



Board of Directors

Finance Committee

September 18, 2019

Complete 540 Project Update

Rodger Rochelle, P.E.
Chief Engineer

Complete 540

Three Contracts



STIP Segments

R-2721 (A&B) and R-2828

Design-Build Teams

R-2828

- The Lane Construction Corporation / Blythe Construction, Inc. JV
- Lead design firm – WSP USA Inc.
- \$403.2M

R-2721B

- Flatiron Constructors, Inc. / Branch Civil, Inc. JV
- Lead design firm - HDR Engineering, Inc. of the Carolinas
- \$159.98M

R-2721A

- Flatiron Constructors, Inc. / Branch Civil, Inc. JV
- Lead design firm - Gannett Fleming, Inc.
- \$183.5M

Complete 540 Design

R-2828

- 8.6 miles
- 120 design submittals, including right-of-way plans, hydraulics design, MOT plans, structure design
- 40% complete

R-2721B

- 4.9 miles
- 31 design submittals, including preliminary roadway plans, hydraulics design, structure design
- 19% complete

R-2721A

- 4.3 miles
- 20 design submittals, including preliminary roadway plans, culvert survey reports
- 10% complete

Complete 540 ROW

R-2721A

- 174 parcels
- 47 parcels acquired
- 127 parcels remaining

R-2721B

- 187 parcels
- 57 parcels acquired
- 130 parcels remaining

R-2828

- 220 parcels
- 22 parcels acquired
- 198 parcels remaining



Complete 540 Permitting

401 Water Quality Certification

- NC Department of Environmental Quality-Division of Water Resources
- Issued February 2019

404 Permit

- US Army Corps of Engineers
- Imminent

R-2828

- Agency coordination meetings held May and August 2019
- Permit modification application anticipated September 2019

R-2721B

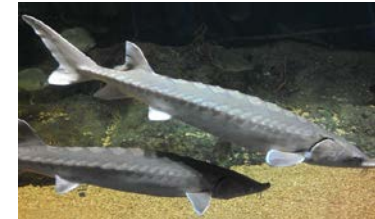
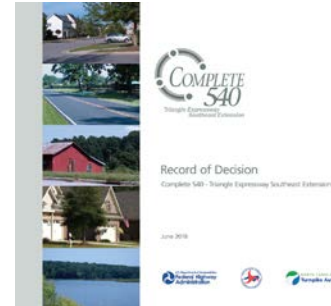
- Agency coordination meeting held in August 2019
- Permit modification application anticipated September 2019

R-2721A

- Agency coordination meeting anticipated in November 2019

Complete 540 Legal Challenges

- Federal lawsuit filed in May 2018
 - Challenging National Environmental Policy Act (NEPA) approvals
 - Challenging Section 7 of Endangered Species Act approvals
 - US Fish and Wildlife Service
 - National Marine Fisheries Service
- Challenge filed with the North Carolina Office of Administrative Hearings in April 2019
 - Challenging Section 401 Water Quality Certification issued in February 2019



Settlement Agreement

- Discussions regarding potential settlement began in March 2019
- Agreement in principal regarding settlement July 2, 2019
- Settlement agreement executed August 22, 2019
- All claims against all parties will be dismissed
 - Federal court
 - NC Office of Administrative Hearings
- Enacts protections for clean air, clean water and endangered aquatic species
- Eliminates costs associated with ongoing litigation, interest rate risk, and project delays
- Allows the project to move forward to construction
- Includes covenants not to sue

Land Acquisition

- Support of Wake County's Open Space Program
 - Support for the county's goals to preserve open space
 - High value properties using Wake County's model
 - Emphasis on purchasing properties in close proximity to Complete 540 and Swift Creek
 - Twenty-five cents per dollar matching funds
 - Calendar years 2020, 2021, 2022, 2023
- High quality land acquisition to provide habitat benefits for aquatic species
- Preservation of 50% of remnant property purchased for right of way

