

Report to the LIPA Finance and Audit Committee

January 23, 2019

ER&T Performance Metrics / Power Supply Hedge Update

Agenda

- **Introductions**
- **Review of ER&T Operational Performance Metrics**
- **Power Supply Hedge Update**

LIPA Finance and Audit Committee

Review of ER&T Operational Performance Metrics
by
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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, 2017 and 2018.

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	2016		2017		2018 ⁽¹⁾	
		Metric	Benchmark	Metric	Benchmark	Metric	Benchmark
PSM 1: Cable Effectiveness (CSC/Neptune) ⁽²⁾	H	85.5%	70.6%	79.0%	72.9%	75.8%	72.3%
PSM 2: Critical Report Timeliness	H	99.5%	95.0%	99.6%	95.0%	99.7%	95.0%
PSM 3: Generation Bid Accuracy	H	99.9%	98.0%	100.0%	98.0%	100.0%	98.0%
PSM 4: Adherence to Bidding Strategy	H	99.7%	98.0%	99.9%	98.0%	100.0%	98.0%
PSM 5: Contingent Bid Responsiveness	H	99.3%	95.0%	99.4%	95.0%	98.6%	95.0%
PSM 6: Annual Significant Loss ⁽³⁾	L	0	0	0	0	0	0
PSM 7: Load Forecasting	L	3.3%	5.0%	3.5%	5.0%	3.4%	5.0%
PSM 8: Capacity Market (\$/kW-month) ⁽⁴⁾	L	\$0.03	\$0.00	\$0.03	\$0.00	(\$0.07)	\$0.00
PSM 9: Quarterly Satisfaction Report	H	4.1	3.0	4.3	3.0	4.1	3.0
Overall PSM Metric							

1) Preliminary results pending final review.

2) PSM 1: 2018 performance was within the tolerance band (the offset trigger was 81.2%)

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

4) PSM 8: 2018 performance was within the tolerance band (the offset trigger was -\$0.075/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	2016		2017		2018 ⁽¹⁾	
		Metric	Benchmark	Metric	Benchmark	Metric	Benchmark
FM 1: Gas Price Forecasting	L	10.5%	14.8%	9.0%	11.9%	7.2%	10.2%
FM 2: Gas Purchase Price	L	-0.1%	2.0%	-0.1%	1.7%	-0.1%	1.6%
FM 3: Gas Balancing Charge	L	0.0%	0.25%	0.0%	0.25%	0.0%	0.25%
FM 4: Quarterly Satisfaction Report	H	4.1	3.0	4.2	3.0	4.1	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%	99.8%	98.0%	99.8%	98.0%

Overall FM Metric			
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1) Preliminary results pending final review.

