco.bm



PLEASE QUOTE OUR REF.

February 8, 2016

The Energy Commission c/o The Ministry of Energy, Telecommunications and E-Commerce PO Box HM 101 Hamilton, HM AX

Attention: Mr. Michael Leverock, Chairman

#### **TARIFF FILING**

Dear Mr. Leverock,

This is to advise you that we wish to make the following changes to the fuel adjustment rate ("FAR") and Commercial renewable system excess energy rate ("CRSEER"):

- 1. FAR Decrease from the existing rate of 10.0 cents per kilowatt-hour sold for February 2016to 9.75 cents per kilowatt-hour sold for March 2016; and
- 2. CRSEER Increase from 14.83 cents per kilowatt-hour for February to 14.86 cents per kilowatt-hour for all meters read during the month of March 2016.

The CRSEER represents the rate BELCO will pay commercial owners for excess energy they have generated but not consumed and have exported to BELCO.

As directed by the Energy Commission in accordance with Schedule 1 Paragraph 16 of the Energy Act 2009, our submission in support of this request is attached for your review.

The actual fuel adjustment cost recovery position as at 31st January, 2016 was \$429,703 over recovered as compared to the projected \$272,250 over recovery position projected in January. The \$157,453 favorable variance is due to:

- The total actual barrels of fuel consumed in January were 170 barrels higher than projected. Total Heavy and Diesel barrels of fuel consumed exceeded projections by 2,980 barrels. This was offset by Tynes Bay equivalent actual barrels below projections by 2,810 barrels. As the current price paid for Tynes Bay equivalent barrels of fuel exceeds the price paid for both Heavy and Diesel barrels of fuel there was a resulting positive impact on the recovery position of \$82,090;
- Net price variance <u>positively</u> impacted the recovery position by \$39,766;
- Actual January electric sales were 782,463 KWH's more than projected. This variance resulted in a net positive impact on the fuel recovery position of \$69,981; and
- Fuel interest finance cost incurred in January <u>negatively</u> impacted the recovery position by \$34,384.

As always, we are available to meet with the Energy Commission to discuss our FAR submission. We will continue to monitor our projections to ensure that our submitted FAR requests enable us to achieve a break-even position on fuel costs. 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



## Bermuda Electric Light Company Limited

Fuel Adjustment Submission

## **FOR PUBLIC DISCLOSURE**

March 2016

This information is provided to the Bermuda Energy Commission as directed by them on December 30, 2013, in accordance with Schedule 1, Paragraph 16 of the Bermuda Energy Act 2009. This information should be read in conjunction with documents filed by Ascendant Group Limited with the Bermuda Stock Exchange. Please refer to the Company's website at <a href="https://www.belco.bm">www.belco.bm</a> for further information describing Bermuda Electric Light Company Limited. 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.



# Fuel Adjustment Submission

# Table of Contents

	PAGE
Graph - Cost per Barrel of Heavy Fuel Oil Purchased	<u>3</u>
Graph - Cost per Barrel of Diesel Fuel Oil Purchased	4
Table of Heavy Fuel Oil Inventory Activity	<u>5</u>
Graph - Heavy Fuel Oil Inventory Activity	<u>6</u>
Table of Diesel Fuel Oil Inventory Activity	<u>7</u>
Graph - Diesel Fuel Oil Inventory Activity	8
Table of Heavy Fuel Oil Costs Per Shipment	9
Table of Diesel Fuel Oil Per Shipment	<u>10</u>
Graph - Barrels of Fuel Consumed	<u>11</u>
Graph - Fuel Consumption & Kilowatt Hours Sold	<u>12</u>
Graph - Kilowatt Hours Sold	<u>13</u>
Graph - Maximum 15-Minute & Hourly Peak Kilowatt Hour Demand	<u>14</u>
Graph - Fuel Adjustment Rate vs. Platt's Indices for Heavy & Diesel Fuel	<u>15</u>