Stream Protection/Mitigation/Stormwater

- Additional stream mitigation beyond permit requirements
- Support for Johnston County stormwater management program for improvements and enhancements
- Studies of runoff discharge volume and peak flow for pre-highway construction and post-construction
- Review of peer states' use of Low Impact Development guidelines and enhance NCDOT Best Management Practices (BMP) toolbox
- Numerous research initiatives for stormwater management
- Post-construction water quality monitoring and BMP implementation

Air Quality/Climate Change

- Toll-free use by public transit buses of all managed lanes projects
- Support GoTriangle's use of NC 540 through funding partnerships
- Conduct quantitative greenhouse gas analyses on major project studies
- Develop strategies and tools to reduce vehicle miles traveled (VMT) and vehicular emissions
- Host breakout sessions at Transportation Summits regarding VMT with SELC and Clean Air Carolina
- Phased approach to reducing greenhouse gas emissions from construction equipment

Species

- Funding for operations and maintenance of the North Carolina Non-Game Aquatic Species Program
 - Yates Mill Aquatic Conservation Center
 - Funding five additional years
- Numerous research projects for aquatic species

Complete 540 Financing Update



David Roy

Director of Finance & Budget

Plan of Finance

Complete 540 Funding Sources:

- \$492 million TIFIA BANs / Loan for the Complete 540 project
- \$521 million Senior Lien Toll Revenue Bonds
- \$243 million NCDOT GARVEE Bonds
- \$81 million NCDOT GARVEE State Match
- \$81 million NCDOT National Highway Performance Program
 - Currently available per STIP but not anticipated to be needed

Financing Assumptions

Toll Revenue Bonds

- Interest Rate: AAA MMD (9/9/2019) + BBB Revenue Bond credit spreads + 75 bps cushion (Estimated true interest cost of 3.98%)
- Common DSRF funded to 50% of the standard lesser of three test
- Gross pledge on parity with Series 2009, Series 2017 and Series 2018 Toll Revenue Bonds

TIFIA

- Interest Rate: 2.82% (TIFIA Rate as of 9/9/2019 + 75 bps cushion)
- DSRF funded to 100% of the lesser of three test, provided the 125% of average annual debt service is calculated on a progressive basis resulting in on-going deposits

