Derivatives Portfolio Report

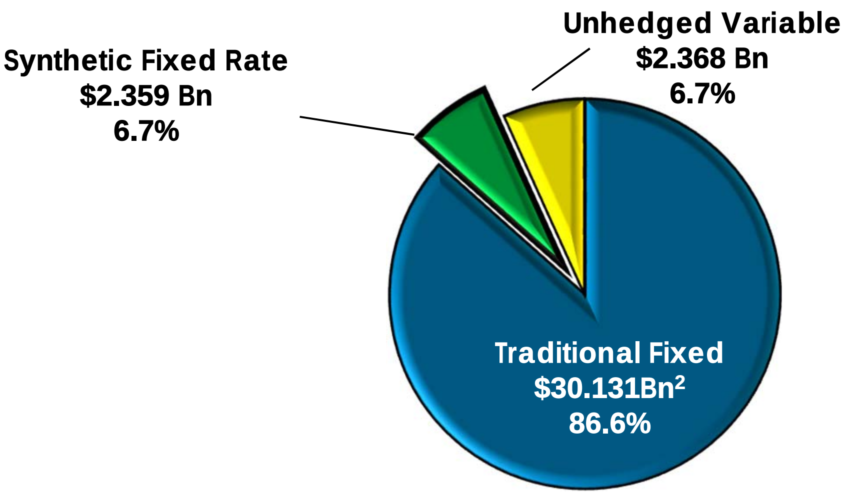
Update to Finance Committee
October 23, 2017

MTA’s derivatives program reduces budget risk by employing interest rate and fuel hedging strategies

- MTA’s synthetic fixed rate portfolio remains low cost
- $2.4 billion notional with 8 counterparties
  - Executed 2001 thru 2007
  - Synthetic fixed rate of 4.18% vs. 3.65% traditional long term fixed rate which includes historic low rates over last decade
- MTA’s fuel hedging program mitigates budget risk by dollar cost averaging half of our ultra-low sulfur diesel (“ULSD”) expenses
  - 24 hedges with 5 counterparties
  - Final maturity 2019
  - Average locked in rate for the next 12 months is $1.61/gallon

Interest Rate Swaps

MTA's debt portfolio is designed to manage budget volatility while maintaining a low cost of capital



- Interest rate exposure is managed through a combination of low cost synthetic fixed rate, fixed rate portfolio management through refundings and reasonable level of floating rate debt
- Exposure to liquidity events is manageable with a total variable rate debt load of $4.727 billion allocated between bank facilities and FRNs

[1] As of September 30, 2017 and excludes State Service Contract Bonds, Special Obligation Bonds and Hudson Rail Yard Obligations.
[2] Excludes Put Bonds and BANs.

Outstanding synthetic fixed rate debt is declining and remains low cost

- The weighted average cost of the synthetic fixed rate portfolio is 4.18% (including fees, excluding benefit of up-front payments)
- Synthetic fixed rate exposure continues to be manageable
- Mark-to-Market values do not impact capital or operating budgeting

Outstanding counterparty exposure is manageable across strong Counterparties

Swap Counterparty	Ratings Moody's/S&P/Fitch		Notional Amount ($000)		% of Total Notional		MTM (mid)	
	2016[1]	2017[1]	2016[1]	2017[1]	2016[1]	2017[1]	2016[1]	2017[1]
AIG Financial Products Corp.	Baa1/A-/BBB+	Baa1/BBB+/BBB+	$100,000	$98,745	4	4	($26,631)	($18.477)
BNP Paribas North America, Inc.	A1/A/A+	Aa3/A/A+	192,200	191,300	8	8	(48,213)	(31,952)
Citibank, N.A.	A1/A/A+	A1/A+/A+	192,200	191,300	8	8	(48,213)	(31,952)
JPMorgan Chase Bank, N.A.	Aa3/A+/AA-	Aa3/A+/AA-	805,850	782,950	33	33	(270,324)	(191,807)
The Bank of New York Mellon	Aa2/AA-/AA	Aa2/AA-/AA	331,020	328,980	14	14	(73,704)	(49,808)
UBS AG	A1/A+/A+	A1/A+/AA-	492,200	487,535	20	21	(128,106)	(87,384)
US Bank, N.A.	A1/AA-/AA	A1/AA-/AA	148,050	139,238	6	6	(26,347)	(17,541)
Wells Fargo Bank, N.A.	Aa2/AA-/AA	Aa2/AA-/AA	148,050	139,238	6	6	(26,347)	(17,541)
Total			**$2,409,570**	**$2,359,285**			**($647,884)**	**($446,463)**

- MTA continues to seek novation opportunities to increase counterparty credit strength and/or improve economic and credit terms

[1] Data from Mohanty Gargiulo LLC Interest Swap Portfolio Reports dated September 30, 2016 and September 29, 2017.
Totals may not add due to rounding.

