Massachusetts Bay Transportation Authority

Energy Hedge – FY25

Patrick Landers, Treasurer

February 2024

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, which is more efficient than a price-fix with the vendor contract.
- To diversify risk among counterparties and ensure competitive bids, the MBTA has 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
✓ A method of reducing budgetary uncertainty ✓ A tool to protect MBTA finances from fuel price volatility ✓ A neutral posture with 50% hedged 50% unhedged positions *(If fuel prices go down, we benefit at the pump. If fuel prices go up, we benefit on the hedge.)*	✗ An opportunity for MBTA to outsmart the market ✗ A tool to take advantage of market conditions ✗ A gamble with the banks

How a Hedge Works

PHYSICAL DELIVERY

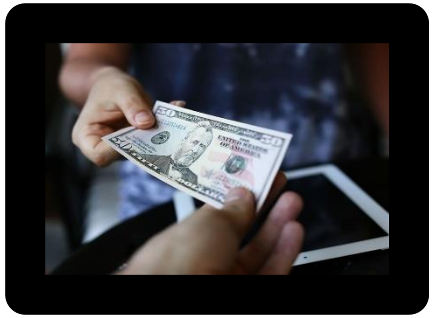
$3 a gallon
Price falls to $2.85

$0.05 Distribution Cost

$3.05 a gallon
Price now $2.90
($0.15 savings)

HEDGE

Lock in rate at $3 a gallon



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

Futures decline to $2.85
(MBTA pays difference)

