



Meeting Agenda

August 24, 2023 1:00 p.m. – 4:00 p.m.
Appropriations Committee Hearing Room
Room 120, House Office Building, Annapolis, Maryland

- | | | |
|----|--|--|
| 1. | Welcome and Opening Remarks | Frank N. Principe Jr.
<i>Chairman</i> |
| | | Paul J. Wiedefeld
<i>Secretary of Transportation</i> |
| 2. | Introduction of Members | Frank N. Principe Jr.
<i>Chairman</i> |
| 3. | Organizational Matters and Commission Work Plan | Jaclyn Hartman
<i>Maryland Department of Transportation</i> |
| | | Michele Lambert
<i>Department of Legislative Services</i> |
| 4. | Transportation Overview | Steve McCulloch
<i>Department of Legislative Services</i> |
| 5. | MDOT Capital Program Overview | Joe McAndrew
<i>Maryland Department of Transportation</i> |
| 6. | Fiscal Cliff Looming for Transit Agencies | Ward McCarragher
<i>American Public Transportation Association</i> |
| 7. | 2023 Outlook on Fuel Tax Sustainability | Ed Regan
<i>Transportation Consultant</i> |
| 8. | IIJA in Action: Transportation Construction and Market Conditions Update | Dr. Josh Hurwitz
<i>American Road & Transportation Builders Association</i> |
| 9. | Closing Remarks and Adjournment | Frank N. Principe Jr.
<i>Chairman</i> |

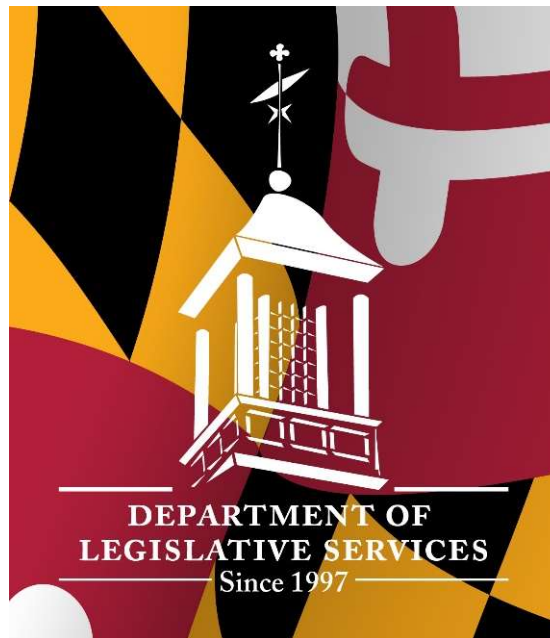
Livestreaming and public notice of meetings will be posted on the Maryland General Assembly's Public Hearing Schedule (<https://mgaleg.maryland.gov/mgawebsite/Meetings/Month>) and the Commission's website (www.mdot.maryland.gov/commission).
Meeting materials will be posted on the Commission's website (www.mdot.maryland.gov/commission).

AGENDA ITEMS 1-3

VERBAL

AGENDA ITEM 4

Transportation Overview

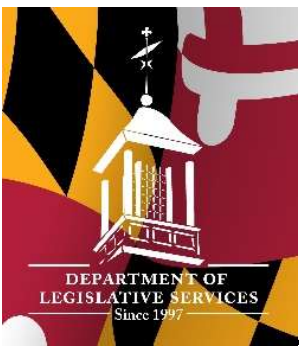


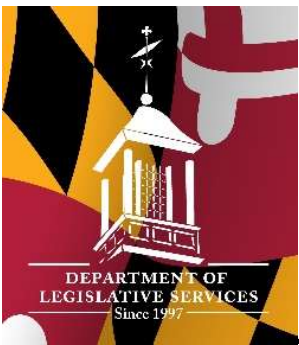
August 2023

Outline

Overview of the:

- Maryland Department of Transportation
- Maryland Transportation Authority
- Transportation Trust Fund





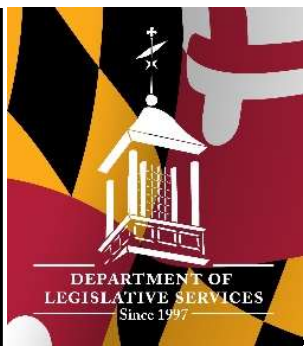
Maryland Department of Transportation

The Maryland Department of Transportation (MDOT) is organized into five modal administrations. Modal activities are coordinated by the Secretary's Office.

