#### BERMUDA ELECTRIC LIGHT COMPANY LIMITED

P.O., 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.

July 8, 2015

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 <u>Maintain</u> the existing rate of 13.0 cents per kilowatt-hour sold for August; and
- 2. CRSEER Decrease from 18.25 cents per kilowatt-hour for July to 18.08 cents per kilowatt-hour for all meters read during the month of August.

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 June 30th, 2015 was \$3,132,943 under recovered as compared to the projected \$2,051,953 under recovery position reported last month. The \$1,080,990 unfavorable variance is due to:

- Actual barrels of fuel consumed in June were more than projected by 8,691 barrels. This <u>negatively</u> impacted the recovery position by \$909,673. Additional barrels of fuel were used due to base load engine outages during the month requiring less efficient plant being utilized to meet demand;
- Net price variance <u>negatively</u> impacted the recovery position by \$4,333;
- Actual June electric sales were 237,353 KWH's less than projected <u>negatively</u> impacting the recovery position by \$67,560; and
- Fuel interest finance cost incurred in June <u>negatively</u> impacting the recovery position by \$99,424.

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, C.A., J.P.

Vice President, Finance & Group Controller



## Bermuda Electric Light Company Limited

Fuel Adjustment Submission

# **FOR PUBLIC DISCLOSURE**

August 2015

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	<u>4</u>
Table of Heavy Fuel Oil Inventory Activity	<u>5</u>
Graph - Heavy Fuel Oil Inventory Activity	<u>6</u>
	<u>_</u>
Table of Diesel Fuel Oil Inventory Activity	7
Graph - Diesel Fuel Oil Inventory Activity	8
Table of Heavy Evel Oil Costs Don Shipment	9
Table of Heavy Fuel Oil Costs Per Shipment	<u>9</u>
Table of Diesel Fuel Oil Per Shipment	10
Table of Breset Fact on For Simplificati	<u> </u>
Graph - Barrels of Fuel Consumed	11
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>

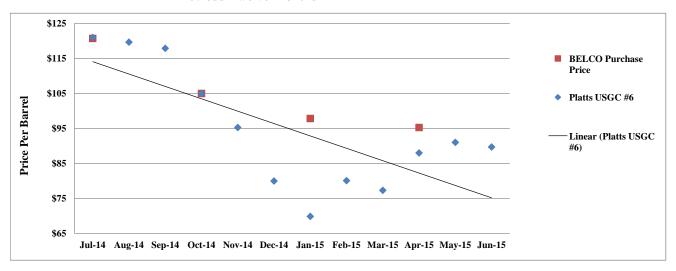


### **Heavy Fuel Oil Purchased**

#### Versus

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

#### **Previous Twelve Months**

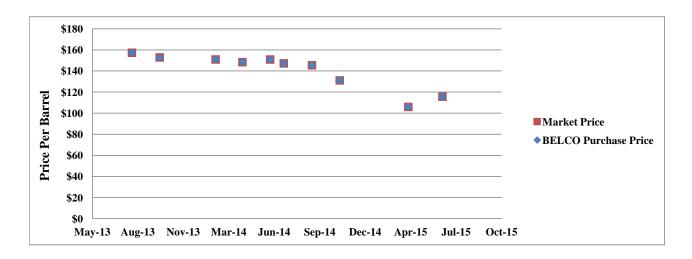


N.B. In accordance with the Fuel Supply Agreement for Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel Oil between BELCO and Shell Western Trading Limited, the contracted price is stipulated as the 30-day average for Platt's U.S. Gulf Coast Waterborne mid-No. 6, 3% Sulfur Heavy Fuel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

