

Oversight Committee

January 24, 2018

Update of PSEG Energy Resources & Trade (ER&T) and PSEG - Middle Office Operations

Agenda

- **Introductions**
- **Review of Middle Office and Performance Metrics**
- **After One Month of Winter 2017 / 18**




PSEG - Middle Office Update:

PSM / FM Operational Performance Metrics

- Middle Office tracks the operating performance of ER&T under the Power Supply Management (PSM) and Fuel Management (FM) contracts
- The overall PSM metric has 9 individual metric components. The overall FM metric has 6 individual metric components.
- Each individual metric has a performance benchmark, as well as an offset trigger at or above the benchmark and a penalty trigger at or below the benchmark. The triggers define a band of reasonableness around benchmarks, in which performance is considered within the tolerance band (metrics shown in white on following charts).
- Performance above the offset trigger (green metrics on charts) on one individual metric can partially offset performance below the penalty trigger (red metrics on charts) on another individual metric.
- ER&T is subject to an annual financial penalty if performance on the PSM metrics, and/or the FM metrics, nets out to a penalty.
- No possibility of financial bonus.
- ER&T's overall performance on PSM and FM metrics was above target performance in 2015, 2016 and 2017.

PSM Operational Performance Metrics

PSM 1: Cable Effectiveness	Measures how much of the potential Day Ahead cost saving is captured when utilizing the Neptune and Cross Sound cables.
PSM 2: Critical Report Timeliness	Evaluates the timeliness of uploading critical reports specified by LIPA to the SharePoint website.
PSM 3: Generation Bid Accuracy	All generation bids submitted to the ISO by the Power Supply Manager are independently calculated and compared for any variances.
PSM 4: Adherence to Bidding Strategy	Tracks that all bids for Load, Bear Swamp, Neptune and CSC are submitted to the ISO appropriately.
PSM 5: Contingent Bid Responsiveness	Tracks the response time to contingent events (generator, cable, fuel, supply disruptions) and samples them for accuracy.
PSM 6: Annual Significant Loss	The intent of this metric is to incent the Power Supply Manager to minimize errors in the performance of its duties not covered by other performance metrics that have an adverse impact on LIPA's financial results.
PSM 7: Load Forecasting	Evaluates the performance of the Power Supply Manager's load forecast.
PSM 8: Capacity Market	The objective is for the Power Supply Manager to purchase capacity to meet LIPA's Statewide Capacity Obligation at a cost lower than the volume-weighted average auction price.
PSM 9: Quarterly Satisfaction Report	Rates LIPA's overall satisfaction with the Power Supply Manager's services based on a survey of LIPA management.

PSM Performance Metrics	L/H	2015		2016		2017 ⁽¹⁾	
		Metric	Benchmark	Metric	Benchmark	Metric	Benchmark
PSM 1: Cable Effectiveness (CSC/Neptune)⁽²⁾	H	62.5% / 64.3%	45.2% / 65.5%	85.5%	70.6%	79.0%	72.9%
PSM 2: Critical Report Timeliness	H	98.5%	95.0%	99.5%	95.0%	99.6%	95.0%
PSM 3: Generation Bid Accuracy	H	99.8%	98.0%	99.9%	98.0%	100.0%	98.0%
PSM 4: Adherence to Bidding Strategy	H	99.5%	98.0%	99.7%	98.0%	99.9%	98.0%
PSM 5: Contingent Bid Responsiveness	H	99.1%	95.0%	99.3%	95.0%	99.4%	95.0%
PSM 6: Annual Significant Loss⁽³⁾	L	0	0	0	0	0	0
PSM 7: Load Forecasting	L	3.0%	5.0%	3.3%	5.0%	3.5%	5.0%
PSM 8: Capacity Market (\$/kW-month)⁽⁴⁾	L	(\$0.03)	\$0.00	\$0.03	\$0.00	\$0.03	\$0.00
PSM 9: Quarterly Satisfaction Report	H	4.4	3.0	4.1	3.0	4.3	3.0
Overall PSM Metric							

1) Preliminary results, pending inclusion of latest Quarterly Satisfaction Report and final review

2) PSM 1: 2017 performance was within the tolerance band (the offset trigger was 81.9%)

3) PSM 6: Cannot gain offset points. Zero is best rating. Not possible to be green.