- State Highway Administration
- Maryland Port Administration
- Maryland Aviation Administration
- Maryland Transit Administration
- Motor Vehicle Administration

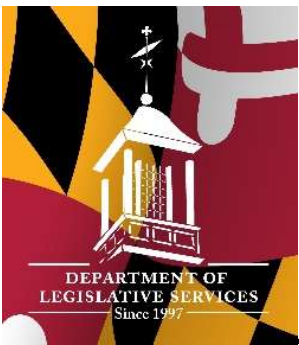
In fiscal 2023, the department had 9,222.5 authorized positions (regular and contractual full-time equivalents) and spent \$5.5 billion.

MDOT historically has not received funding from the State's general fund. Instead, the department relies on the Transportation Trust Fund (TTF) as its funding source.



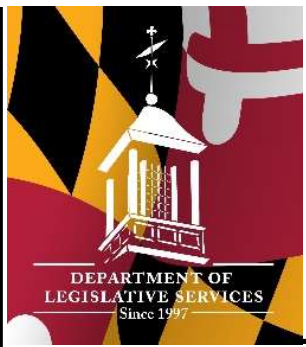
Maryland Department of Transportation Modal Administrations

- **State Highway Administration** – maintains and constructs the State’s highways and bridges
- **Maryland Port Administration** – owns seven public marine terminals and markets the Helen Delich Bentley Port of Baltimore
- **Maryland Aviation Administration** – regulates airports around the State and owns and operates the Baltimore/Washington International Thurgood Marshall Airport and Martin State Airport
- **Maryland Transit Administration** – operates bus, light rail, and subway service in Baltimore and commuter bus and rail across the State
- **Motor Vehicle Administration** – licenses drivers, registers vehicles, and regulates certain businesses

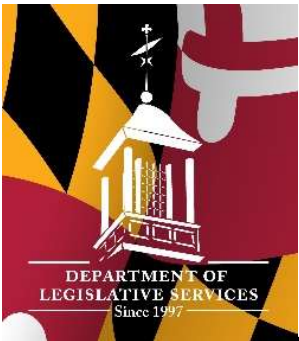


Maryland Transportation Authority

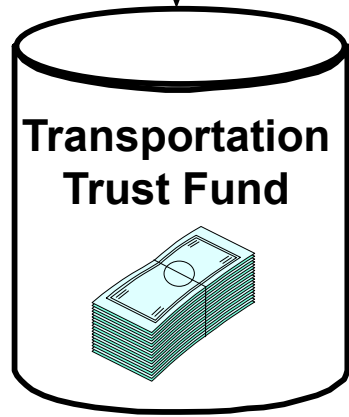
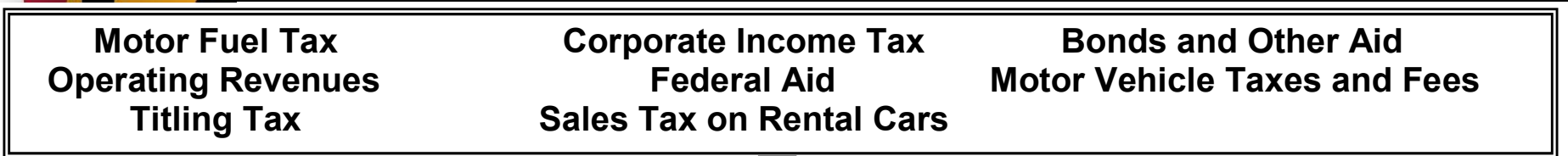
- The Maryland Transportation Authority (MDTA) is not part of MDOT. It has separate sources of funding and manages its own trust fund separate from the MDOT TTF.
- MDTA collects toll revenue and maintains eight bridges, tunnels, and highways in the State.
- Toll revenue is not part of the TTF and is used for operating and maintaining facilities as well as to pay the debt service on bonds sold for the capital program.
- MDTA is also charged with financing transportation facilities other than those owned and operated by the Authority.