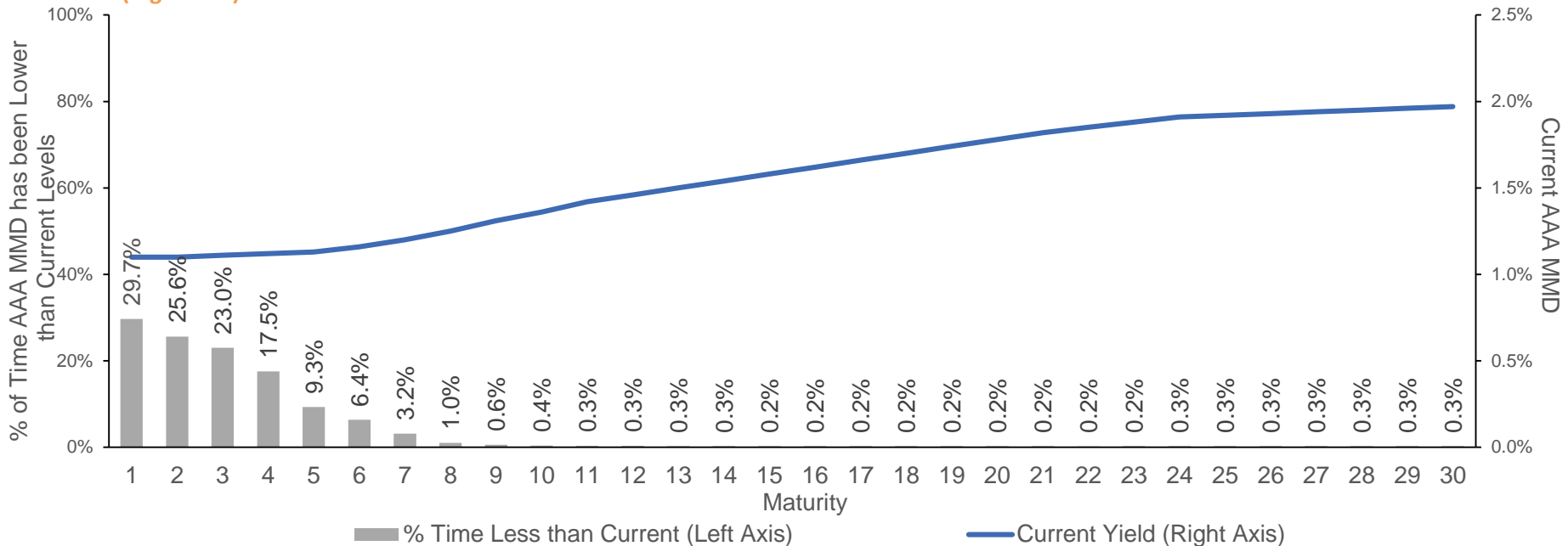
General Reserve

- Common with the existing Triangle Expressway

Market Interest Rate Movements

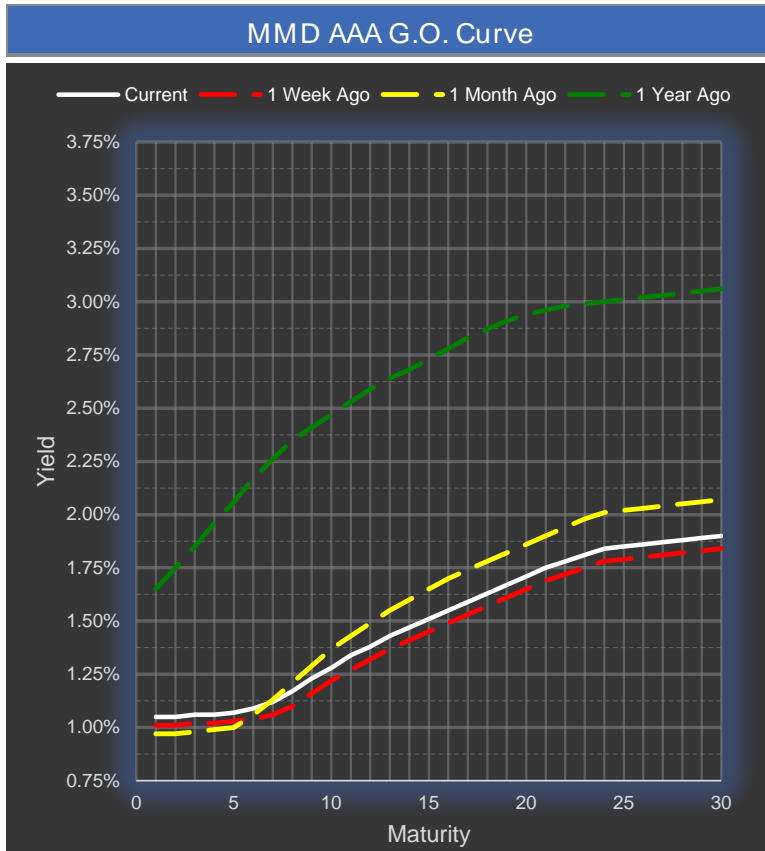
The graph below compares current AAA MMD rates to rates since 1986. Interest rates have been lower, less than 1% of the time on the long end of the curve.

% Of Time AAA MMD Has Been Lower Since 1986 (Left Axis)
 09/10/2019 AAA MMD Curve (Right Axis)

