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Metropolitan Transportation Authority

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TO: BOARD OF DIRECTORS

THROUGH: PHILLIP A. WASHINGTON *Paul*
CHIEF EXECUTIVE OFFICER

FROM: NALINI AHUJA *Nalini*
CHIEF FINANCIAL OFFICER

SUBJECT: NATURAL GAS HEDGING PROGRAM

ISSUE

The Natural Gas Hedging Program (the "Hedging Program") requires that we report compliance with the Hedging Program Guidelines and program performance to the Board on a quarterly basis. This report is provided for the quarter and fiscal year ended June 30, 2016.

DISCUSSION

The purpose of this report is to present the status of compliance and performance for the hedged portion of our compressed natural gas ("CNG") budget. Operations related variances are presented in order to provide an overall perspective for CNG costs.

The objective of the Hedging Program is to improve budget certainty for fuel costs and to help determine the CNG budget for the upcoming year by establishing a portion of the cost in advance or otherwise reducing the effects of price volatility on the budget. The Hedging Program allows us to use commodity swaps, commodity options and cost stabilization reserves.

During fiscal 2016, we hedged 53% of the budgeted volume using financial swaps, based on conservative assumptions about the potential amount of payments under the swaps and estimated costs for natural gas. Swaps effectively "lock-in" our cost for a portion of the budgeted volume of natural gas that is the same as the volume of the swap. When actual prices are higher than the swap price, we pay more to the Gas Company and receive a payment from the swap to offset the higher cost of natural gas. When actual prices are lower than the swap price, we pay less to the Gas Company and make a payment to the swap that offsets the lower actual gas cost. In the fourth quarter of fiscal 2016, we had three swaps in place for fiscal 2016 that expired as of June 30, 2016. Metro has not entered into any swaps for fiscal 2017 at this time.

Compliance

As of the date of this report the Hedging Program is in compliance with all the specified limitations and requirements. The individual compliance items are listed on Attachment A.

Performance

For fiscal 2016, the hedging program took a conservative approach based on expectations that natural gas prices would increase during the year and only hedged 53% of the total budgeted volume.

For the quarter, CNG costs were approximately \$711,000 over budget, including the \$1.0 million cost of the hedge, and the actual usage was lower than budgeted by approximately 359,000 therms. Including the hedge, the actual average gas price of \$0.574 exceeded the per therm budget price of \$0.496. See Attachment B. When the hedges were placed, the total cost of CNG net of the hedge was expected to be lower than actual cost. Other charges from SoCal Gas Company, unrelated to the wholesale cost of natural gas (pipeline transportation, etc.) increased unexpectedly and have remained above original expectations and historical norms.

For all of fiscal 2016, CNG costs were approximately \$1.6 million over budget, including the \$2.8 million cost of the hedge and the actual average gas price of \$0.548 was higher than the per therm budget price of \$0.496. The actual usage was lower than budgeted by approximately 1,500,000 therms. See Attachment C.

While the market continues to be very well supplied, investment in sustaining supply at current levels has decreased, as shown in the decline in the number of drilling rigs actively developing new gas wells over the last five years, decreasing from 936 in October 2011 to 86 currently. On April 1st at the end of the 2015-2016 heating season, natural gas inventories were 68.5% larger than the previous year levels and 54.4% larger than the five year average. Inventories have since decreased with respect to these two historical averages, to 13.4% larger than the one year previous levels and 16.4% larger than the five year average as of July 29, 2016.

While inventories are still relatively plentiful, which continues to keep prices low from a longer-term perspective, recent hot weather has increased natural gas demand and prices have increased from their recent lows. With lower production anticipated, the risk of rising prices is increasing. The forward pricing curve, which is usually positively sloped (forward prices higher than spot prices), has become negatively sloped so prices for the next two years are slightly higher than those indicated for the following two years (mid-2018 through mid-2020). This indicates that more supply is needed in the short to medium-term in order to meet expected demand. Generally, conditions have changed from very oversupplied and too much natural gas production to more normal sized inventories and expectations of production levels more in line with consumption.