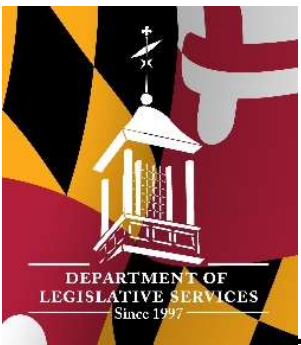


Transportation Trust Fund

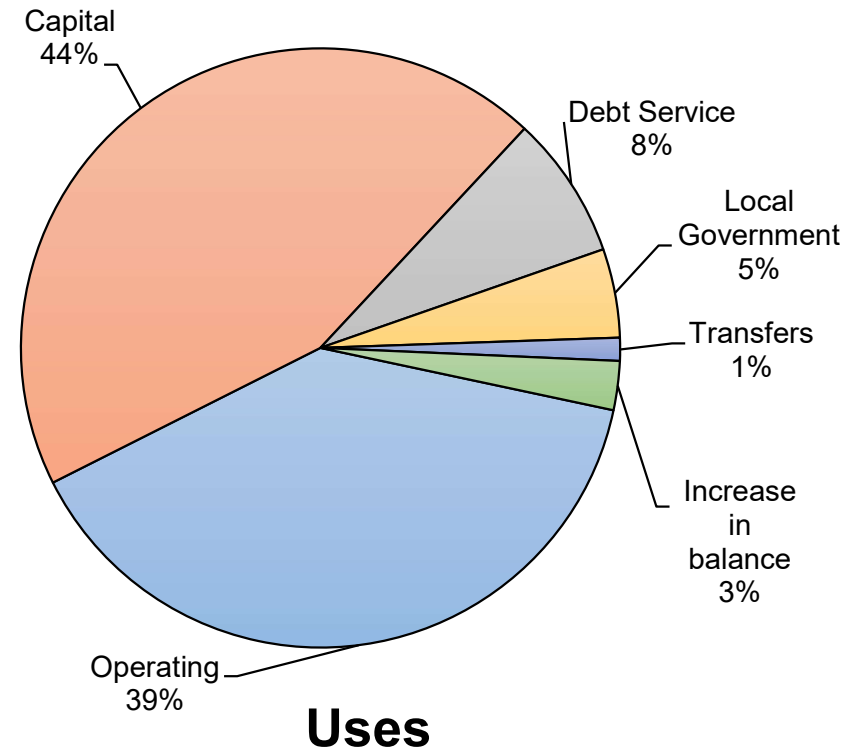
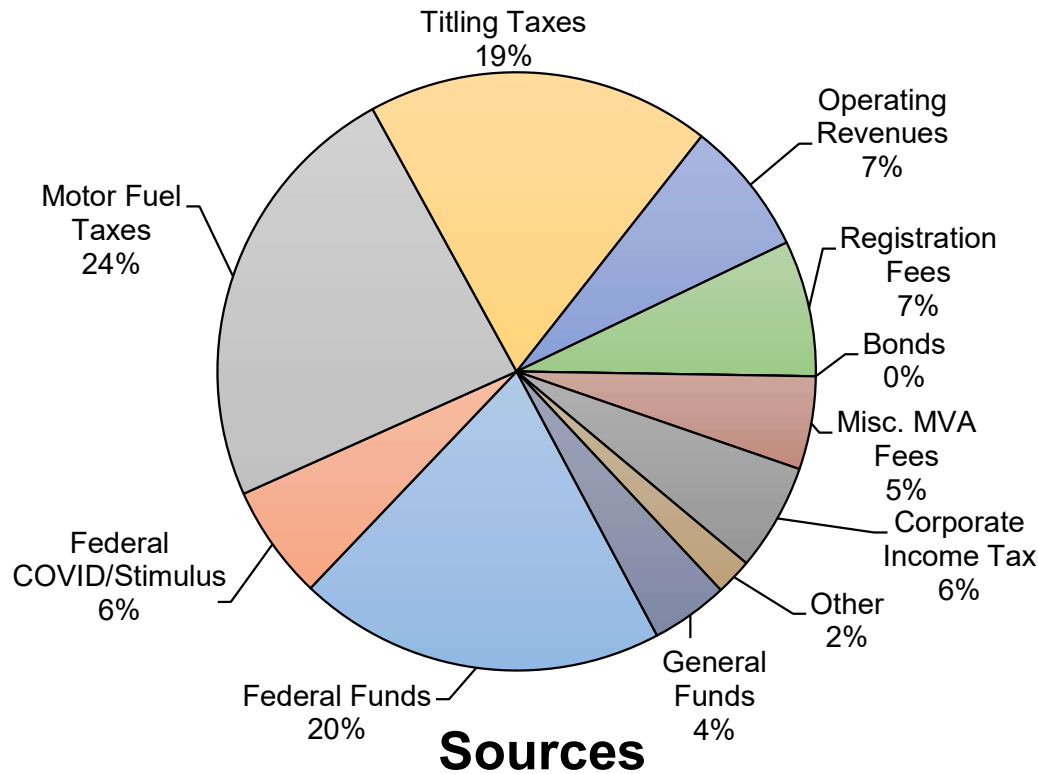