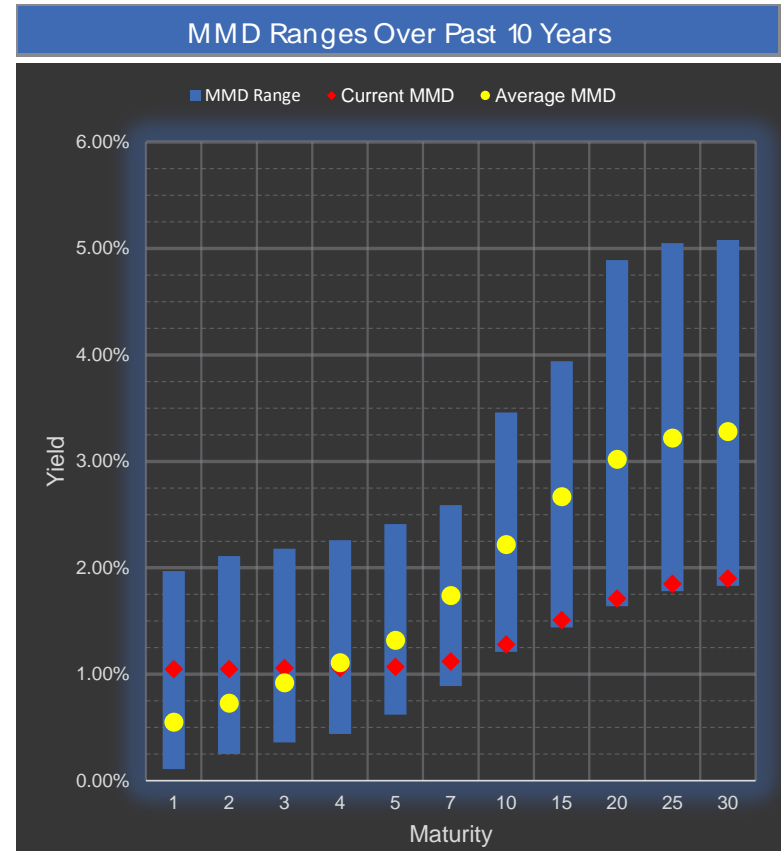


Source: Refinitiv (formerly Thomson-Reuters)

Market Interest Rate Movements



Spot Rates				
	Current	1 Week Ago	1 Month Ago	1 Year Ago
2-Year	1.05%	1.01%	0.97%	1.75%
5-Year	1.07%	1.03%	1.00%	2.06%
7-Year	1.12%	1.06%	1.13%	2.26%
10-Year	1.28%	1.22%	1.37%	2.47%
30-Year	1.90%	1.84%	2.07%	3.06%



MMD Ranges Over Past 10 Years					
	Current	10yr Avg	vs. 10yr Avg	Min	Max
2-Year	1.05%	0.73%	32 bps	0.25%	2.11%
5-Year	1.07%	1.32%	-25 bps	0.62%	2.41%
7-Year	1.12%	1.74%	-62 bps	0.89%	2.59%
10-Year	1.28%	2.22%	-94 bps	1.21%	3.46%
30-Year	1.90%	3.28%	-138 bps	1.83%	5.08%

Senior Lien Bond Financial Covenants

Rate Covenant

- 1.30x Senior Lien debt service
- 1.10x Senior, Subordinate and TIFIA debt service
- 1.30x TIFIA Loan Life Coverage Ratio

Additional Bonds Test

- Rate Covenant compliance
- Projected debt service coverage ratios of at least:
 - 1.40x Senior Lien debt service
 - 1.30x Senior, Subordinate and TIFIA debt service for the issuance of senior lien debt
 - 1.20x Senior, Subordinate and TIFIA debt service for the issuance of subordinate lien debt
 - 1.30x TIFIA Loan Life Coverage Ratio

Covenants for the Benefit of TIFIA & Bond Insurer

The following additional or higher covenants are made for the benefit of the Bond Insurer and TIFIA (and not for Bond Owners)

Rate Covenant

- **1.25x** Senior, Subordinate and Mandatory TIFIA debt service
- **1.0x** All debt service, debt service reserves, O&M expenses and reserves, R&R expenses and reserves; projected general reserve balance treated as a revenue

Additional Bonds Test

- **Evidence of an investment grade rating**
- Projected debt service coverage ratios of at least:
 - **1.75x** Senior Lien debt service
 - **1.50x** Senior, Subordinate and TIFIA debt service for the issuance of senior lien debt
 - **1.20x** Senior, Subordinate and TIFIA debt service **and TIFIA Consent** for the issuance of subordinate lien debt
 - **1.35x** TIFIA Loan Life Coverage Ratio