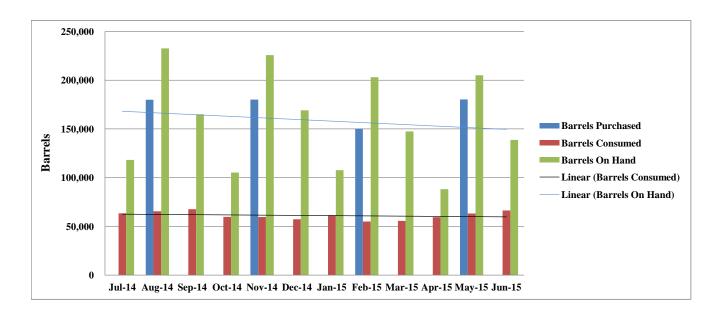


# **Heavy Fuel Oil Inventory Activity**

Date Barrels Purchased		<b>Barrels Consumed</b>	<b>Barrels On Hand</b>	
July, 2014		63,298.00	118,172.43	
August, 2014	180,041.29	65,499.00	232,714.72	
<b>U</b> ,	160,041.29	,	,	
September, 2014	-	67,611.00	165,103.72	
October, 2014	-	59,804.00	105,299.72	
November, 2014	180,159.88	59,619.00	225,840.60	
December, 2014	-	57,212.00	169,174.72	
January, 2015	-	61,419.00	107,755.72	
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	



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



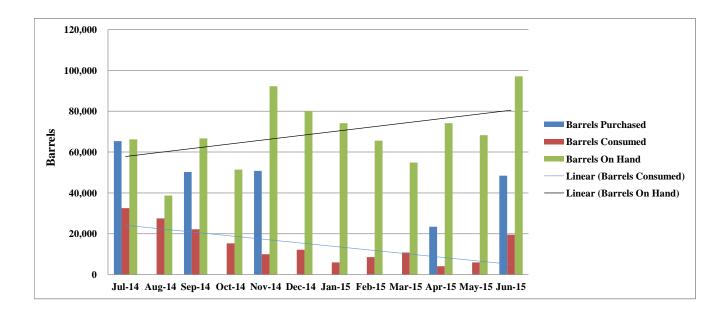


# **Diesel Fuel Oil Inventory Activity**

Date	<b>Barrels Purchased</b>	<b>Barrels Consumed</b>	<b>Barrels On Hand</b>
July, 2014	65,377.73	32,538.00	66,219.12
August, 2014	-	27,530.00	38,689.12
September, 2014	50,189.00	22,176.00	66,702.12
October, 2014	-	15,290.00	51,412.12
November, 2014	50,764.86	9,913.00	92,263.98
December, 2014	-	12,177.00	80,088.52
January, 2015	-	5,959.00	74,129.52
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



## **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**

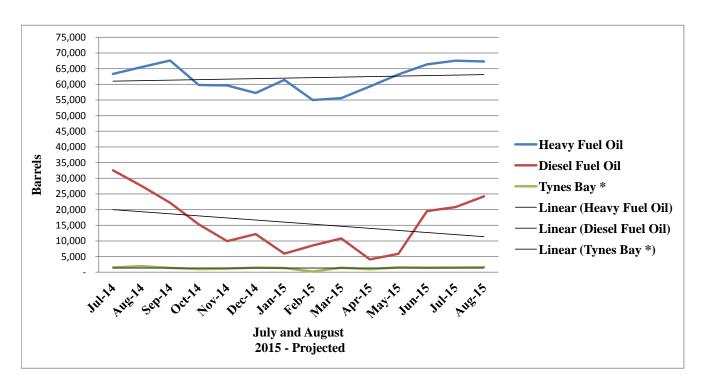
In accordance with Part 4, Paragraph 26A Clause (1)(c)(i) of the Bermuda Energy Act 2009, certain information provided to the Bermuda Energy Commission has been designated as confidential on the grounds that it could result in material financial loss or gain to any person and therefore has been excluded.