Fuel Adjustment Over/(Under) Recovery - Previous Month	<u>16</u>
Fuel Consumption Projections - Forward Three Months	<u>17</u>
Fuel Adjustment Over/(Under) Recovery Projections - Existing Rate	<u>18</u>
Fuel Adjustment Over/(Under) Recovery Projections - Requested Rate	<u>19</u>
Fuel Adjustment Over/(Under) Recovery Projections - Full Cost	<u>20</u>
Generators Available for Service - Previous Month	<u>21</u>
Generators Out of Service - Previous Month	<u>22</u>
Scheduled Generator Maintenance - Filing Period	<u>23</u>
Other Events Affecting The Fuel Adjustment Calculation	<u>24</u>

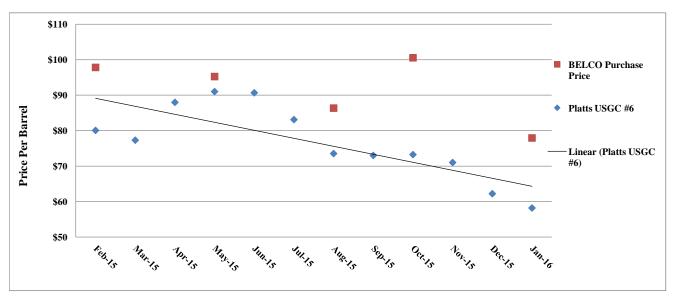


#### **Heavy Fuel Oil Purchased**

#### Versus

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

#### **Previous Twelve Months**

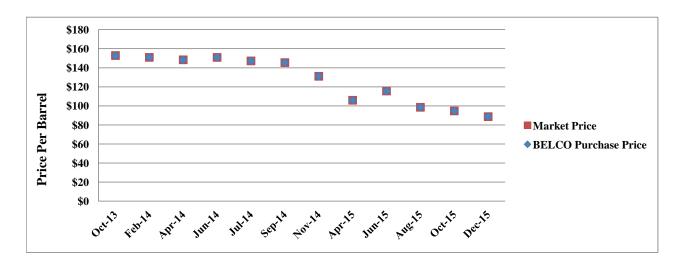


N.B. In accordance with the Fuel Supply Agreement for Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel Oil between BELCO and Shell Western Trading Limited, the contracted price is stipulated as the 30-day average for Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel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



#### **Diesel Fuel Oil Purchased**

#### **Previous Twelve Months**



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.

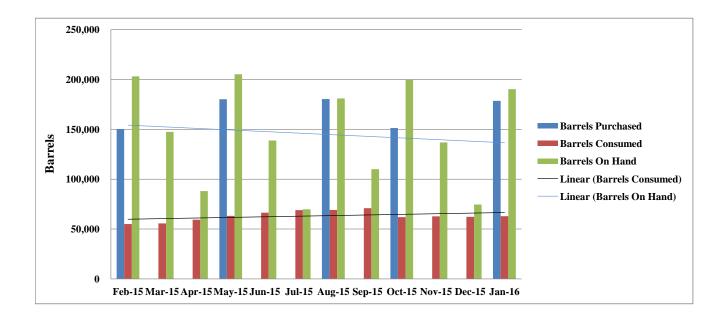


# **Heavy Fuel Oil Inventory Activity**

Date	Barrels Purchased	Barrels Consumed	Barrels On Hand
February, 2015	150,289.50	54,987.00	203,058.22
March, 2015	-	55,605.00	147,453.22
April, 2015	-	59,347.00	88,106.22
May, 2015	180,228.50	63,163.00	205,171.72
June, 2015	-	66,399.00	138,772.72
July, 2015	-	69,022.00	69,750.72
August, 2015	180,297.11	69,125.00	180,922.83
September, 2015	-	70,852.00	110,070.83
October, 2015	151,329.70	61,874.55	199,525.98
November, 2015	-	62,737.00	136,788.98
December, 2015	-	62,251.00	74,553.17
Jnauary, 2016	178,534.67	62,874.00	190,213.84