Performance above offset trigger

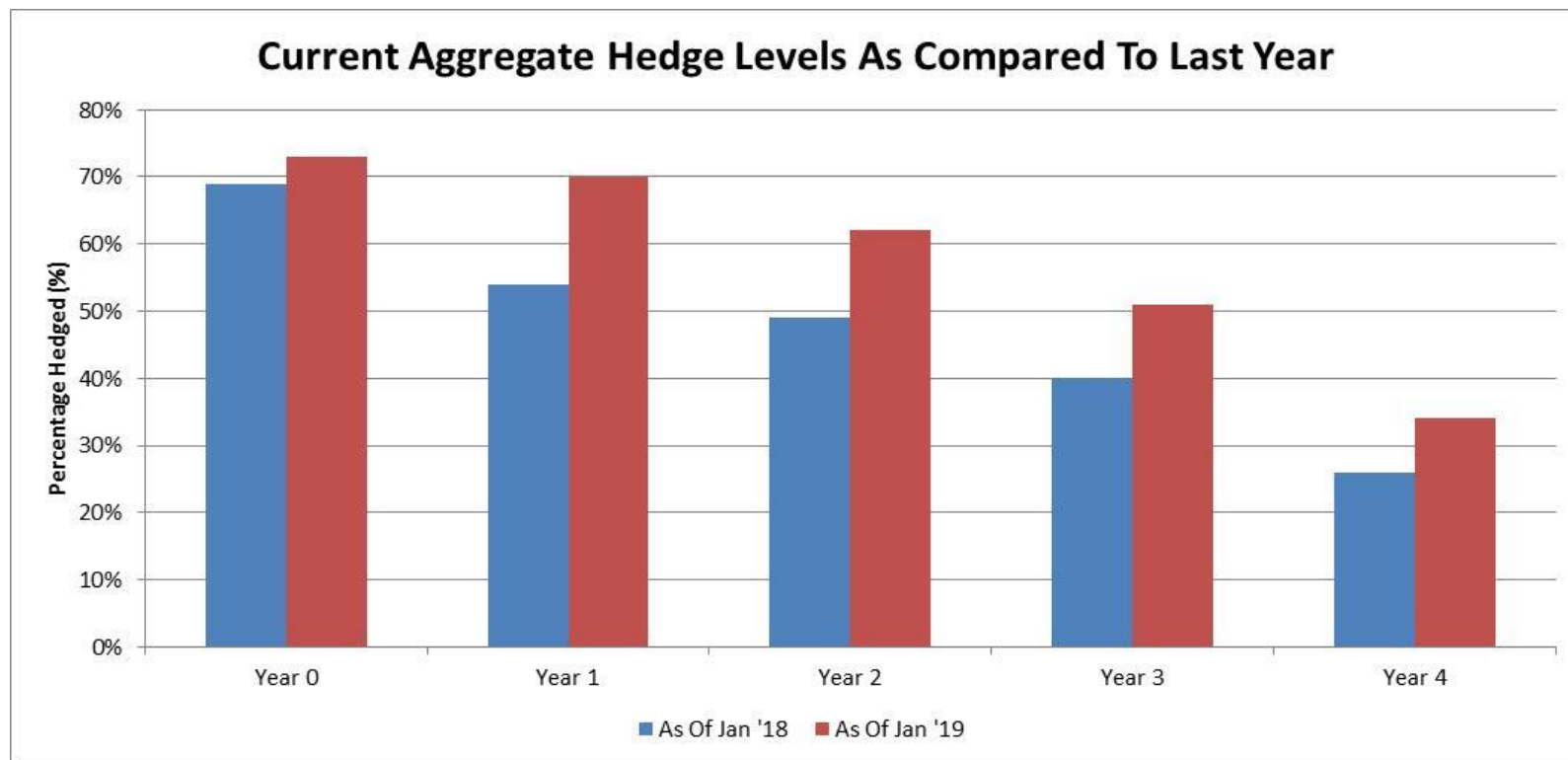
Performance within tolerance band

Performance below penalty trigger

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Power Supply Hedge Update
by
Steven Oster, PSEG ER&T