How the Transportation Trust Fund Works





Sources and Uses of TTF Funds Fiscal 2023



Total = \$5.5 billion

Notes

Numbers are preliminary actuals for fiscal 2023

Total excludes other funds for capital projects which are nonbudgeted

Capital excludes Highway User Revenue grants which are shown separately as "Local Government"

AGENDA ITEM 5

MDOT Capital Program Overview

Transportation Revenue Commission

August 24, 2023



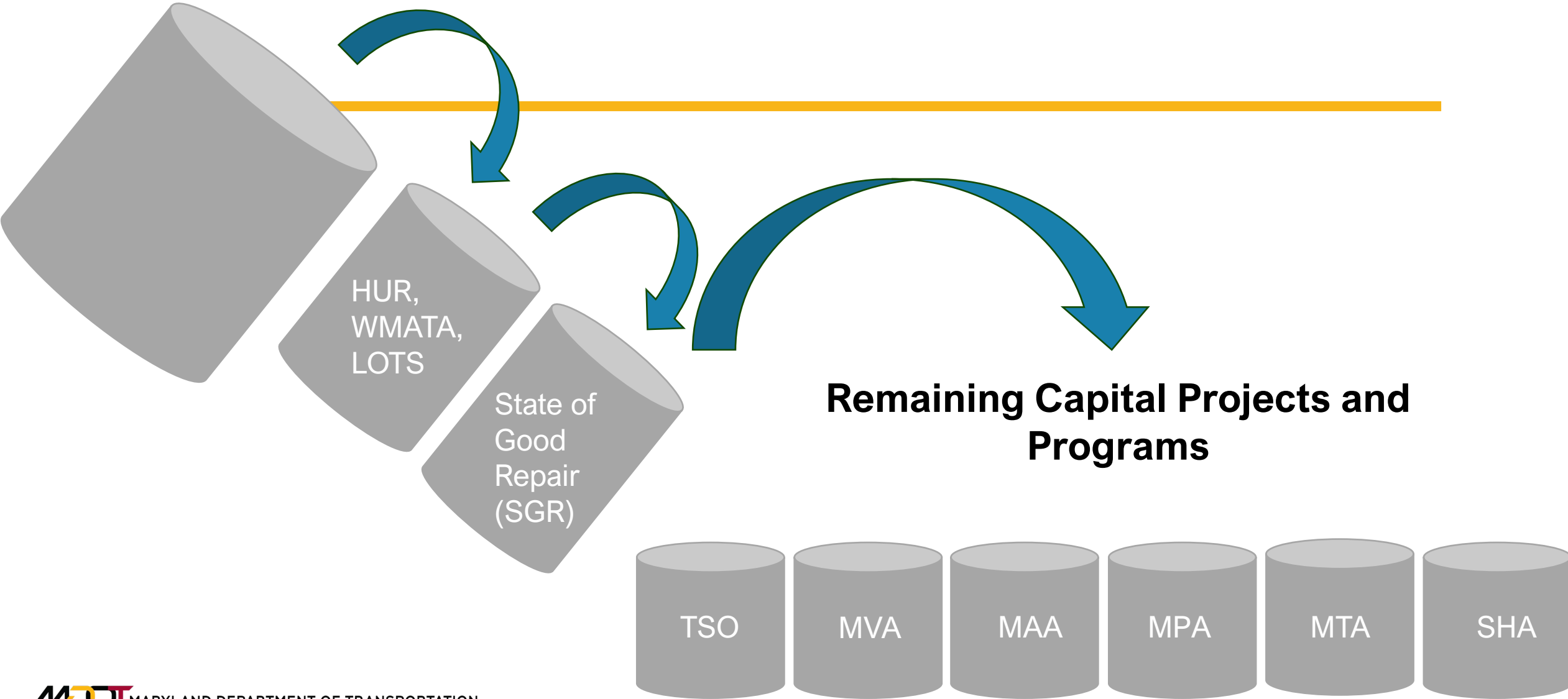
Capital Program at MDOT

- The Capital Program is made up of the capital projects and programs across the six modes (TSO, MTA, SHA, MAA, MPA & MVA), MDTA, and WMATA.
- The Consolidated Transportation Program (CTP) is a six-year capital investment plan for MDOT. It is produced as a Draft CTP in September and a Final CTP in January.
- The purpose of the CTP is to communicate to the Legislature and the public about the plan for capital projects within MDOT over the next six years.





Uses of Transportation Capital Funds





MDOT Capital Program Process

Month	CTP Development Step	Engagement Step	Legislative Deadline
May (2023)	CTP Project Requests	County Priority Letters	
June	CTP Allocations		
July			
August			
September	Draft CTP		
October			
November	Prepare Final CTP	Fall CTP Tour to all counties and Baltimore City	Nov 1 - Pre-Filed Bills Due
December			
January (2024)		Legislative Review of CTP	
February	January 10 – Legislative Session Starts		
March			
April	January 17 – CTP Due		



MDOT Family of Plans

- The CTP is a key piece of larger MDOT planning framework
- Statute requires MDOT develop the State Report on Transportation. This comprises the following three plans:
 - Maryland Transportation Plan (MTP) – The State’s Long Range Plan with a 20-year horizon, provides policy direction, updated every four years
 - Consolidated Transportation Program (CTP) – The State’s Short Range Plan with a 6-year horizon, focuses on capital investment planning, updated annually
 - Attainment Report on System Performance (AR) – The State’s assessment of progress in meeting its long-range goals and objectives included in the MTP, updated annually





Key MDOT Partners

MDOT engages all of Maryland in the development and delivery of the transportation system. Key stakeholders that support MDOT in this effort include:

- USDOT, including FHWA, FTA, FAA, and FRA
- Metropolitan Planning Organizations
- Local Agencies—Counties/Cities





Federal Funding

- MDOT is allocated formula Federal funds across different funding programs. Each of these funding programs has its own set of unique requirements that MDOT must satisfy.
- In order to use any Federal funds, MDOT must meet program-specific requirements **and** provide a match of State funds typically 10-20%.
- SHA, MTA and WMATA receive the largest amount of Federal funds; MVA receives the least
- In addition to formula programs there are also competitive grants such as FTA's Capital Investment Grant Program





Federal Funding

- The Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), is current Federal transportation authorization
 - Signed into law November 15, 2021, replacing the Fixing America's Surface Transportation Act or FAST Act
 - Doubles annual amount of Federal funds for transportation infrastructure as compared to FAST Act
 - Allocates \$567.1 billion over FFY 2022-2026 nationwide, including both Federal formula funds and increased funding levels for competitive discretionary grant programs
 - Created over a dozen new highway programs, including the NEVI (EV charging infrastructure), Carbon Reduction Program and PROTECT (climate resiliency)





Federal Funding

- Estimated federal formula funding for MDOT over the 5-year life of IIJA (FFY 2022-2026)
 - \$4.7 billion for highways and bridges (35% increase*)
 - \$1.7 billion for transit (36% increase*)
 - \$158 million for airports (FAA never had formula funding before)
 - IIJA allocates MDOT an estimated \$1.5 billion in additional Federal aid over FAST Act
 - State is required to allocate an estimated \$334 million in matching funds to access the full \$1.5 billion
 - MDOT programmed \$176 million in state funds to match \$1 billion of additional IIJA aid in the FY23-28 CTP
 - IIJA allocated more than \$150 billion through discretionary, competitive grant opportunities
 - For MDOT to be competitive for competitive grants, the state must provide anywhere from 20 to 50 percent matching funds
 - IIJA also includes significant increases in funding for Amtrak and WMATA who serve Maryland
- * Percent increases are on an average annual basis over FAST Act funding levels.