The current market environment presents the potential to hedge FY 2017 at a relatively low assumed index gas cost of around \$0.3131 plus an additional expected cost of \$0.2329 in SoCal Gas Company charges, for a total expected cost of about \$0.5460 per therm for September 2016 through June 2017. The estimated SoCal Gas Company non-gas charge of \$0.2329 is a monthly average of these charges over the past year. As of March 2016, this charge had increased to \$0.30 per therm for the month. The actual final cost of gas for Metro may be \$0.05 to \$0.10 per therm higher than current expectations due to the uncertain and increasing nature of the SoCal Gas Company charges, which have nothing to do with the cost of the gas itself and cannot be hedged or controlled. While there are no hedges currently in place for FY2017, we continue to monitor changes in the market and can enter into hedges in less than a week if conditions warrant. If we enter into hedges we will continue the conservative practice of hedging less than the total budgeted volume for the year.

NEXT STEPS

- Enter into hedges for fiscal 2017 as warranted.

ATTACHMENTS

- A. Program Compliance
- B. Quarterly Summary of CNG Costs and Variances
- C. Fiscal Year Summary of CNG Costs and Variances

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Program Compliance

Maximum Trade Maturity – The guidelines specify that the maximum trade maturity for hedges is 30 months forward to coincide with the last business day of the fiscal year being hedged. – As of June 30, 2016 there are not hedges in place.

Hedge Ratio - Limited to 100% of planned volume –FY16 hedges were less than 100%, in compliance with the Hedging Program Guidelines.

Counterparty Credit Criteria – Requirements to post collateral are based on credit ratings of the counterparties and volume of hedges; in compliance.

- Aa3/AA- or better No collateral required
- A3/A- or better \$25 million limit without collateral
- Baa1/BBB+ \$15 million limit without collateral
- Baa2/BBB \$10 million limit without collateral
- Baa3/BBB- \$ 2.5 million limit without collateral

Re-Confirm Assumptions –Before entering into new hedges we will reconfirm assumptions with our hedging advisor.

Re-Confirmation of Terms - The amount of terms will be reconfirmed with Operations prior to entering into new hedges.

All information is as of June 30, 2016, unless otherwise specified.

ATTACHMENT B

**Quarterly Summary of CNG Costs and Variances
FY 2016 QTR 4**

Performance vs. Budget	<u>Price per Therm</u>	<u>Volume in Therms</u>	<u>Total Cost</u>
Budget	\$ 0.4960	11,796,579	\$ 5,851,103
Actual therms consumed	<u>\$ 0.4844</u>	<u>11,437,728</u>	<u>\$ 5,540,315</u>
Variance to Budget excluding hedge: Fav (Unfav)	\$ 0.0116	358,851	\$ 310,788
<u>Variance Analysis:</u>			
Actual volume vs budget variance fav (unfav)	\$ 0.4960	358,851	\$ 177,990
Actual price vs budget variance fav (unfav)	\$ 0.0116	11,437,728	<u>\$ 132,798</u>
Variance to Budget excluding hedge: Fav (Unfav)			\$ 310,788
Therms Hedged and net receipts (payments) for hedge (a)		6,300,000	\$ (1,021,860)
% of budgeted therms hedged		53.41%	
Total variance to budget including hedge			<u>\$ (711,072)</u>
Total cost of gas including hedge	\$ 0.574		\$ 6,562,175
Actual cost as a percentage of budget			112.2%

(a) Three hedges were in place for 4th quarter FY16.

ATTACHMENT C

**Annual Summary of CNG Costs and Variances
FY 2016**

Performance vs. Budget	Price per Therm	Volume in Therms	Total Cost
Budget	\$ 0.4960	47,186,315	\$ 23,404,412
Actual therms consumed	\$ 0.4863	45,671,849	\$ 22,209,226
Variance to Budget excluding hedge: Fav (Unfav)	\$ 0.0097	1,514,466	\$ 1,195,186
<u>Variance Analysis:</u>			
Actual volume vs budget variance fav (unfav)	\$ 0.4960	1,514,466	\$ 751,175
Actual price vs budget variance fav (unfav)	\$ 0.0097	45,671,849	\$ 444,011
Variance to Budget excluding hedge: Fav (Unfav)			\$ 1,195,186
Therms Hedged and net receipts (payments) for hedge (a)		25,200,000	\$ (2,821,140)
% of budgeted therms hedged		53.41%	
Total variance to budget including hedge			\$ (1,625,954)
Total cost of gas including hedge	\$ 0.548		\$ 25,030,366
Actual cost as a percentage of budget			106.9%

(a) Three hedges were in place for FY16.