## **Graph of Heavy Fuel Oil Inventory Activity**



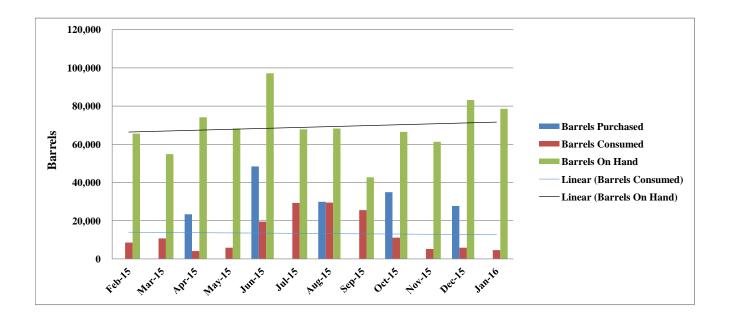


# **Diesel Fuel Oil Inventory Activity**

Date	<b>Barrels Purchased</b>	<b>Barrels Consumed</b>	<b>Barrels On Hand</b>
February, 2015	_	8,529.00	65,600.52
March, 2015	- -	10,779.00	54,821.52
April, 2015	23,421.39	4,096.00	74,146.91
May, 2015	-	5,914.00	68,232.91
June, 2015	48,413.33	19,525.00	97,121.24
July, 2015	-	29,286.00	67,835.24
August, 2015	29,940.60	29,499.00	68,276.84
September, 2015	-	25,552.00	42,724.84
October, 2015	34,952.60	11,171.00	66,506.44
November, 2015	-	5,216.00	61,290.44
December, 2015	27,725.60	5,874.00	83,142.70
January, 2016	-	4,594.07	78,548.63



## **Graph of Diesel Fuel Oil Inventory Activity**





## **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**

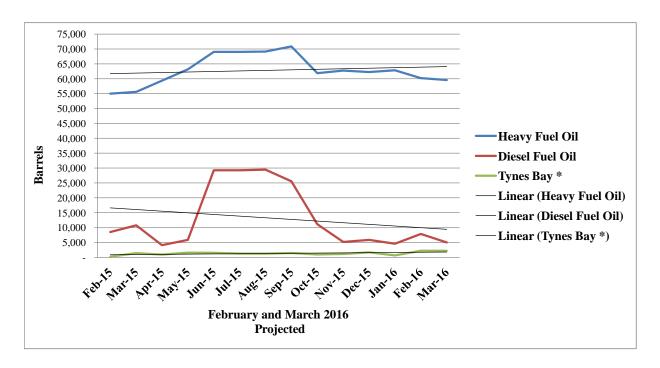
In accordance with Part 4, Paragraph 26A Clause (1)(c)(i) of the Bermuda Energy Act 2009, certain information provided to the Bermuda Energy Commission has been designated as confidential on the grounds that it could result in material financial loss or gain to any person and therefore has been excluded.



#### **Barrels of Fuel Consumed**

#### **Previous Twelve Months**

#### **Plus Two Month Forward Projection**



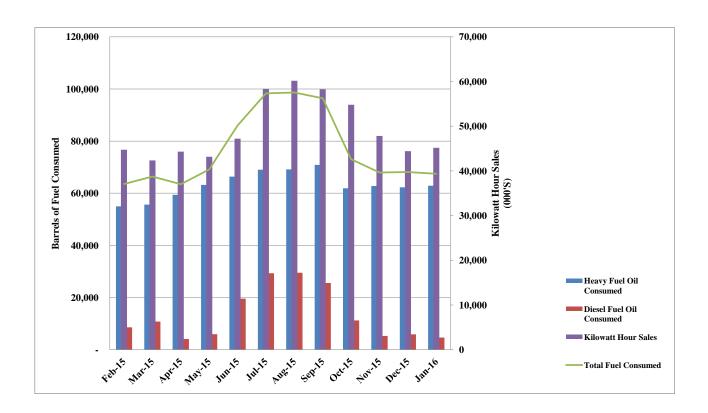
<sup>\*</sup> BELCO calculates an efficiency rating for its generators on a monthly basis. This is calculated as the estimated kilowatt hours that will be generated that month divided by the estimated number of barrels of fuel that will be used. Therefore, the equivalent barrels of fuel is calculated 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**