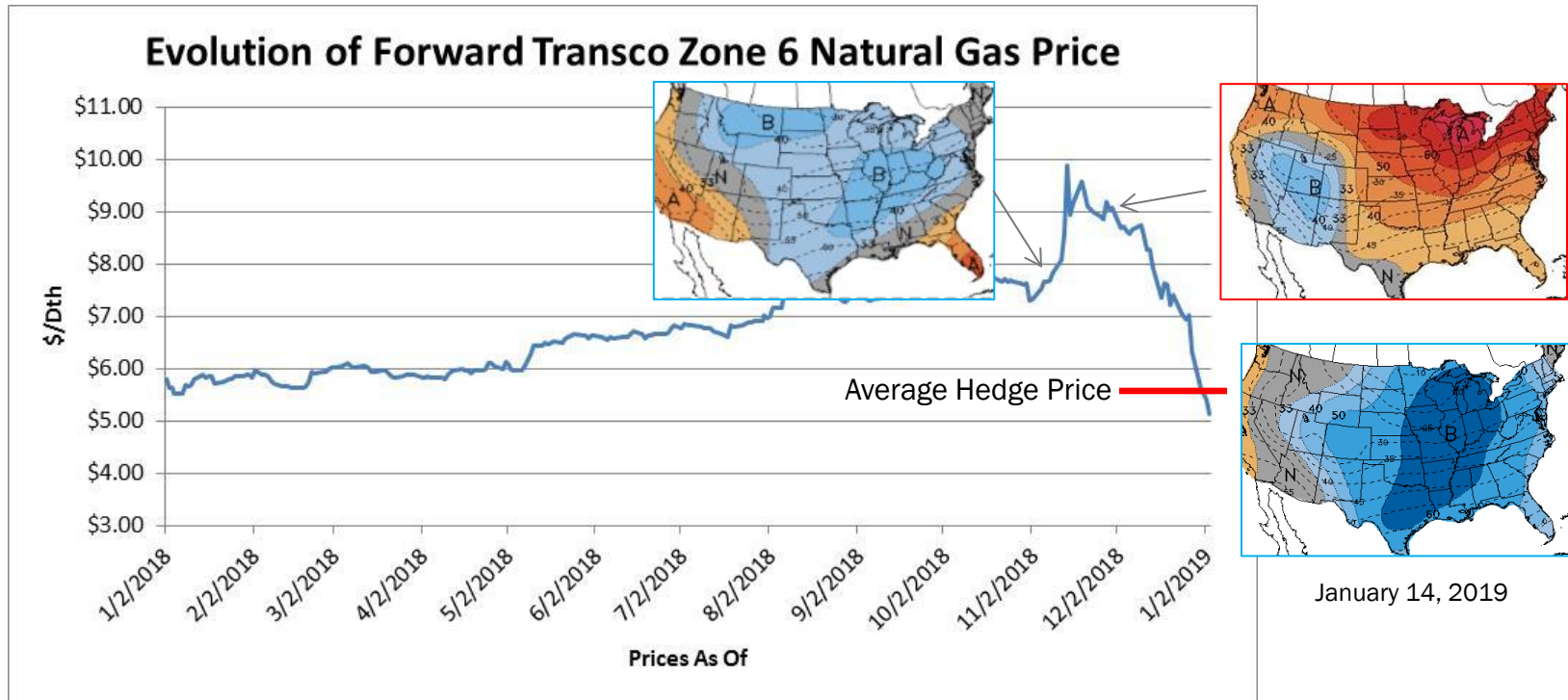
Comparison of Current Hedge Levels To Last Year



- Consultant's survey indicates utilities hedging more due to lower market prices
- The ERMC increased LIPA's maximum hedge percentage from 80-85% this past June
- LIPA has taken advantage of these lower prices – average hedge levels ↑ 10%
- Current hedge level is compliant with Board Policy for Power Supply Hedging Program