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

#### **Previous Twelve Months**

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



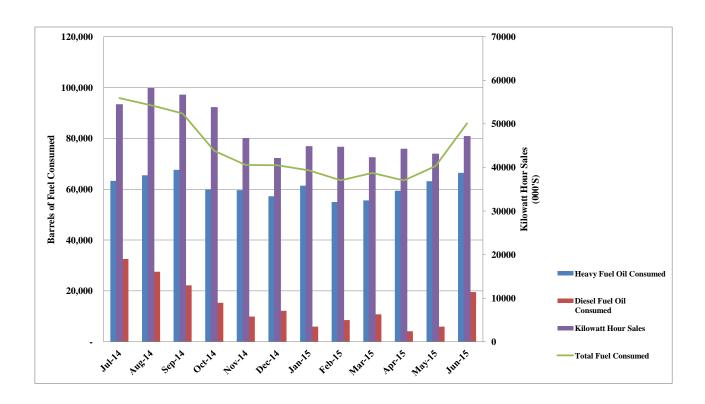
<sup>\*</sup> BELCO calculates an efficiency rating for its generators on a monthly basis. This is calculated as the estimated kilowatt hours that will be generated that month divided by the estimated number of barrels of fuel that will be used. Therefore, the equivalent barrels of fuel is calculated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

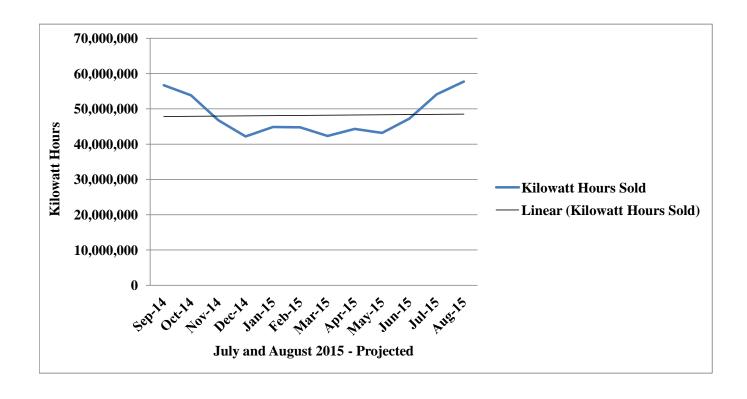




## **Kilowatt Hour Sales**

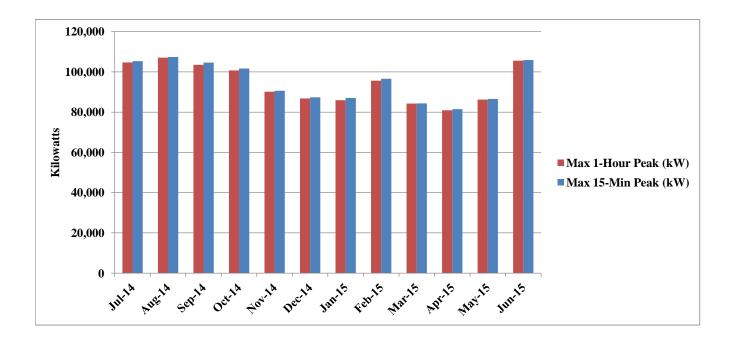
### **Previous Twelve Months**

## **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 30th June 2015

		\$	\$	\$
Opening Balance at 1 June 2015				(1,248,607)
Fuel Consumption				
Diesel - 19,525 bbls @ \$131.0621		2,558,988		
Less: Fuel Consumption @ \$30/bbl		(585,750)	1,973,238	
Heavy - 11,455.78 @ \$98.0597		1,123,350		
Heavy - 30,000 @ \$114.5634		3,436,902		
Heavy - 24,943.22 @ \$89.0544		2,221,303		
Less: Fuel Consumption @ \$30/bbl		(1,991,970)	4,789,585	
Tynes Bay - 1,086,388 kWh @ \$0.185		200,982		
Less: (1,086,388 kWh /702.8) 1,545.8 bbls @ \$30/bbl		(46,374)	154,608	
	•	. , , ,	6,917,431	
Deduct: Fuel Adjustment Revenue (after discount)				
	\$5,384,797	@ .95315	5,132,519	
June over / (under) recovery				(1,784,912)
Interest Expense				(99,424)
Cost of Power Purchased from Commercial Providers				0
Ending Balance at 30 June 2015			<u>-</u>	(3,132,943)