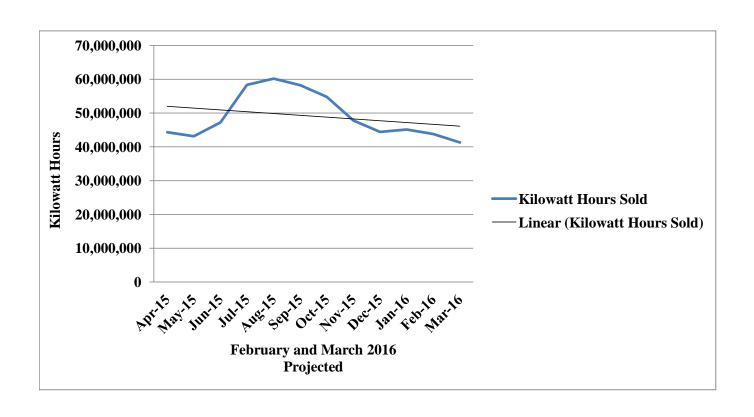




## **Kilowatt Hour Sales**

### **Previous Twelve Months**

## **Plus Two Month Forward Projection**





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

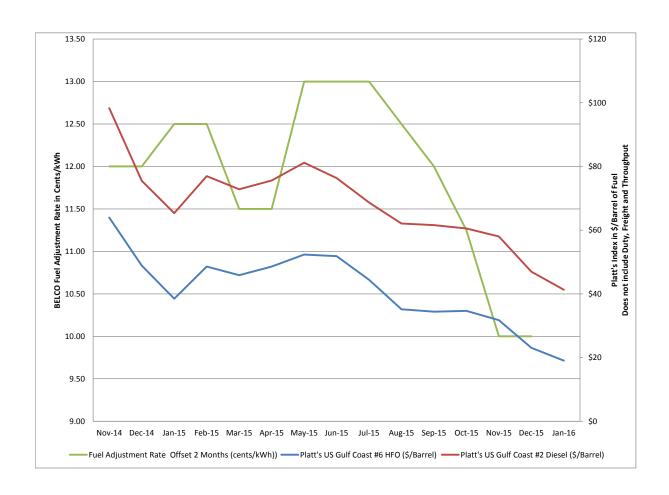




#### **Fuel Adjustment Rate**

#### Versus

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





## Fuel Adjustment Over / (Under) Recovery

## For the Month Ended 31st January 2016

Opening Balance at 1 January 2016	\$	\$	\$ 1,092,089
Fuel Consumption			,
Diesel -4,594.07 bbls @ \$98.5940	452,948		
Less: Fuel Consumption @ \$30/bbl	(137,822)	315,126	
Heavy - 13,223.47 bbls @ \$93.9714	1,242,628		
Heavy - 30,000.00 bbls @ \$115.6389	3,469,167		
Heavy - 19,650.53 bbls @ \$87.39024	1,717,264		
Less: Fuel Consumption @ \$30/bbl	(1,886,220)	4,542,839	
Tynes Bay - 480,596 kWh @ \$0.185	88,910		
Less: (480,596 kWh /734.5) 654.32 bbls @ \$30/bbl	(19,630)	69,280	
		4,927,245	
Deduct: Fuel Adjustment Revenue (after discount)			
\$4,510,563	@ .95315	4,299,243	
December over / (under) recovery	_		(628,002)
Interest Expense			(34,384)
Year End temperature gain adjustment per SOL pump quantity			
Ending Balance at 31 January 2016		_ _	429,703