Sources and Uses

Sources	
TIFIA Loan	492,226,333
Toll Revenue Bonds	581,755,283
General Reserve Contribution	30,533,144
NCDOT GARVEE / State Match	324,000,000
Total Sources	1,428,514,759

Uses	
Construction Cost	1,295,440,618
Debt Service Reserve Funds	38,600,766
Costs of Issuance / UW Discount	4,169,034
Capitalized Interest Cost	90,303,349
Total Uses	1,428,514,759

Projected Coverage Ratios

Senior Lien Toll Revenue Bonds

- 1.68x Minimum
- 3.38x Average (through 2055)

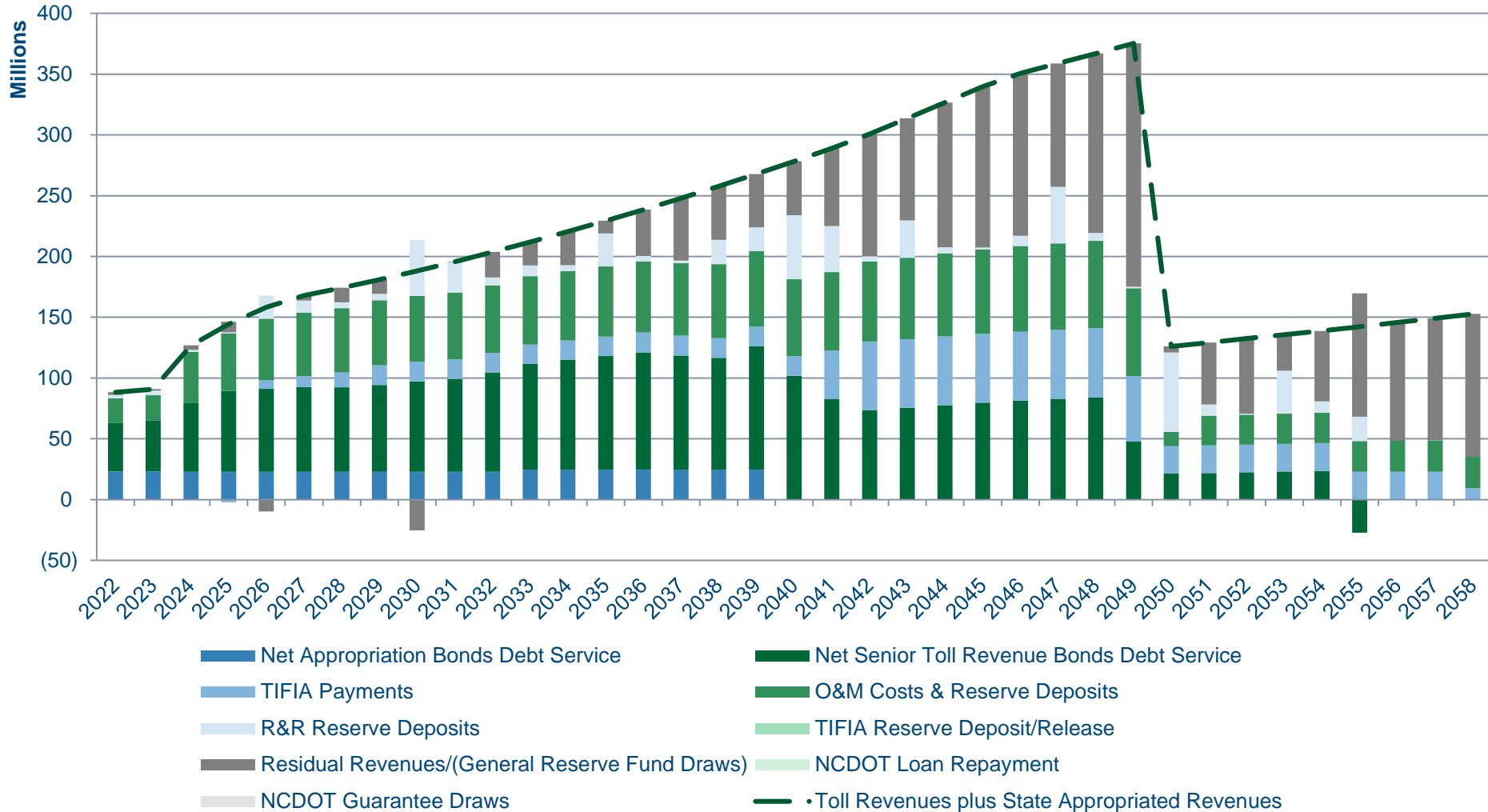
TIFIA Loan

- 1.81x Minimum
- 2.32x Average (through 2055)