Price drops $0.15 at pump

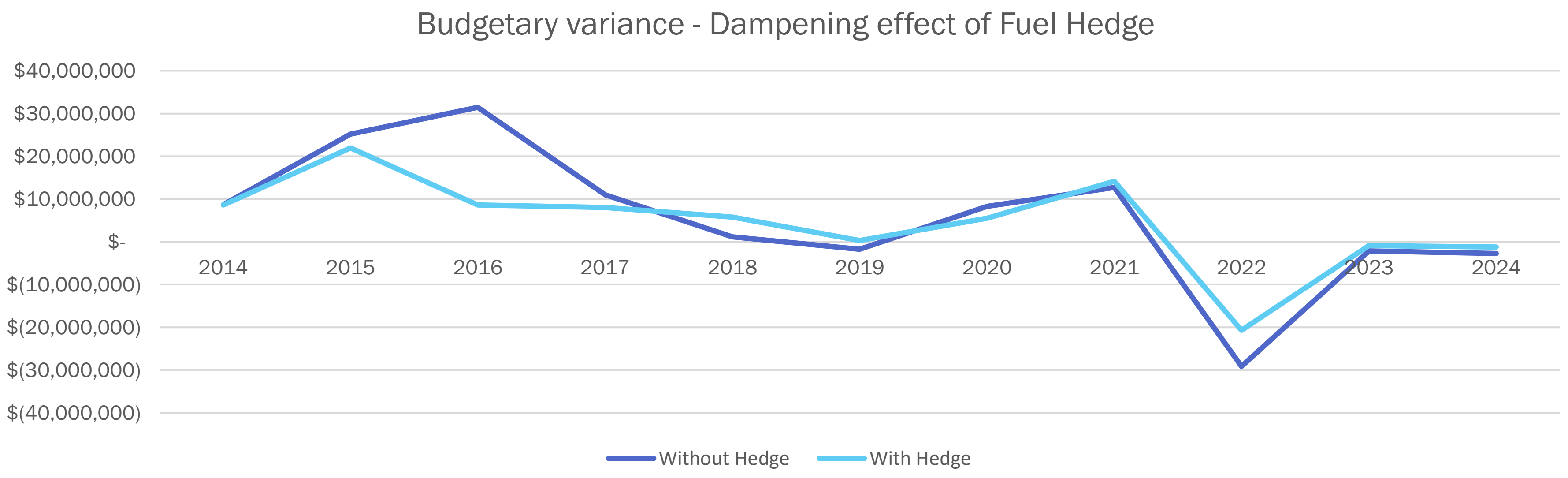
-$0.15 + $0.15 = $0

The result of changes in the price of Oil Futures

Recent Hedging

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Targeted percentage hedged	90%	75%	50%	37%	50%	50%	50%	50%	50%
Gallons hedged	18.7 million	15.7 million	10.3 million	8.1 million	8.8 million	9.9 million	8.8 million	9.95 million	9.83 million
Providers	Citi, Morgan Stanley, Bank of America	Citi, JP Morgan	Citi, Morgan Stanley	Goldman	Goldman	Wells Fargo	Morgan Stanley	Morgan Stanley, Citi, Goldman	Morgan Stanley, Citi, Goldman, Bank of America
Hedged Price Per Gallon	$2.50	$1.79	$1.51	$1.71	$1.85	$1.29	$1.99	$3.24	$2.63

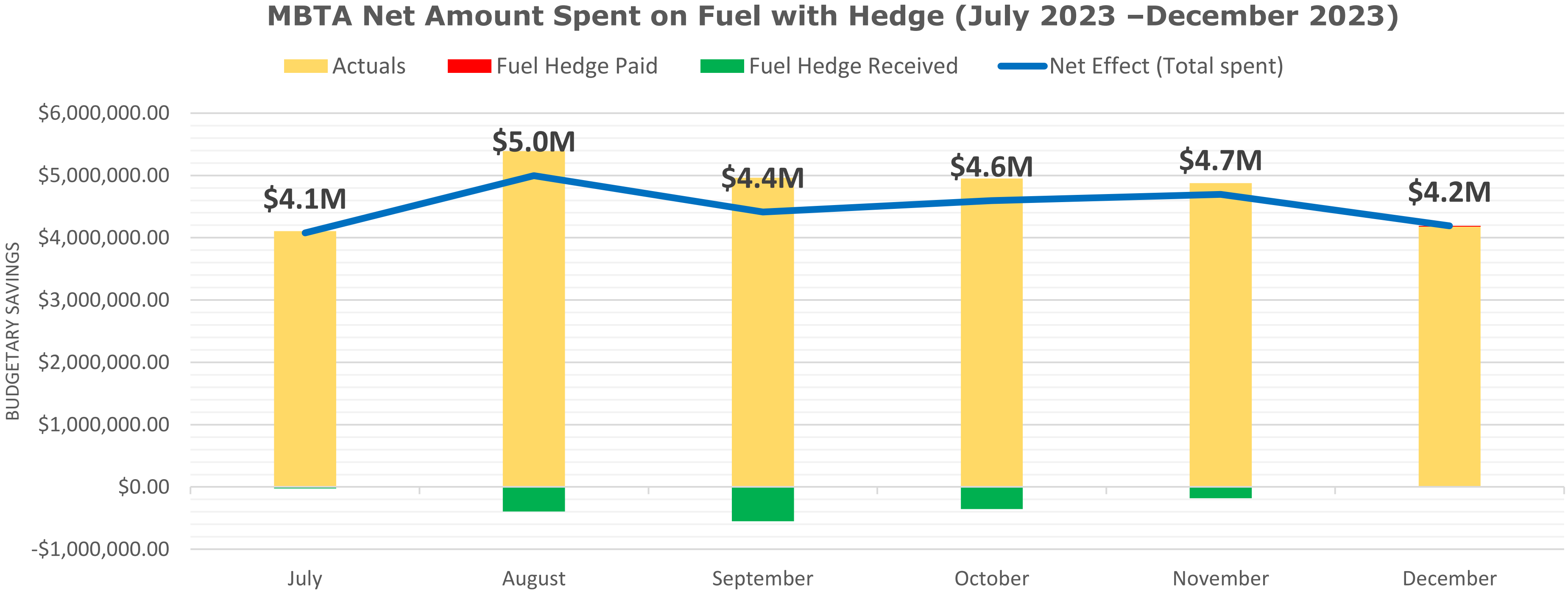
The MBTA hedges its diesel usage every year. The amount hedged varies each year, but the hedge must be for a specific volume of fuel for a specific term.