## **Fuel Consumption Projections**

## **Forward Three Months**

Shipment			Amount	Total	FADJ (less
Date	Type	Hedged	(Barrels)	Cost/Barrel	\$30/bbl)
October 15	Heavy	Yes	10,349.47	87.3902	57.3902
October 15	Heavy	No	1,329.70	75.6477	45.6477
January 16	Heavy	Yes	30,000.00	88.9055	58.9055
January 16	Heavy	Yes	30,000.00	116.0405	86.0405
January 16	Heavy	Yes	30,000.00	79.1450	49.145
January 16	Heavy	Yes	30,000.00	67.5418	37.5418
January 16	Heavy	No	58,534.67	57.4806	27.4806
August 15	Diesel	No	15,870.73	98.594	68.594
October 15	Diesel	No	34,952.60	94.7667	64.7667



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

## At Existing Fuel Adjustment Rate

## **Three Months Forward**

		Ov	er (Under) Recov	ery account as at end	of	previous month:	\$ 429,703
			, , , , , , , , , , , , , , , , , , , ,				, , , , ,
Projected kWh							
Sales - February							
2016	43,804,640		At 10.00 FADJ	@ 95315 (discount)	\$	4,175,239	
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel		Total Cost	
	Diesel	August 2015	7,894		<u> </u>	(541,481.04)	
	Heavy	October 2015	10,349	, ,	\$	(593,931.18)	
	Heavy	October 2015	1,330			(60,711.44)	
	Heavy	January 2015	30,000	. ,	_	(1,767,165.00)	
	Heavy	January 2015	18,523			(1,593,728.18)	
	Tynes Bay	N/A	2,224	\$ (104.25)	\$	(231,902.69)	
	Total Barrels		70,320				(613,680
		Projecte	d Over (Under) R	decovery account as a	t en	d of this month:	(183,977
			_				
Projected kWh							
Sales - March							
2016	41,304,919		At 10.00 FADJ	@ 95315 (discount)	\$	3,936,978	
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel		Total Cost	
	Diesel	August 2015	5,022	. ,	_	(344,479.07)	
	Heavy	January 2016	11,477		-	(987,486.82)	
	Heavy	January 2016	30,000			(1,474,350.00)	
	Heavy	January 2016	18,088	, ,	-	(679,056.08)	
	Tynes Bay	N/A	2,559	\$ (102.53)	\$	(262,363.38)	
	Total Barrels		67,146				189,243
		Projecte	d Over (Under) R	ecovery account as a	t en	d of this month:	5,260
Projected kWh							
Sales - April							
2016	43,556,812		At 10.00 FADJ	@ 95315 (discount)	\$	4,151,618	
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel		Total Cost	
	Diesel	August 2015	2,955		-	(202,695.27)	
	Diesel	October 2015	3,742	. , ,		(242,356.99)	
	Heavy	January 2016	11,912	. ,		(447,197.92)	
	Heavy	January 2016	52,157			(1,433,305.65)	
	Tynes Bay	N/A	1,129	\$ (104.48)	\$	(117,972.64)	
	<b>Total Barrels</b>		71,895				1,708,089
		Projecte	d Over (Under) R	ecovery account as a	t en	d of this month:	1,713,355



