



**Massachusetts Bay  
Transportation Authority**

# Energy Hedge – FY24

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January 9<sup>th</sup> 2023

Christina Marin, Assistant Treasurer

# Diesel Fuel Hedge Background

- MBTA has historically hedged the costs of its diesel fuel to minimize expenditure volatility and to provide greater certainty in budgeting.
- Since 2001, the hedging of fuel costs has been through the use of derivative contracts rather than a cap within the vendor contract.
- To diversify risk among counterparties and ensure competitive bids, the MBTA has historically put in place a master hedge for specific amounts and terms.

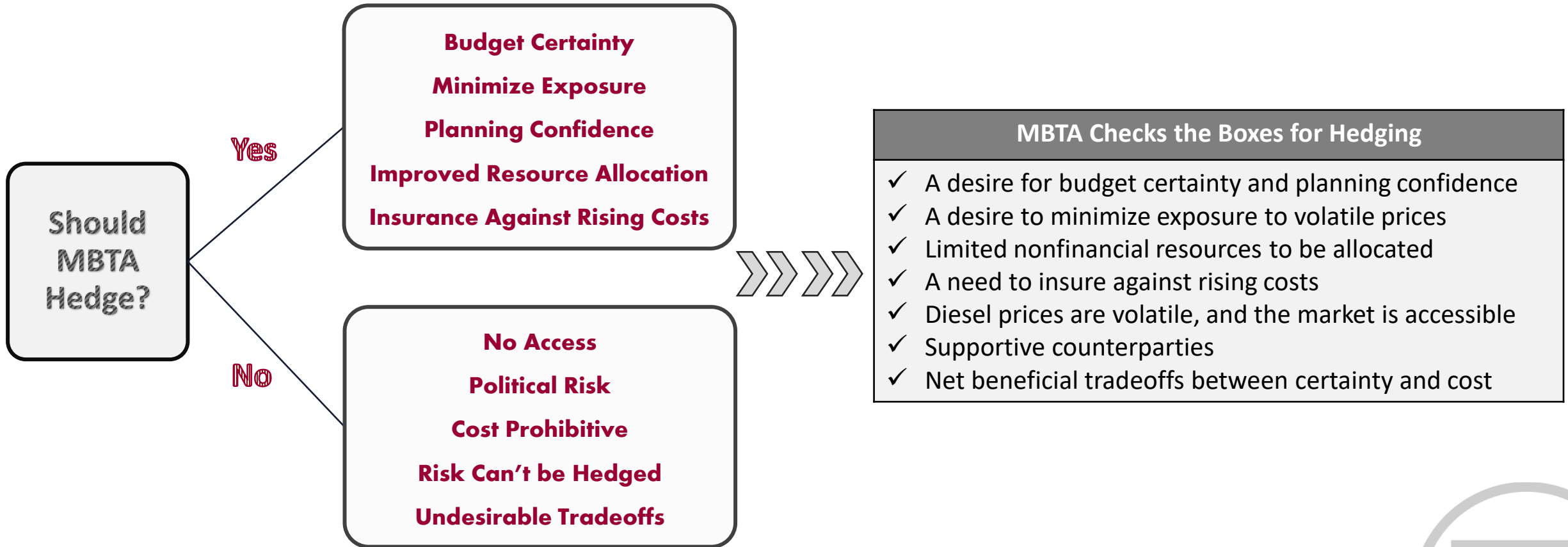
## **Past counterparties include**

JP Morgan  
 Citibank  
 Bank of America – Merrill Lynch  
 Morgan Stanley  
 Goldman Sachs  
 Wells Fargo

WHAT A FUEL HEDGE IS	WHAT A FUEL HEDGE IS NOT
<p>✓ A method of reducing budgetary uncertainty</p> <p>✓ A tool to protect MBTA finances from fuel price volatility</p> <p>✓ A win-win (<i>If fuel prices go down, we win at the pump. If fuel prices go up, we win on the hedge.</i>)</p>	<p>✗ An opportunity for MBTA to outsmart the market</p> <p>✗ A tool to take advantage of market conditions</p> <p>✗ A gamble with the banks</p>