Stretching Federal Funds

- MDOT leverages toll credits to use Federal funds at a higher rate on qualifying projects.
- This mechanism can only be used on a limited number of projects. The number is determined by the amount of work that MDTA has done to improve the National Highway System within Maryland with toll revenues.
- This allows MDOT to reduce the State match to as little as 5% on select projects.
- However, it does not increase the overall amount of Federal funds available to MDOT but instead allows the use of allocated Federal funds at a faster rate



Flexing Federal Funds

- FHWA formula funds can be used for transit purposes under the rules of the program when allowed
 - 7 core FHWA formula programs
- Transit project still require the State fund match (typically 20%) in order to use flexed Federal funds
- Federal funds typically cannot be flexed to support operating activities (e.g., running buses, cleaning roadsides)
 - Exceptions include rural transit and up to 5-years of operations for new service



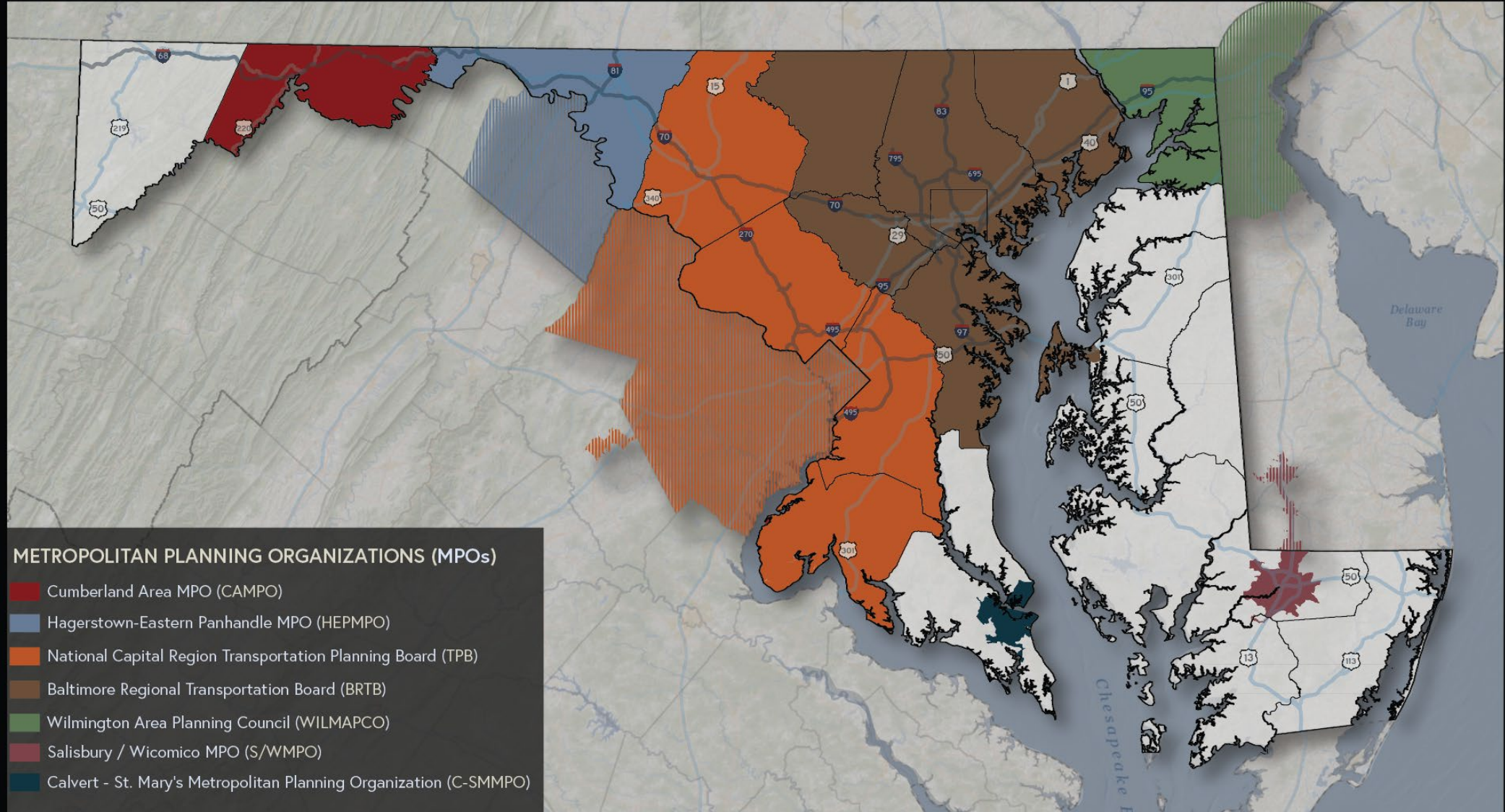


Role of Metropolitan Planning Organizations (MPOs)

- MPOs are Federally mandated and Federally funded transportation planning organizations in urbanized areas
- MPO policy boards are made up of representatives from local governments and governmental transportation authorities within a region.