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

## At Requested Fuel Adjustment Rate

### **Three Months Forward**

		(	Over (Under) Rec	cover	ry account as at e	nd o	of previous month:	\$ 429,703
Projected kWh								
Sales -								
February 2016	43,804,640		At 10.00 FADJ	@ 9	95315 (discount)	\$	4,175,239	
Projected fuel								
consumed		<b>Shipment Date</b>	Barrels		ADJ Cost/Barrel		Total Cost	
	Diesel	August 2015	7,894		(68.59)	\$	(541,481.04)	
	Heavy	October 2015	10,349		(57.39)	\$	(593,931.18)	
	Heavy	October 2015	1,330		(45.65)	_	(60,711.44)	
	Heavy	January 2015	30,000		(58.91)	\$	(1,767,165.00)	
	Heavy	January 2015	18,523		(86.04)	\$	(1,593,728.18)	
	Tynes Bay	N/A	2,224		(104.25)	\$	(231,902.69)	
	Total Barrels		70,320					(613,680)
		Proje	cted Over (Under	) Re	covery account as	s at	end of this month:	(183,977)
Projected kWh								
Sales - March								
2016	41,304,919		At 9.75 FADJ	@ 9	95315 (discount)	\$	3,838,554	
Projected fuel								
consumed		<b>Shipment Date</b>	Barrels	FA	ADJ Cost/Barrel		<b>Total Cost</b>	
	Diesel	August 2015	5,022	\$	(68.59)	\$	(344,479.07)	
	Heavy	January 2016	11,477	\$	(86.04)	\$	(987,486.82)	
	Heavy	January 2016	30,000	\$	(49.15)	\$	(1,474,350.00)	
	Heavy	January 2016	18,088	\$	(37.54)	\$	(679,056.08)	
	Tynes Bay	N/A	2,559		(102.53)	\$	(262,363.38)	
	Total Barrels		67,146					90,819
		Proje	cted Over (Under	) Re	covery account as	s at	end of this month:	(93,159)
Projected kWh								
Sales - April								
2016	43,556,812		At 6.10 FADJ	@ 9	95315 (discount)	\$	2,536,638	
Projected fuel								
consumed		<b>Shipment Date</b>	Barrels	FA	ADJ Cost/Barrel		<b>Total Cost</b>	
	Diesel	August 2015	2,955	\$	(68.59)	\$	(202,695.27)	
	Diesel	October 2015	3,742	\$	(64.77)	\$	(242,356.99)	
	Heavy	January 2016	11,912		(37.54)	\$	(447,197.92)	
	Heavy	January 2016	52,157	\$	(27.48)	\$	(1,433,305.65)	
	Tynes Bay	N/A	1,129		(104.48)	\$	(117,972.64)	
	Total Barrels		71,895					93,110
		Proje	cted Over (Under	) Re	covery account as	s at	end of this month:	(49)



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

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

### **Three Months Forward**

		Proj	ected Over (Unde	er) Recovery account	as a	t end of February:	\$ (183,977)
Projected kWh							
Sales - March							
2016	41,304,919		At 14.86 FADJ	@ 95315 (discount)	\$	5,850,350	
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel		<b>Total Cost</b>	
	Diesel	August 2015	5,022	\$ (98.59)	\$	(495,139.07)	
	Heavy	January 2016	11,477	\$ (116.04)	\$	(1,331,796.82)	
	Heavy	January 2016	30,000	\$ (79.15)	\$	(2,374,350.00)	
	Heavy	January 2016	18,088	\$ (67.54)	\$	(1,221,696.08)	
	Tynes Bay	N/A	2,559	\$ (132.53)	\$	(339,127.20)	
	<b>Total Barrels</b>		67,146				88,241
		Proje	cted Over (Under	Recovery account as	s at	end of this month:	(95,737)
				·			
Projected kWh							
Sales - April							
2016	43,556,812		At 11.31 FADJ	@ 95315 (discount)	\$	4,695,479	
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel		<b>Total Cost</b>	
	Diesel	August 2015	2,955	\$ (98.59)	\$	(291,345.27)	
	Diesel	October 2015	3,742	\$ (94.77)	\$	(354,616.99)	
	Heavy	January 2016	11,912	\$ (67.54)	\$	(804,557.92)	
	Heavy	January 2016	52,157		\$	(2,998,015.65)	
	Tynes Bay	N/A	1,129	\$ (134.48)	\$	(151,848.00)	
	Total Barrels		71,895				95,096
		Proje	cted Over (Under	) Recovery account as	s at	end of this month:	(641)



# Generators Available for Service

## January 2016

Generator	Available	Type of fuel Consumed	Barrels of Fuel Consumed	Efficiency Rating*
E1	Yes	HFO	9,700	666
E2	Yes	HFO	5,914	654
E3	Yes	HFO	5,362	694
E4	Yes	HFO	5,210	691
E5	Yes	HFO	9,406	692
E6	Yes	HFO	11,458	705
E7	Yes	HFO	11,557	720
E8	Yes	HFO	8,924	733
D3	Yes	LFO	699	596
D8	Yes	LFO	744	792
D10	Yes	LFO	722	600
D14	Yes	LFO	10	399
GT4	Yes	LFO	215	200
GT5	Yes	LFO	92	401
GT6	Yes	LFO	6	389
GT7	Yes	LFO	13	443
GT8	Yes	LFO	6	357