All-In

- 0.87x Minimum (shortfalls paid from General Reserve or NCDOT guarantee)
- 1.28x Average (through 2055)
- Minimum Projected General Reserve Balance: \$23,436,219

Projected Cash Flows



TIFIA Update



Negotiated material business terms for the TIFIA Loan Agreement



Be invited by TIFIA to submit an application



Finalize loan agreement documentation

TIFIA BANs Overview

- NCTA is considering TIFIA BANs to be issued after TIFIA commercial closing in an amount equal to the TIFIA loan.
- NCTA and LGC approval would be sought if and when BANs were being pursued
- TIFIA Bond Anticipation Notes are frequently used for the following reasons:
 - To realize interest cost savings – The interest rate on short term BANs will likely be less than the TIFIA Loan rate which is set based on the 30-Year Treasury
 - To avoid complications with multiple TIFIA Loan draws – TIFIA draws are limited to 33% of total costs, pro-rata with actual expenditures
 - To defer issuance of other sources of debt – in this case NCDOT's GARVEE Bonds – as TIFIA can only be drawn upon once all funding is in place

Tentative Schedule

Date	Event
September 2019	Solicit Credit Ratings TIFIA Council on Credit & Finance Review Invitation to submit TIFIA Application Submit TIFIA Application
October 2019	Receive Final Credit Ratings NCTA Special Board Meeting to Approve TIFIA Council on Credit & Finance Approval
November 2019	LGC Meeting to Consider Financing Pending Approvals, Finalize & Post POS Investor Marketing Bond Pricing TIFIA Loan Closing / Bond Closing

Fuel Price Cap Overview

David Miller

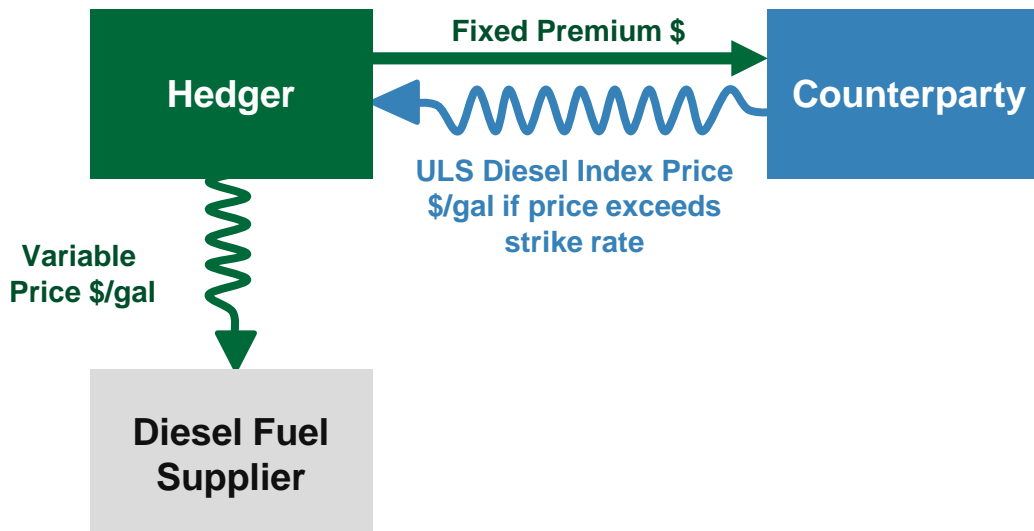
PFM Financial Advisors

Why Consider a Fuel Hedge?