Without the fuel hedge, standard deviation over the past 10 years is 49% higher ($15.75M vs. $10.6M)

FY24 Fuel Hedge

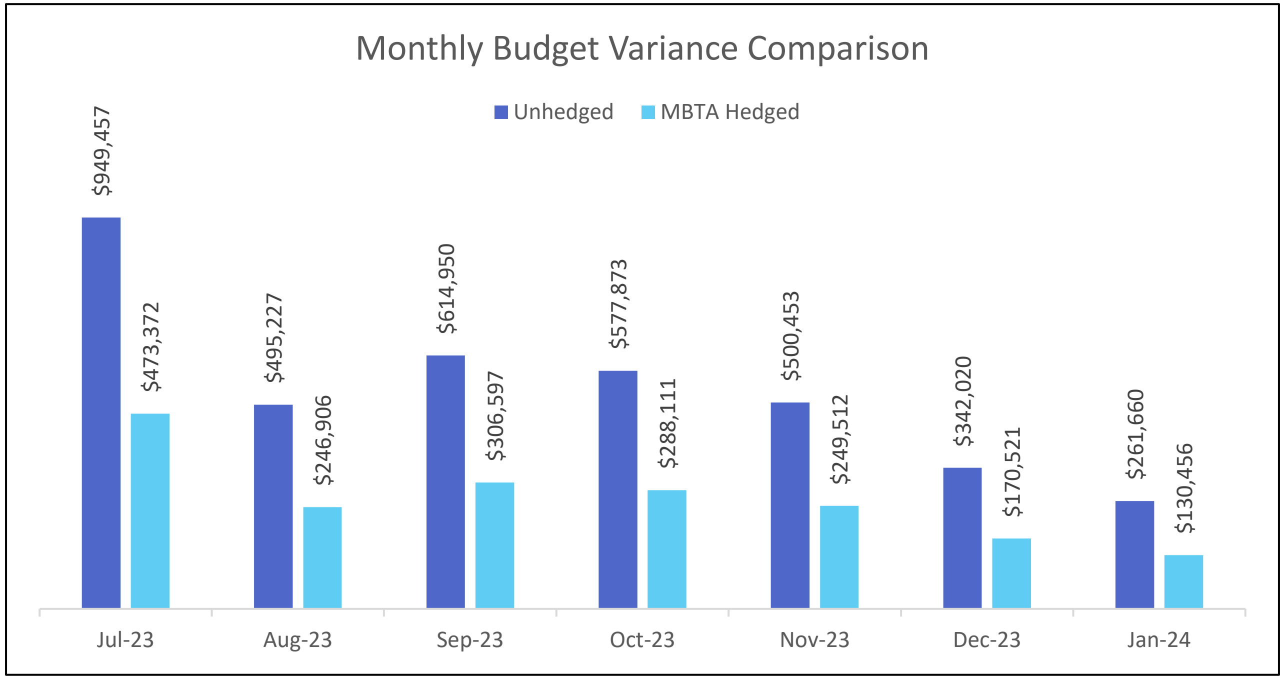
- The MBTA is currently hedging ~50% of its budgeted usage (9.83 million gallons).
- A 50% hedge performs when price per gallon increases. The remaining 50% unhedged portion performs when price per gallon decreases.
- Weighted average price of $2.63 per gallon
- Hedge counterparties – Morgan Stanley, Goldman Sachs, Bank of America, Citi
- **Fuel hedge has resulted in a net payments to the MBTA of $1.5 million in FY24 to date.**



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)

FY24 Fuel Hedge

- Lower realized volatility in December 2023 compared to December 2022.
- Hedge has been on target for reducing volatility in realized costs by 50%.



World Events Can Create Market Volatility

Attacks in Both Warring Regions Remind Us of How Quickly Volatility Can Jump, and to be Prepared

Term structure and skew rise in response to the attacks. Regional spreads and flows respond, and remain meaningful indicators.