# **Fuel Consumption Projections**

# **Forward Three Months**

Shipment			Amount	Total	FADJ (less
Date	Type	Hedged	(Barrels)	Cost/Barrel	\$30/bbl)
May 15	Heavy	Yes	18,544.22	98.0597	68.0597
May 15	Heavy	Yes	30,000.00	87.0740	57.074
May 15	Heavy	Yes	30,000.00	91.3772	61.3772
May 15	Heavy	No	60,228.50	90.2573	60.2573
July 15	Heavy	Yes	30,000.00	114.4605	84.4605
July 15	Heavy	Yes	30,000.00	78.7193	48.7193
July 15	Heavy	Yes	30,000.00	87.4268	57.4268
November 14	Diesel	No	25,286.52	131.0621	101.0621
April 15	Diesel	No	23,421.39	105.9076	75.9076
June 15	Diesel	No	48,413.33	115.6252	85.6252



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

## At Existing Fuel Adjustment Rate

## **Three Months Forward**

Over (Under) Recovery account as at end of previous month							\$ (3,132,943)
				·			
Projected kWh							
Sales - July							
2015	54,122,524		At 13.0 FADJ	@ 95315 (discount)	\$	6,706,295	
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel		Total Cost	
	Diesel	November 2014	20,830	. ,		(2,105,123.54)	
	Heavy	May 2015	18,544	\$ (68.06)	\$	(1,262,114.05)	
	Heavy	May 2015	30,000		\$	(1,712,220.00)	
	Heavy	May 2015	19,008	. ,	-	(1,166,644.31)	
	Tynes Bay	N/A	1,562	\$ (98.67)	\$	(154,093.24)	
	<b>Total Barrels</b>		89,944				306,100
		Projected	d Over (Under) R	ecovery account as a	t en	d of this month:	(2,826,843)
Projected kWh							
Sales - August							
2015	57,721,769		At 13.0 FADJ	@ 95315 (discount)	\$	7,152,276	
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel		Total Cost	
	Diesel	November 2014	4,457		_	(450,385.27)	
	Diesel	April 2015	19,771	\$ (75.91)		(1,500,805.60)	
	Heavy	May 2015	10,992			(674,671.69)	
	Heavy	May 2015	56,304	. ,	_	(3,392,713.76)	
	Tynes Bay	N/A	1,660	\$ (91.03)	\$	(151,135.43)	
	<b>Total Barrels</b>		93,184				982,564
		Projected	d Over (Under) R	ecovery account as a	t en	d of this month:	(1,844,279)
Projected kWh							
Sales -							
September 2015	54,736,249		At 13.0 FADJ	@ 95315 (discount)	\$	6,782,341	
Projected fuel							
consumed		Shipment Date	Barrels	FADJ Cost/Barrel		Total Cost	
	Diesel	April 2015	3,650	. ,	_	(277,055.91)	
	Diesel	June 2015	13,520	. ,		(1,157,660.41)	
	Heavy	May 2015	3,925			(236,493.03)	
	Heavy	July 2015	30,000	. ,		(2,533,815.00)	
	Heavy	July 2015	30,000			(1,461,579.00)	
	Heavy	July 2015	1,370			(78,690.80)	
	Tynes Bay	N/A	3,368	\$ (100.52)	\$	(338,531.68)	
	Total Barrels		85,833				698,515
		Projected	d Over (Under) R	ecovery account as a	t en	d of this month:	(1,145,764)