- Federal transportation funds in urbanized areas can only be used for projects included in the long-range transportation plan of an applicable MPO



METROPOLITAN PLANNING ORGANIZATIONS IN MARYLAND





Role of Local Jurisdictions

- MDOT is in daily communication with our local jurisdiction partners to ensure a safe and reliable multimodal transportation system.
- MDOT provides direct formula funding to local jurisdictions through the Highway User Revenue and Locally Operated Transit programs.
- Local input is carefully considered during the CTP development
 - By April 1 annually submit priority letters for CTP requests to the Secretary; and,
 - Public meeting on draft CTP each fall with individual jurisdictions and MDOT Secretary





Funding for the CTP

- MDOT will release the draft FY24-29 CTP on September 1st.
- The FY23-28 CTP totaled \$20.5B with funds allocated to the modes as follows—
 - 49% for SHA and local highways
 - 21% for MTA
 - 14% for WMATA
 - 7% for Port
 - 6% for Aviation
 - 1% for TSO
 - 0.5% for MVA



AGENDA ITEM 6

Maryland Transportation Revenue and Infrastructure Needs Commission



Fiscal Cliff Looming for Public Transit Agencies

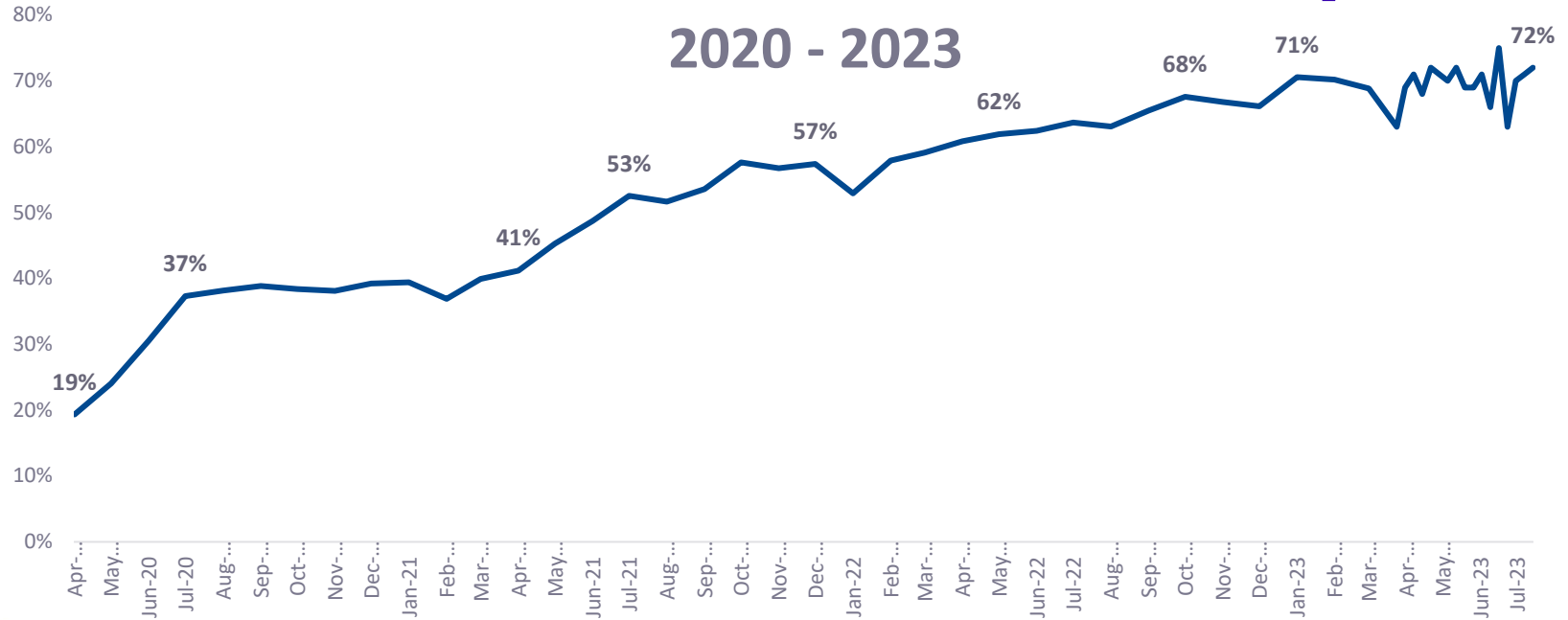
Ward McCarragher
Vice President, Government Affairs and Advocacy