# Should MBTA Hedge?



# How a Hedge Works

## PHYSICAL DELIVERY



**\$4 a gallon**  
**Price falls to \$3.85**



**\$0.05 Distribution Cost**



**\$4.05 a gallon**  
**Price now \$3.90**  
**(\$0.15 savings)**

**Price drops \$0.15 at pump**



$$-\$0.15 + \$0.15 = \$0$$

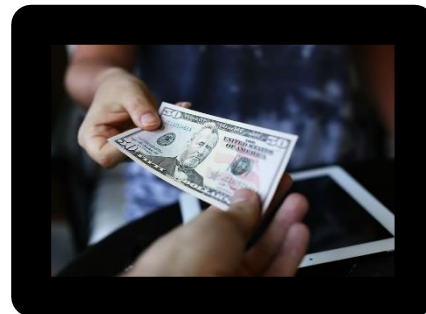


**The result of changes in the price of Oil Futures**

## HEDGE



**Lock in rate at \$4 a gallon**



**If price goes up, Bank pays MBTA**  
**If prices go down, MBTA pays Bank**



**Futures decline to \$3.85**  
**(MBTA pays difference)**

# Current Market Conditions

## How did we get here?

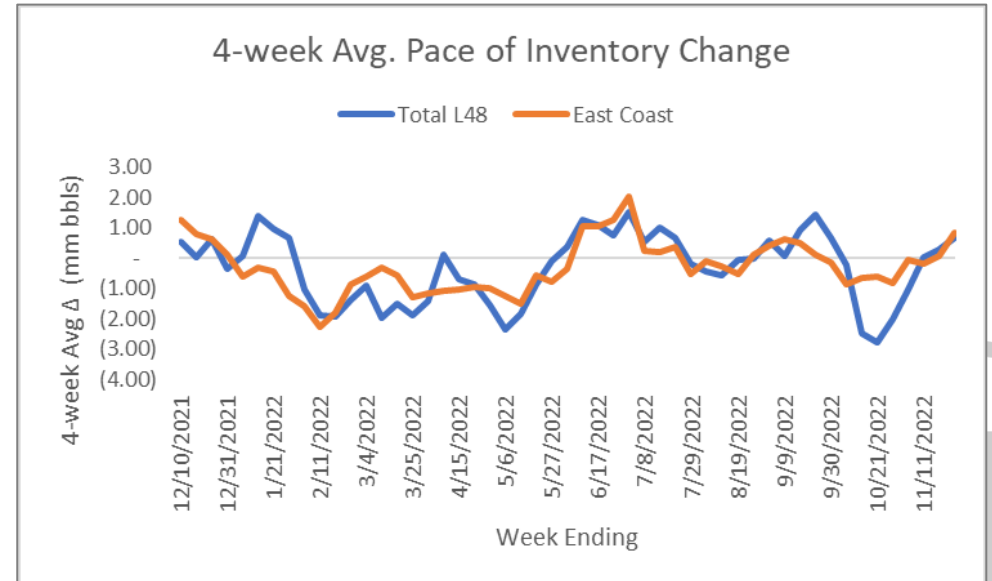
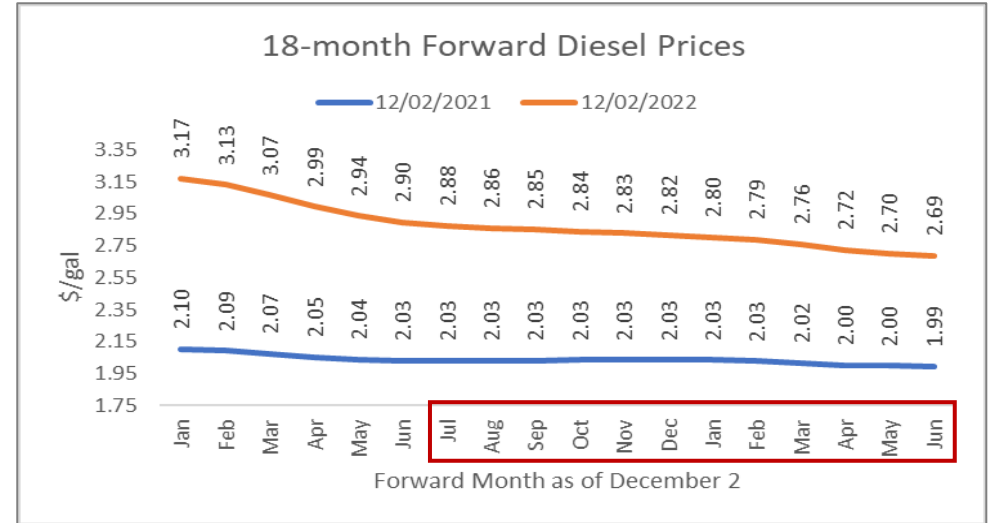
- From Dec. 2021 to Dec. 2022 diesel prices rose >\$1 to \$3.17
- The forward curve sloped downward
- Both moderated during 4Q 2022
- Volatility jumped and remains high