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

## At Requested Fuel Adjustment Rate

## **Three Months Forward**

Over (Under) Recovery account as at end of previous month: \$							
Projected kWh							
Sales - July							
2015	54,122,524		At 13.0 FADJ	@ 95315 (discount)	\$ 6,706,295		
Projected fuel							
consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost		
	Diesel	November 2014	20,830	, ,	\$ (2,105,123.54)		
	Heavy	May 2015	18,544		\$ (1,262,114.05)		
	Heavy	May 2015	30,000				
	Heavy	May 2015	19,008		\$ (1,166,644.31)		
	Tynes Bay	N/A	1,562	\$ (98.67)	\$ (154,093.24)		
	Total Barrels		89,944			306,100	
Projected Over (Under) Recovery account as at end of this month:					(2,826,843)		
Projected kWh							
Sales - August							
2015	57,721,769		At 13.0 FADJ	@ 95315 (discount)	\$ 7,152,276		
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel	Total Cost		
	Diesel	November 2014	4,457	\$ (101.06)	, . ,		
	Diesel	April 2015	19,771	\$ (75.91)	\$ (1,500,805.60)		
	Heavy	May 2015	10,992				
	Heavy	May 2015	56,304		\$ (3,392,713.76)		
	Tynes Bay	N/A	1,660	\$ (91.03)	\$ (151,135.43)		
	Total Barrels		93,184			982,564	
		Projec	cted Over (Under)	Recovery account as	s at end of this month:	(1,844,279)	
Projected kWh							
Sales -							
September 2015	54,736,249		At 13.0 FADJ	@ 95315 (discount)	\$ 6,782,341		
Projected fuel							
consumed		Shipment Date	Barrels	FADJ Cost/Barrel	Total Cost		
	Diesel	April 2015	3,650	\$ (75.91)	\$ (277,055.91)		
	Diesel	June 2015	13,520		\$ (1,157,660.41)		
	Heavy	May 2015	3,925		\$ (236,493.03)		
	Heavy	July 2015	30,000		\$ (2,533,815.00)		
	Heavy	July 2015	30,000		\$ (1,461,579.00)		
	Heavy	July 2015	1,370		\$ (78,690.80)		
	Tynes Bay	N/A	3,368	\$ (100.52)	\$ (338,531.68)		
	Total Barrels		85,833			698,515	
		Projec	cted Over (Under)	Recovery account as	s at end of this month:	(1,145,764)	



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

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

### **Three Months Forward**

Projected Over (Under) Recovery account as at end of July:						\$ (2,826,843)	
Projected kWh							
Sales - August							
	57,721,769		At 18.08 FADJ	@ 95315 (discount)	\$	9,947,165	
Projected fuel							
consumed		<b>Shipment Date</b>	Barrels	FADJ Cost/Barrel		Total Cost	
	Diesel	November 2014	4,457		_	(584,080.87)	
	Diesel	April 2015	19,771	\$ (105.91)		(2,093,950.00)	
	Heavy	May 2015	10,992	. ,		(1,004,438.29)	
	Heavy	May 2015	56,304	( )		(5,081,827.16)	
	Tynes Bay	N/A	1,660	\$ (121.03)	\$	(200,945.52)	
	Total Barrels		93,184				981,923
		Proje	cted Over (Under	Recovery account as	s at	end of this month:	(1,844,920)
Projected kWh							
Sales -							
September 2015	54,736,249		At 17.94 FADJ	@ 95315 (discount)	\$	9,359,631	
Projected fuel							
consumed		Shipment Date	Barrels	FADJ Cost/Barrel		Total Cost	
	Diesel	April 2015	3,650	. ,		(386,553.21)	
	Diesel	June 2015	13,520		_	(1,563,263.11)	
	Heavy	May 2015	3,925		_	(354,234.63)	
	Heavy	July 2015	30,000		_	(3,433,815.00)	
	Heavy	July 2015	30,000	. ,		(2,361,579.00)	
	Heavy	July 2015	1,370	. ,	_	(119,799.20)	
	Tynes Bay	N/A	3,368	\$ (130.52)	\$	(439,568.33)	
	Total Barrels		85,833				700,818
	Projected Over (Under) Recovery account as at end of this month:						



## **Generators Available for Service**

## **June 2015**

Generator	Available	Type of fuel Consumed	Barrels of Fuel Consumed	Efficiency Rating*
E1	yes	HFO	8,995	654
E2	yes	HFO	10,994	649
E3	yes	HFO	4,800	689
E4	yes	HFO	5,056	692
E5	yes	HFO	9,688	679
E6	yes	HFO	6,596	693
E7	yes	HFO	11,130	715
E8	yes	HFO	11,700	717
D3	yes	LFO	3,425	656
D8	yes	LFO	2,857	607
D10	yes	LFO	3,744	583
D14	yes	LFO	1,005	582
GT4	yes	LFO	2,705	433
GT5	yes	LFO	1,761	505
GT6	yes	LFO	1,120	461
GT7	yes	LFO	1,358	394
GT8	yes	LFO	812	470