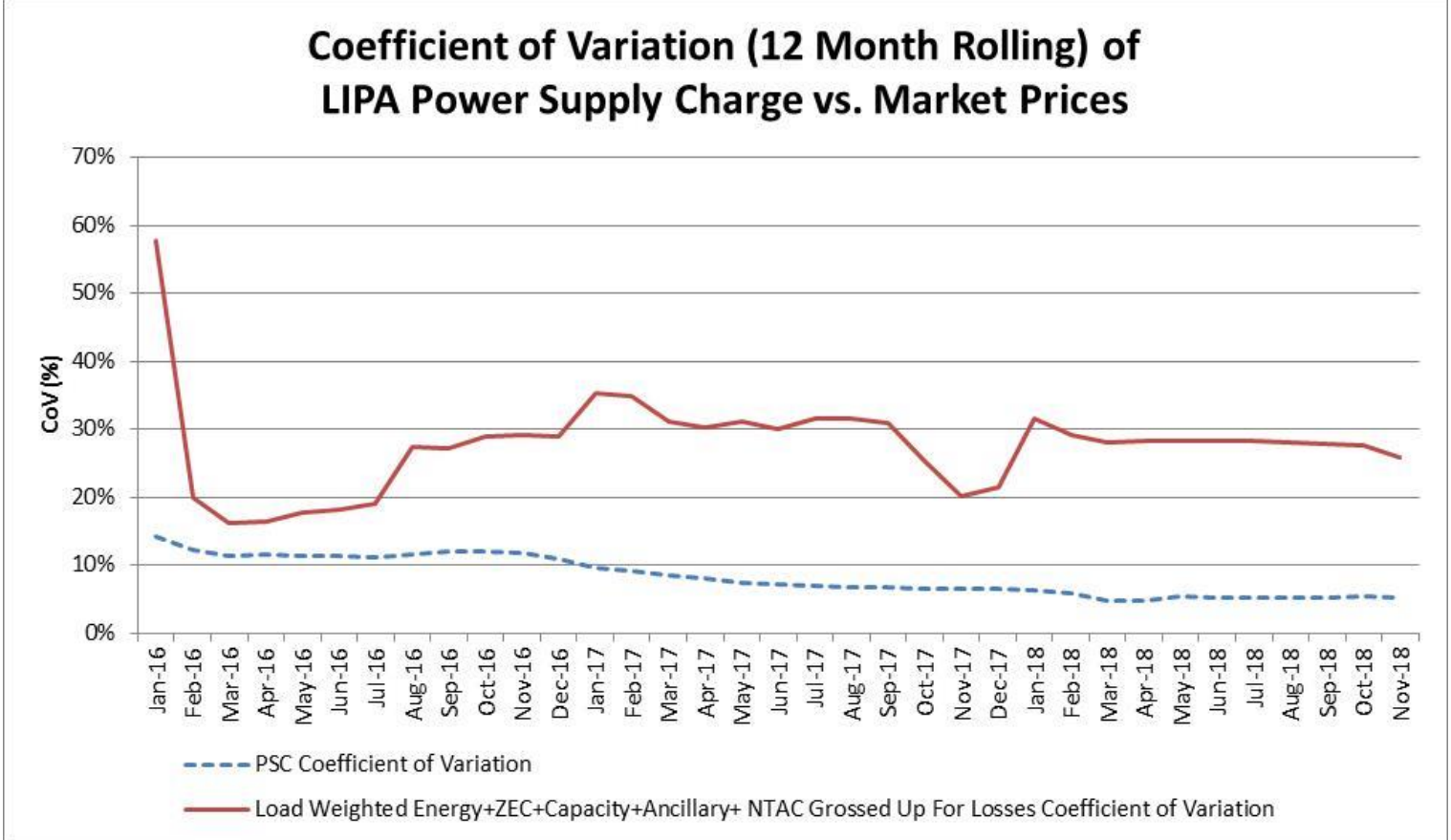
Comparison of hedge levels as of January 2018 vs. January 2019. For "As of Jan '18", Year 0-4 represents 2018 – 2022. For "As of Jan '19", Year 0-4 represents 2019 – 2023.

Winter 2019 Natural Gas Price Movement



- Natural gas prices are the most volatile in the winter due to heating requirements
- Natural gas is also used as an input fuel for many power plants, including LIPA's contracted resources
- Natural gas prices increase with the expectation / reality of a cold winter
- LIPA uses its multi-year hedge program and enters into hedges to reduce volatility (time triggers) as well as seeks to find low prices (value triggers)

Hedge Results – Customer Price Volatility Continues To Decline



Our hedging activity has led to a continuing decline in customer’s price volatility with current volatility levels substantially below wholesale spot market results.

PSC pre 1/1/2017 adjusted up by 2.5 cents/kwh associated with transfer of capacity costs