## Where are we now?

- Prices recovering from war risk premium, but still high
- Fundamentals normalizing, evidenced by inventory
- Downside risk = Recession, Upside risks = Supply Disruption

## What does this mean for MBTA?

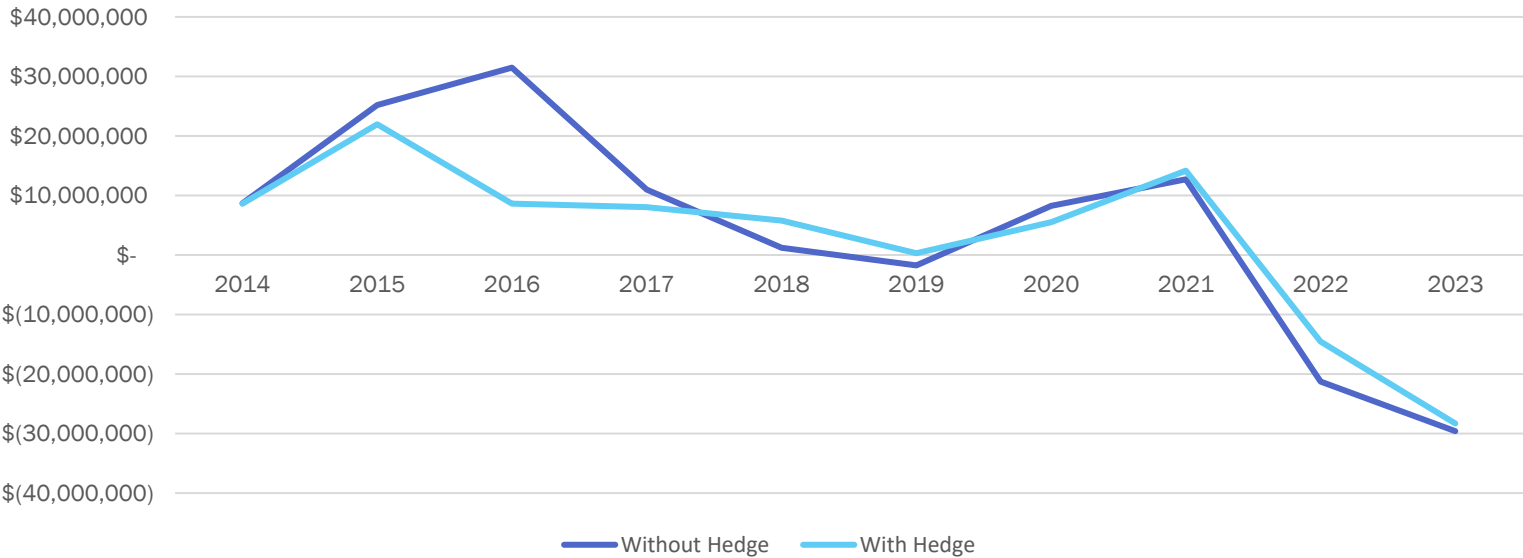
- Higher Prices + High Volatility = Higher Potential Variability
- 2023 expected volatility is ~40% or higher,  $\geq \$24M$  in possible budget variance
- Risk skewed to upside  $-\$0.25$  priced the same as  $+\$0.35$
- Curve slope allows MBTA to hedge  $\sim \$0.20$  below spot price (Jul 23-Jun 24 avg price =  $\sim \$2.80$ )



# Recent Hedging

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
<b>Targeted percentage hedged</b>	90%	75%	50%	37%	50%	50%	50%	50%
<b>Gallons hedged</b>	18.7 million	15.7 million	10.3 million	8.1 million	8.8 million	9.9 million	8.8 million	9.95 million
<b>Providers</b>	Citi, Morgan Stanley, Bank of America	Citi, JP Morgan	Citi, Morgan Stanley	Goldman	Goldman	Wells Fargo	Morgan Stanley	Morgan Stanley, Citi, Goldman
<b>Hedged Price Per Gallon</b>	\$2.50	\$1.79	\$1.51	\$1.71	\$1.85	\$1.29	\$1.99	\$3.24

Budgetary variance - Dampening effect of Fuel Hedge



- **The MBTA hedges its diesel usage every year. The amount hedged varies each year, but the hedge must be for a specific volume of fuel for a specific term.**
- **In some years, the MBTA enters into agreements with multiple providers.**