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



### **Generators Out of Service**

#### June 2015

Unit	Category	Type Forced Outage Details		Outage Date	Return Date
E8	Auxilary Systems	MO	Unit out to replace L/o regulator to T/C.	06/30/15	06/30/15
GT5	Electrical System	FO (Postpone)	Unit out to change out Generation Breaker	06/30/15	06/30/15
GT5	Electrical System	FO (Immediate)	GT5 FO due to loss of load and quick reloading. Main breaker inspected by G.O.	06/25/15	06/25/15
E6	Auxilary Systems	FO (Immediate)	E6 icw leak	06/25/15	06/25/15
E4	Main Engine	MO	Unit out to re align pedestal bearing.	06/24/15	06/25/15
E3	Instrumentation & Control System	FO (Immediate)	Unit was forced out due to bias differential relay operating.	06/24/15	06/25/15
GT5	Auxilary Systems	FO (Immediate)	Unit forced out due to lube oil fan tripping	06/24/15	06/24/15
GT6	Main Engine	MO	Bedplate has too much leaked fuel oil to safely run the engine.	06/23/15	06/23/15
GT4	Electrical System	MO	Unit out to repair breaker position feedback switch.	06/23/15	06/24/15
GT4	Electrical System	FO (Start-Up Failure)	Breaker failed to close	06/22/15	06/22/15
D3	Instrumentation & Control System	FO (Immediate)	D3 tripped off load. Ops Center control panel still showing engine as running. Master trip activated		06/23/15
GT6	Other Systems	FO (Immediate)	Unit FO due to fuel starvation caused by Hago Plant problems		06/20/15
GT8	Other Systems	FO (Immediate)	Unit FO due to Fuel starvation caused by problems in Hago plant	06/20/15	06/20/15
D14	Main Engine	FO (Immediate)	High lube oil temperatures caused by incorrect lube oil 3 way valve installation at service.		06/19/15
E7	Main Engine	FO (Immediate)	LHS lube oil engine driven pump suction bellows has collapsed, causing low pressures.	06/17/15	06/18/15
E1	Main Engine	FO (Immediate)	Fuel pump cyl #7 not firing, pump not lifted mmd called at 0415	06/12/15	06/12/15
E5	Main Engine	МО	Unit out to change water washing lance cap spring and inspect 7B cam lobe.	06/12/15	06/12/15
GT7	Auxilary Systems	MO	Fuel oil filter change	06/09/15	06/09/15
GT6	Auxilary Systems	MO	GT6 fuel filter changed	06/09/15	06/09/15
E8	Auxilary Systems	FO (Immediate)	E8 spiked HTCW pressure.	06/08/15	06/09/15
D3	Electrical System	FO (Immediate)	D3 trip at switchgear at same time as E8. A frequency alarm and a sync alarm came up.		06/09/15
E7	Auxilary Systems	FO (Immediate)	Engine to M.O. for I.C.W. bellows change	06/08/15	06/09/15
E3	Main Engine	FO (Postpone)	Pedestal bearing temperatures continued to rise. In half an hour from 75 - 71 to 76.7 - 73.4	06/07/15	06/12/15
E3	Main Engine	MO	Pedestal Bearing inspection	06/04/15	06/07/15
E1	Main Engine	FO (Immediate)	Cylinder #4 exhaust gas valve hydraulic hose failure	06/04/15	06/05/15
E3	Main Engine	MO	Pedestal Bearing RTD s to be checked	06/03/15	06/03/15



# **Scheduled Generator Maintenance**

# August 2015

Generator	Maintenance Type	Outage Date	Return Date
E5	PM 12K	08/01/15	08/25/15



## 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 June 30, 2016 has a maximum limit of \$41 million.