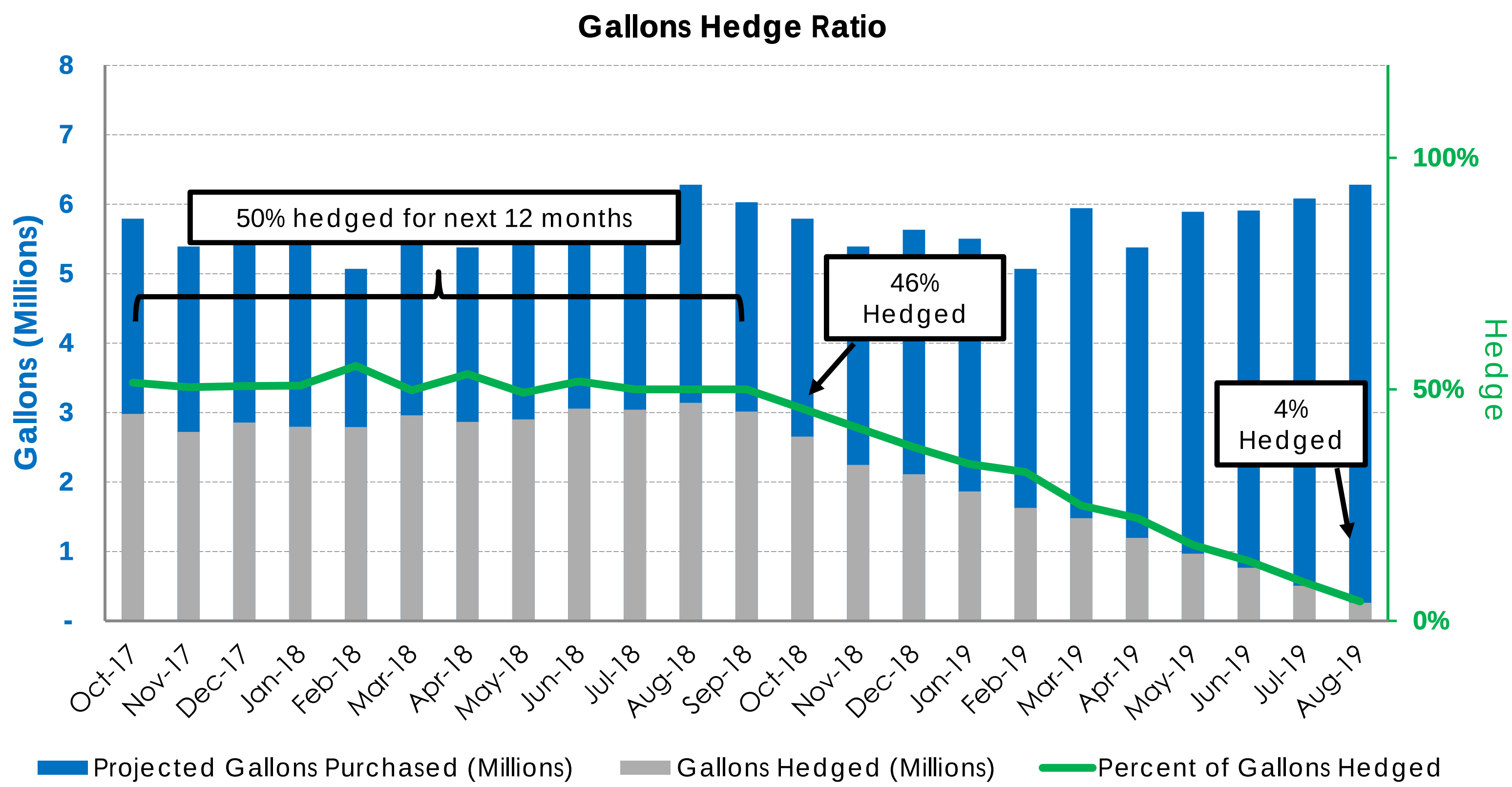
Fuel Hedging Program

MTA hedges 50% of its fuel costs to protect ULSD budget from volatility

- Currently hedging 50% of annual ultra-low sulfur diesel (“ULSD”) expenditures pursuant to existing Board Authorization in September 2012