- Protects against unforeseen fuel price increases, for which NCDOT/NCTA are at risk under the design-build construction contract
- Allows better cost estimating certainty
- Allows for the release of fuel reserve budgetary contingency to be used on other elements of the project
- Allows NCDOT/NCTA to benefit from lower fuel prices but reduces exposure to higher prices

Mechanics of Fuel Price Cap

- NCDOT/NCTA pays premium up-front for the price protection via cap
- Floating index typically used in energy hedging is published price from an industry trade publication, e.g. Platt's Oilgram, or the "near" (closest to expiration) futures contract
- Hedge Provider pays difference if index exceeds cap strike (rate)



2016 NCDOT/NCTA Example:

NCDOT/NCTA buys a fuel price cap at **\$2.00/gallon** on the NY Harbor Ultra Low Sulfur Diesel fuel index

- If price is **\$1.80/gallon** in a month, no payments made by either party
- If price is **\$3.00/gallon** in a month, NCDOT/NCTA receives \$1.00/gallon payment from Counterparty, which offsets higher fuel price paid under the DB construction contract

Pros and Cons of a Hedging Program



Benefits

- Budget Stability
- Ability to more accurately budget (less need to reserve against increases)
- Transparency of income vs. expense

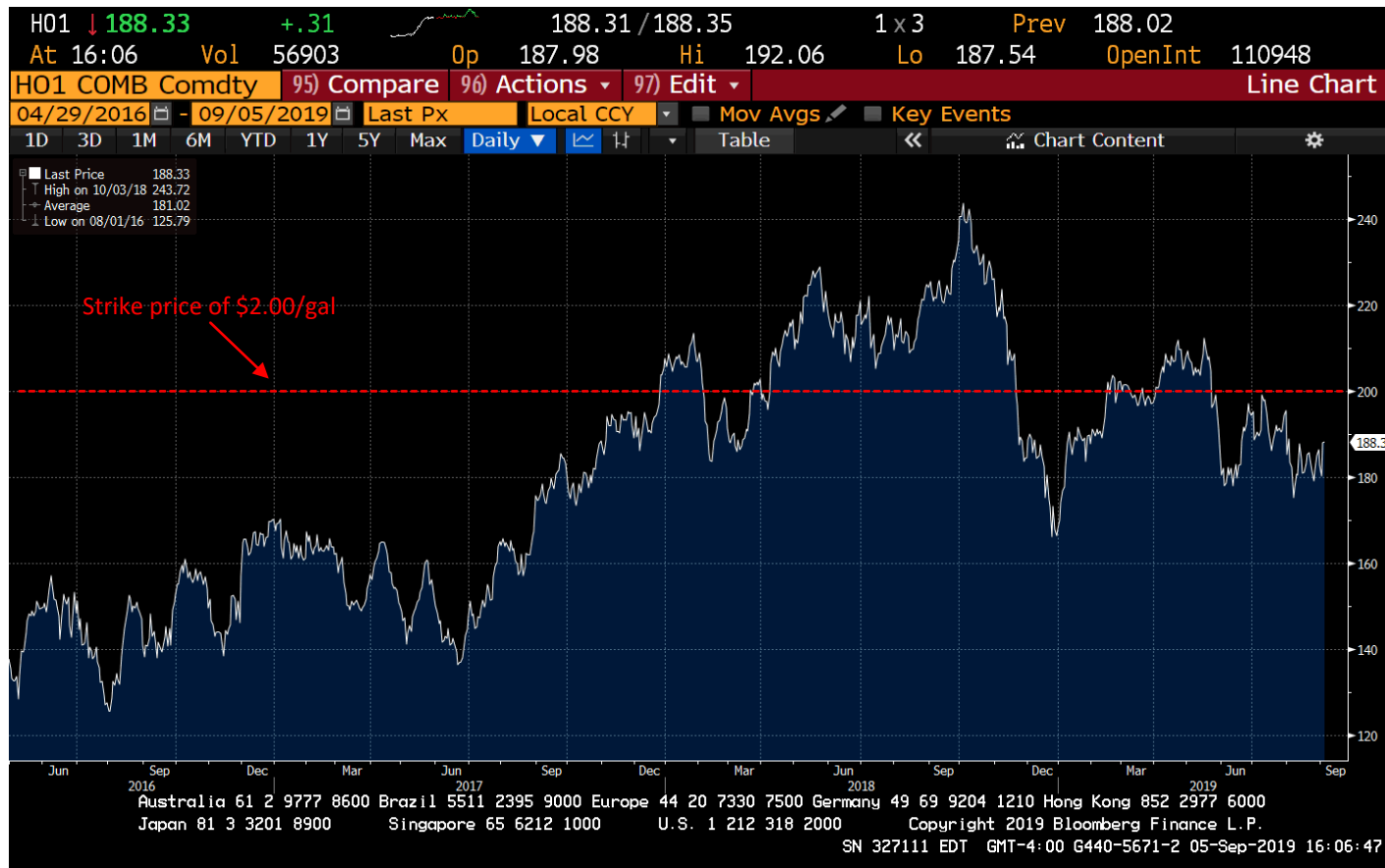


Considerations

- Cost of implementing a hedge or hedging program
- Cost of forward contracts vs. spot
- “News management”
- Speculation or hedging
- Price movement (lower) during the hedge period

Diesel Fuel Prices

- Diesel fuel prices have been volatile since NCTA's original hedge in May 2016 causing the Cap to be "in the money" (fuel price > \$2.00/gal) during some periods



Fuel Cap Procurement Process

NCTA/PFM Swap Advisors

- Will prepare bid specifications and distribute to interested fuel Cap Providers
- The bid specifications will establish the parameters for the fuel Cap including:
 - NCTA's monthly fuel usage projection taking into account seasonal fluctuations (expected usage is 5.27 million gallons from Apr. 2020 until Dec. 2022)