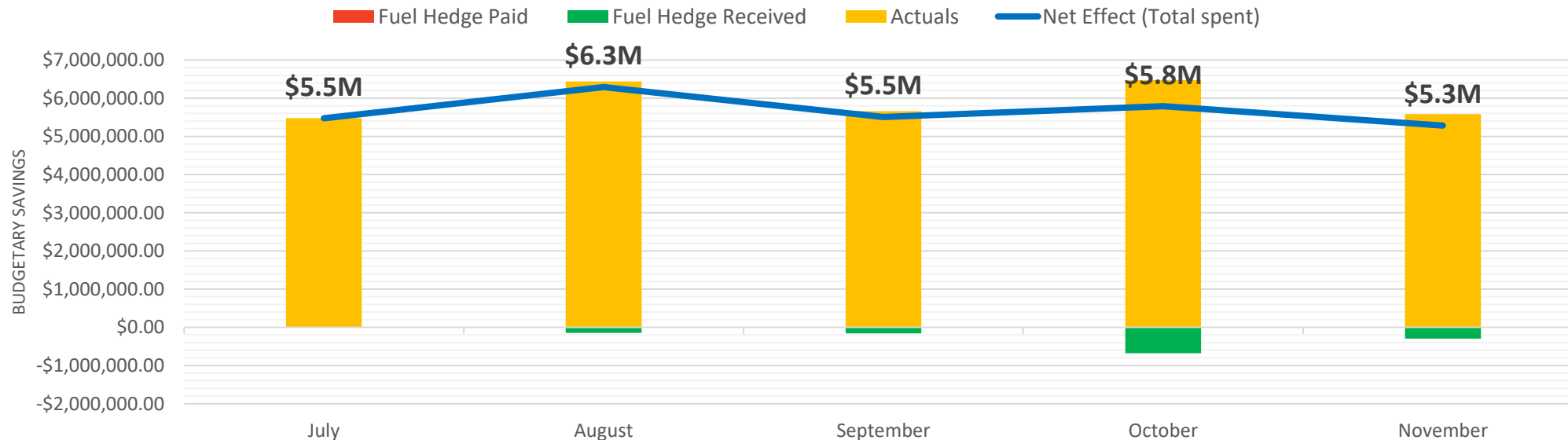


# FY23 Fuel Hedge

- August 2022 through June 2023 fuel hedge contract
- Hedged roughly 50% of projected usage during normal times during 10-month period (9.9M Gallons)
- Entered a hedge with Morgan Stanley, Citi and Goldman Sachs for a weighted average of \$3.24 per gallon
- **Energy hedge has resulted in a net payments from our counterparties YTD of \$1.28 million.**

## MBTA Fuel Hedge VS Pump Price Variance (August 2022- November 2022)

MBTA Fuel Program - FY23



Yellow is what was paid at the pump (actual)  
 Red/green represents fuel hedge. Red is a payment we made to the counterparty. Green is a payment we received from the counterparty.  
 Blue line represents what MBTA actually paid on fuel (hedge and pump prices combined)

# Proposed FY24 Fuel Hedge

## **Recommendation**

- Execute a forward-starting hedge so that the hedge and budgeted amount are determined at the same time.
- Based on historic usage, adjusted for lower ridership, the MBTA is budgeting for 18.85 million gallons in fuel purchases between its commuter rail and bus in FY24
- The MBTA is targeting a 50% hedge of its budgeted usage (9.4 million gallons). Unhedged the MBTA could be exposed to \$24 million in budgetary volatility based on expected volatility
- A 50% hedge would reduce potential budgetary volatility to \$8.5-\$17 million (one-to-two standard deviations)
- A 50% hedge performs when price per gallon increases. The remaining 50% unhedged portion performs when price per gallon decreases.

## **Next Step**

After MBTA receives board authorization, MBTA will enter into a competitive bid process run by Blue Lacy (MBTA's hedge advisor). The bank will be chosen based on price and the provider's credit rating.





# Requested Vote

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## **VOTED:**

To recommend that the Board of Directors authorize either the Chief Financial Officer or Treasurer of the Massachusetts Bay Transportation Authority ("MBTA"):

- to enter into one or more hedges, with terms expiring no later than June 30, 2024, as determined to be necessary or appropriate, to hedge the MBTA's financial risks related to the price of diesel fuel, provided that such hedges shall be procured via competitive bid process; and
- to execute any and all documents, certificates and other instruments necessary or desirable to effectuate the transactions contemplated by the foregoing vote.