<sup>\*</sup> Efficiency Rating = Amount of kilowatt hours generated per barrel consumed



## **Generators Out of Service**

## January 2016

Unit	Category Type Forced Outage Details		Outage Date	Return Date	
E2	Instrumentation & Control System	MO	Unit out for replacement of "local / remote" control switch	01/03/16	01/03/16
E2	Auxilary Systems	МО	Cylinder #4 Fuel Pump lifted and safety valve operated on fuel block.	01/03/16	01/04/16
E4	Instrumentation & Control System	FO (Immediate)	Faulty IO to OMD	01/04/16	01/04/16
GT6	Electrical System	MO	Main Breaker maintenance	01/05/16	01/06/16
GT7	Electrical System	MO	Main Breaker maintenance	01/05/16	01/06/16
E3	Main Engine	MO	Hot Deflections	01/06/16	01/06/16
GT8	Electrical System	MO	Main Breaker Maintenance	01/06/16	01/07/16
GT8	Instrumentation & Control System	FO (Immediate)	Moved from M/O for the breaker to F/O due to Wonderware issues.	01/07/16	01/08/16
D10	Instrumentation & Control System	FO (Immediate)	Unit forced out due to high lub oil temperature switch failure.	01/08/16	01/08/16
E4	Auxilary Systems	FO (Immediate)	HTCW pressure tripped breaker engine kept running	01/08/16	01/08/16
E7	Auxilary Systems	MO	E7 MO for E7 HTCW control valve and OMD calibration	01/09/16	01/10/16
E8	Auxilary Systems	FO (Immediate)	Unit forced out due to HTCW pressure low.	01/10/16	01/10/16
E8	Auxilary Systems	FO (Immediate)	Unit tripped due to air in HTCW system. 1st load shed, approximately 3 switches and 2mws lost.	01/10/16	01/10/16
E8	Main Engine	MO	Replace fuel pump and Injector for cyl 7A	01/11/16	01/12/16
D8	Main Engine	MO	Lub oil separator discharge filter being cleaned.	01/13/16	01/15/16
E4	Main Engine	MO	cylinders 2R, 4R and 7R injector change	01/14/16	01/15/16
E6	Main Engine	FO (Immediate)	Cyl 6A Hi Hi exhaust temp had been slowly climbing over the last to days according to trend	01/17/16	01/18/16
E7	Auxilary Systems	MO	Fuel Rail Seals to Replace Cylinder #4 RHS south upper.	01/18/16	01/18/16
D8	Main Engine	MO	Unit to M/O to replace indicator cock seals.	01/19/16	01/19/16
E4	Instrumentation & Control System	MO	Unit out for MO to repair Engine Block Air Springs	01/27/16	01/27/16
E3	Auxilary Systems	MO	Unit out to repair Fuel oil pressure line from rail to LEP	01/27/16	01/27/16
E7	Auxilary Systems	MO	Unit out to carry out corrective works by GO, EMD, and MMD.	01/30/16	01/30/16
E4	Main Engine	МО	Unit out for repairs to fuel system (5A), nutshell pots, and blocked entablature drains.	01/31/16	01/31/16



## **Scheduled Generator Maintenance**

## February 2016

Generator	Maintenance Type	Outage Date	Return Date
E8	15k	01/04/16	01/11/16
E5	3K	01/12/16	01/17/16
E2	12K	01/18/16	02/17/16



## 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 incured by BELCO during the filing period that would result in a potential insurance
- 2. Any major events that have a direct impact on the Fuel Adjustment Rate.

  No major events have occurred during the filing period having an impact on the Fuel Adjustment Rate.
- 3. Changes in Debt Facilities Affecting the Fuel Adjustment Rate.

  The current overdraft facility which expires on 28 February, 2016 has a maximum limit of \$41 million.