 - Cap strike price, e.g. \$2.00/gal, and the Cap maturity (indicative pricings are 18.33 cents/gal (cpg) for a strike price of \$2.25/gal and 26.0 cpg for a strike price of \$2.00/gal to hedge until Dec. 2022. A higher strike price and/or a shorter hedging period will lower the cost of hedging)
- Negotiate ISDA Agreements with the interested bidders (Note: NCTA already has executed or near final ISDA Agreements with Barclays Bank and Cargill Inc.)
- Adhere to Dodd-Frank Protocols (CFTC regulations) with each potential bidder
- Obtain draft legal opinion from NCTA's counsel for bidders' review
- Furnish NCTA Authorizing Resolution for fuel Cap purchase to bidders for review
- Take live bids on pricing date from the qualified providers

Document Overview

Wally McBride

Hunton Andrews Kurth LLP

Bond Documents for Complete 540 Revenue Bonds – Offering Documents

Preliminary Official Statement

- Main marketing document for 2019 Bonds
- Describes the project and revenues as security
- Includes Traffic and Revenue Study

Official Statement

- After sale, the POS is updated with actual 2019 Bond terms

Bond Order

- Short formula document to be adopted by the Authority as required by Revenue Bond Act

Bond Documents for Complete 540 Revenue Bonds – Issuance Documents

Amended and Restated Trust Agreement

- Between the Authority and Wells Fargo as Trustee
- Amends the 2009 Trust Agreement and incorporates the First Supplemental, Second Supplemental and Third Supplemental under which refunding bonds were issued

Fourth Supplemental Trust Agreement

- Provides terms for 2019 Bonds (security, rates, maturities, etc.) and bond insurance if obtained. Also provides terms for a bond to evidence repayment of the TIFIA Loan

TIFIA Loan Agreement

- Sets forth terms for repayment of TIFIA Loan from USDOT; has key covenants required by USDOT

2020 Finance Committee Meeting Dates

Robert Teer
Chair

2020 Meeting Dates

Finance Committee

January 15

March 18

April 15

June 17

July 15

September 16

October 21

December 16

Full Board

February 6

May 7

August 6

November TBD

- Held in Charlotte

*All meetings at 10:30am

Thank You!