STEVE SINOS
JAN 28, 2024 - PAID

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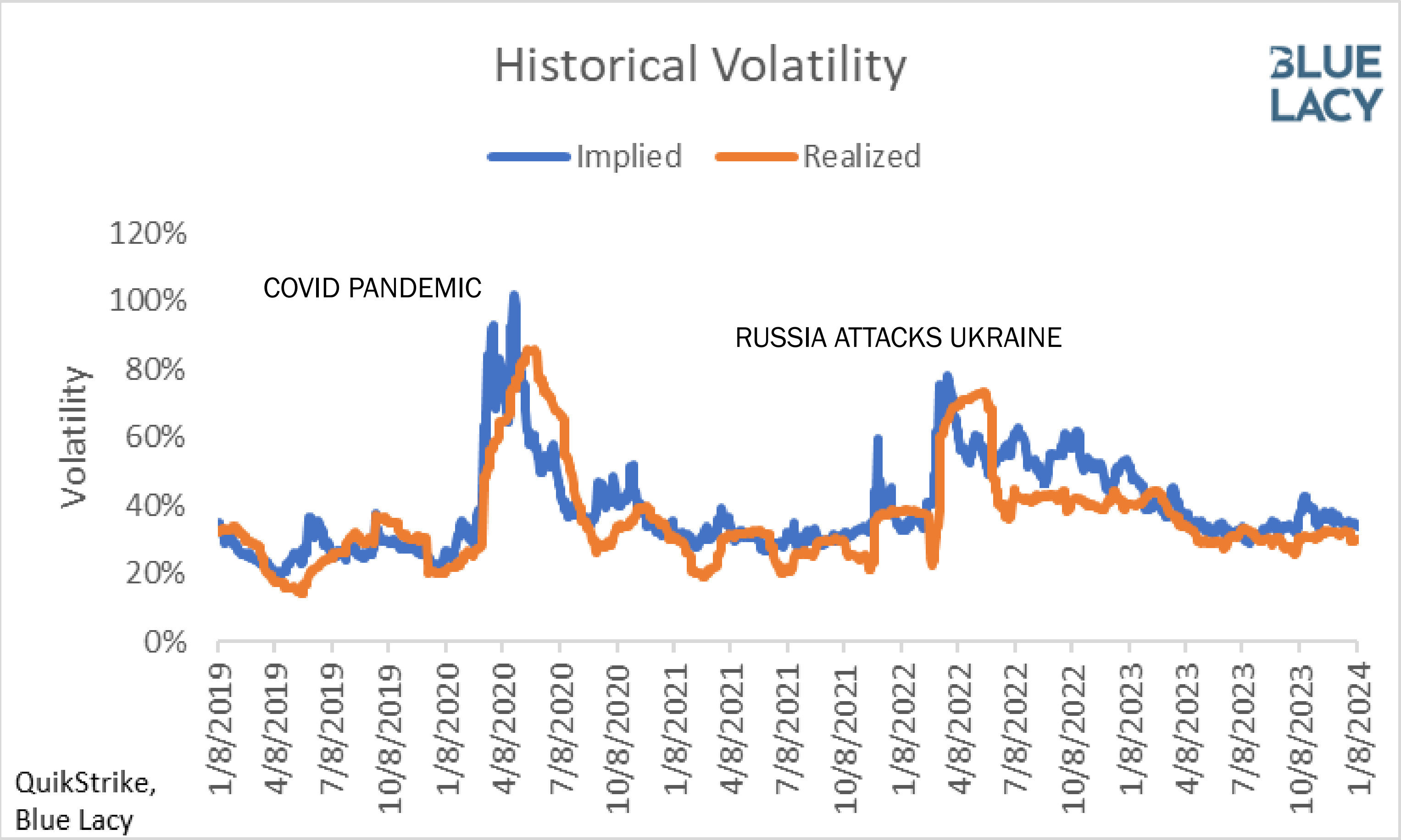
Three Point Summary

1. Multiple reports of attacks on energy transport assets in both warring regions highlight the potential volatility risk we have been warning about, rallying NYMEX diesel >6.5% and ICE Gasoil 5% WoW.
2. The premium at which 25-delta calls trade to ATM tripled from the previous Friday, now trading close to a full point above ATM for March options. Put vols did not see much of a change. Consequently, the skew is pretty balanced.
3. The upcoming few months will likely see plenty of these event-driven reminders of volatility, possibly concentrated in refined product prices with a busy maintenance season expected and shipping lanes disrupting flows to demand centers.