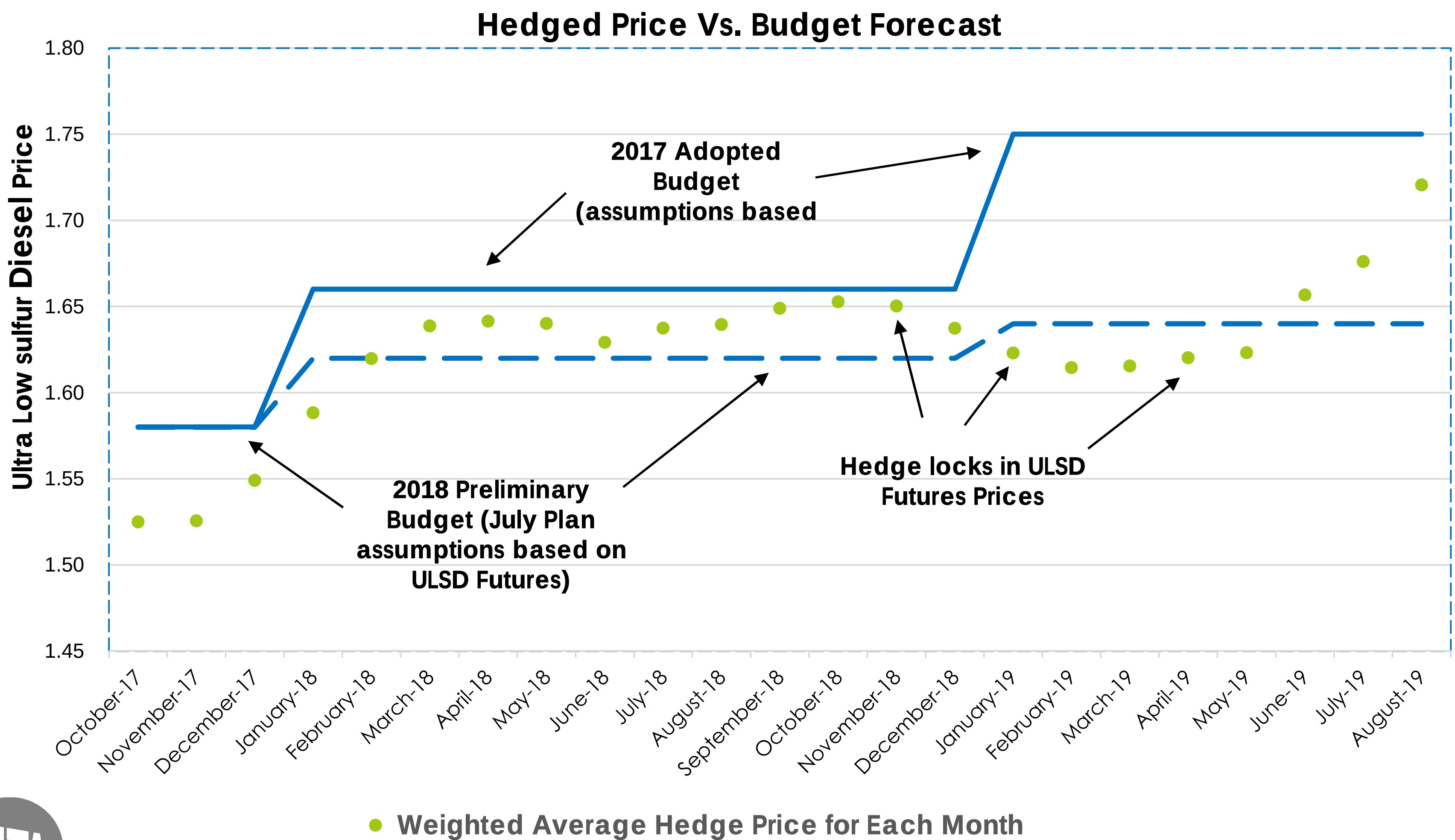
- Hedges are procured through a competitive bidding process with pre-approved counterparties:
  - Merrill Lynch Commodities Inc. (845,020 gallons hedged)
  - J. Aron & Company (57,586,434 gallons hedged)
  - JP Morgan (6,690,229 gallons hedged)
  - Macquarie Energy LLC (16,667,108 gallons hedged)
  - Cargill (4,918,086 gallons hedged). Cargill added to the program in February of 2017

Current portfolio hedges 50% of the next 12 months of projected fuel purchases laddered in over time