4) PSM 8: 2017 performance was within the tolerance band (the penalty trigger was \$0.15/kW-month)

Performance above offset trigger

Performance within tolerance band

Performance below penalty trigger

FM Operational Performance Metrics

FM 1: Gas Price Forecasting	Measures the Fuel Manager's ability to accurately estimate the Gas Daily Settle price of natural gas.
FM 2: Gas Purchase Price	Measures the Fuel Manager's ability to secure a favorable price relative to daily market activity.
FM 3: Gas Balancing Charge	Measures the Fuel Manager's ability to minimize balancing penalties associated with natural gas nominations while optimizing the use of cashout gas when it is economic to do so based upon market conditions.
FM 4: Quarterly Satisfaction Report	Rates LIPA's overall satisfaction with the Fuel Manager's services based on a survey of LIPA management.
FM 5: Oil Inventory Monitoring	Monitors the fuel oil inventories to ensure the appropriate oil inventory levels are maintained.
FM 6: Invoice Processing	Measures the Fuel Manager's ability to validate and process invoice payments on behalf of LIPA.

FM Performance Metrics	L/H	2015		2016		2017 ⁽¹⁾	
		Metric	Benchmark	Metric	Benchmark	Metric	Benchmark
FM 1: Gas Price Forecasting ⁽²⁾	L	9.7%	15.7%	10.5%	14.8%	9.0%	11.9%
FM 2: Gas Purchase Price	L	-0.1%	2.0%	-0.1%	2.0%	-0.1%	1.7%
FM 3: Gas Balancing Charge	L	0.0%	0.25%	0.0%	0.25%	0.0%	0.25%
FM 4: Quarterly Satisfaction Report	H	4.5	3.0	4.1	3.0	4.2	3.0
FM 5: Oil Inventory Monitoring	H	100.0%	98.0%	100.0%	98.0%	100.0%	98.0%
FM 6: Invoice Processing	H	100.0%	98.0%	100.0%	98.0%	99.8%	98.0%

Overall FM Metric			
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1) Preliminary results, pending inclusion of latest Quarterly Satisfaction Report and final review

2) FM 1: 2017 performance was within the tolerance band (the offset trigger was 8.9%)

Performance above offset trigger

Performance within tolerance band

Performance below penalty trigger

We Have Had One Month Of Winter 2017/18 So Far

- Weather forecasters for this winter predicted:
 - Normal, warmer than normal, colder than last year
- After one month of winter, already colder than last two years
- Current forecasts are cold reappears in February
- On track to be colder / larger consumption than 2014/15

	Winter 2014/15	Winter 2015/16	Winter 2016/17	Winter 2017/18 *
Temperature (vs. 30 year avg)	~2 degrees below	~6 degrees above	~2 degrees above	~2 degrees below-since 11/1 ~8 degrees below - 12/27-1/17
# Operational Flow Orders (OFO)** (Daily/Ratable)	38/8	8/0	10/0	24/15
#6 Oil Consumption - Steam Units (bbls)	900,000	153,000	78,000	740,000
#2 Oil Consumption - CTs (gals) ***	8,350,000	2,300,000	1,100,000	5,300,000
~ number of equivalent trucks	675	175	80	450

Winter period represents Nov-March

* Information through January 17, 2018

** Operational Flow Orders (OFO's) are declared by National Grid Gas LDC during times of expected stress to the Long Island gas system. There are two types of OFO's; Daily OFO's require daily purchases to be within a declared tolerance of daily consumption while the more restrictive Ratable OFO requires the same gas volume to be used every hour of the day, consistent with deliveries. In the case of both OFO's, significant penalties are assessed for non-compliance.

*** 42 gallons per barrel; ~12,000 gallons per truck