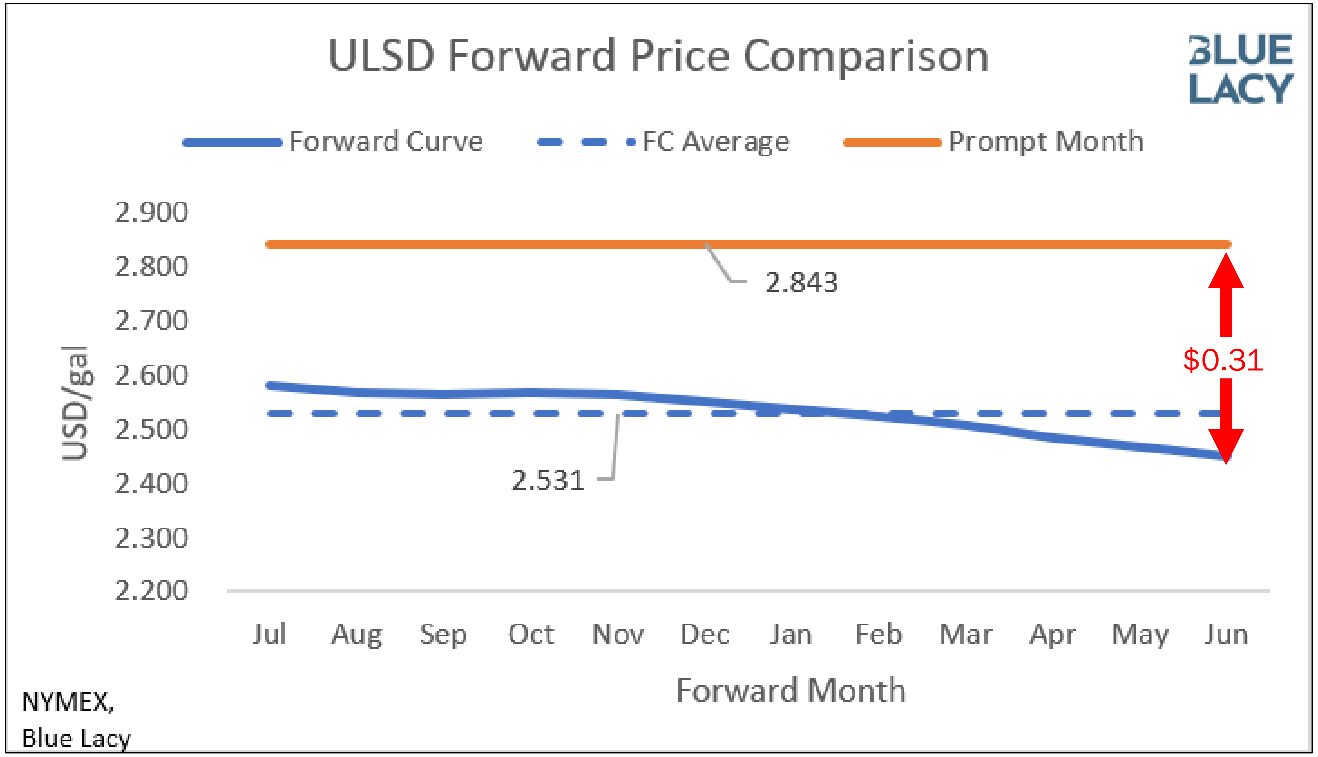
Historic Volatility

- Current volatility 34%, closer to the long-term median of 32%
- At current price of $2.84, 34% vol is +/-$0.97/gal ($1.87-$3.81)
- Volatility has subsided since its recent peak in Spring of 2022, which was associated with Russia’s invasion of Ukraine



Ultra Low Sulfur Diesel Forward Price Comparison

- ULSD for delivery in February = ~$2.84/gal
- The forward average for Jul 24-Jun25 = ~$2.53/gal
- Fwd prices tend to trade at a discount when the market is tight
- A discounted forward price offers incentives to plan ahead currently $0.31 lower per gallon



Proposed FY25 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 and projected ridership, the MBTA is budgeting for 21.2 million gallons in fuel purchases between its commuter rail and bus in FY25
- The MBTA is targeting a 50% hedge of its budgeted usage (10.6 million gallons). Unhedged the MBTA could be exposed to $20.4 million in budgetary volatility based on expected volatility
- A 50% hedge would reduce potential budgetary volatility to $10.2 million

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

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, 2025, 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.