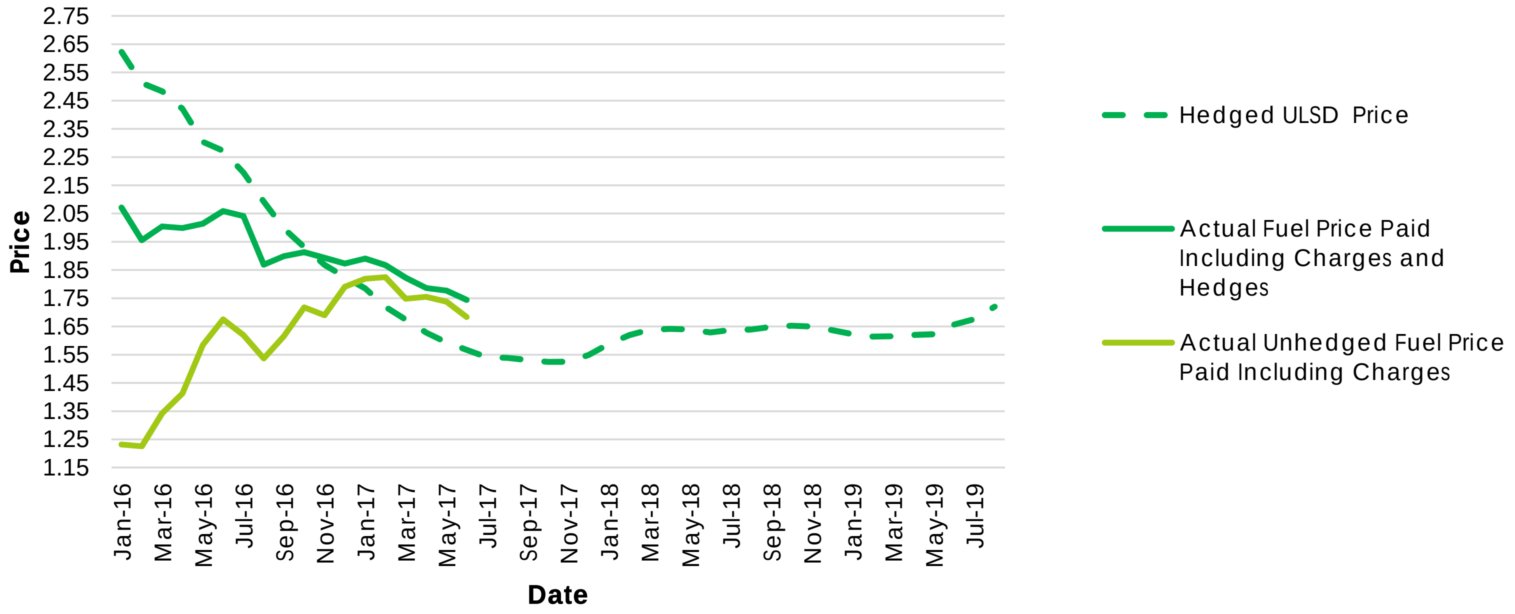
- The goal of the program is to be 50% hedged for the next 12 months.
- Hedges are entered into monthly for roughly 4% of the projected fuel purchases expected to occur 13-24 months from each hedge execution date.

The hedged price locks in a portion of the fuel budget assumptions



Hedge program provides budget stability while protecting against commodity price spikes

- Executing monthly forward hedges results in deferring the impact of major market moves in any current budget year by shifting them 12 months forward into future budgets
- With limited resources to protect the budget from negative volatility this strategy will reduce the immediate impact of potential spikes in fuel prices



- Sometimes this will result in not realizing the full effect of lower prices in the current budget year, as was the case in 2016.
- But we do begin to realize the benefit of those falling prices in future years.

Appendix

Interest Rate Derivative Contract Bond Allocation

Issue	Bond Series	Par Amount ($Mn)	Fixed Rate Paid (%)	Variable Rate Index Received	Maturity Date	MTM Values ($Mn)
Transportation Revenue						
	2002D-2	$200.00	4.450%	69% 1-Month LIBOR	November 1, 2032	($70.575)
	2002G-1[1]	142.02	3.520	67% 1-Month LIBOR	January 1, 2030	(13.021)
	2005D & 2005E	394.98	3.561	67% 1-Month LIBOR	November 1, 2035	(73.910)
	2011B[1]	56.22	3.520	67% 1-Month LIBOR	January 1, 2030	(15.831)
	2012G	357.50	3.563	67% 1-Month LIBOR	November 1, 2032	(87.784)
	Total	$1,150.72				($261.122)
Dedicated Tax Fund						
	2008A	$328.98	3.316	67% 1-Month LIBOR	November 1, 2031	($49.808)
	Total	$328.98				($49.808)
Bridges and Tunnels --General Revenue						
	2001C	$57.48	3.520	67% 1-Month LIBOR	January 1, 2030	(2.916)
	2002F& 2003B	191.30	3.076	67% 1-Month LIBOR	January 1, 2032	($31.952)
	2005A	22.77	3.520	67% 1-Month LIBOR	January 1, 2030	(3.313)
	2005B	573.90	3.076	67% 1-Month LIBOR	January 1, 2032	(95.856)
	Total	$845.44				($134.037)
Bridges and Tunnels --Subordinate						
	2000ABCD	$34.15	6.080	SIFMA-15 bps	January 1, 2019	($1.496)
	Total	$34.15				($1.496)

Notes: Data for derivative contracts outstanding as of September 29, 2017.
Totals may not add due to rounding.
[1]Associated swap is with TBTA.