American
Public Transportation
Association

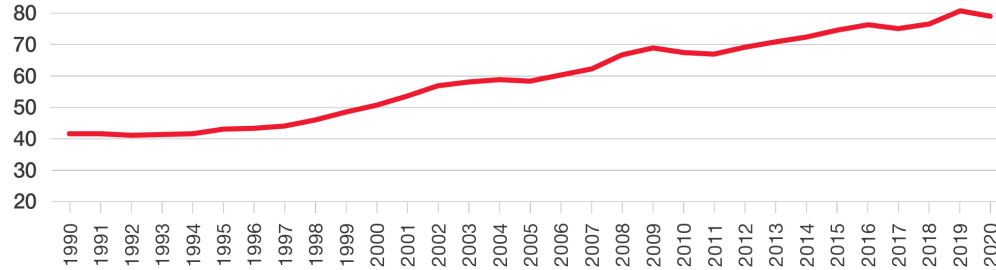
U.S. Public Transit Ridership

2020 - 2023



Total Public Transit Funding

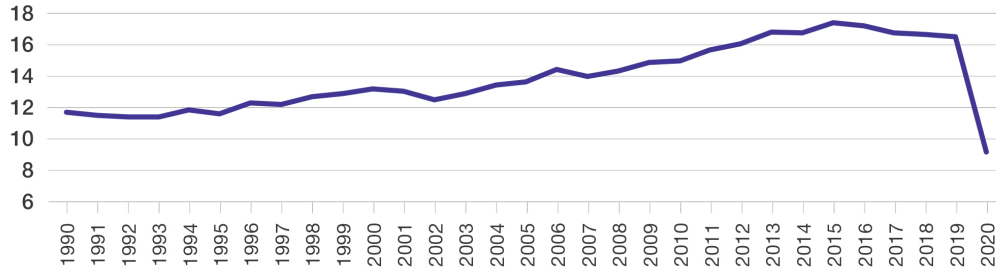
Transit Funding (In 2020 dollars)



SOURCE: APTA FACT BOOK ANALYSIS

Passenger Fare Revenue

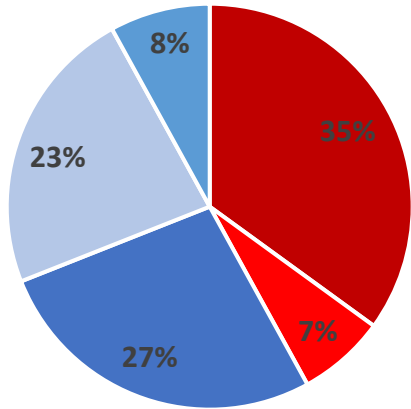
Passenger Fare Revenue, 1990-2020 (In 2020 Dollars)



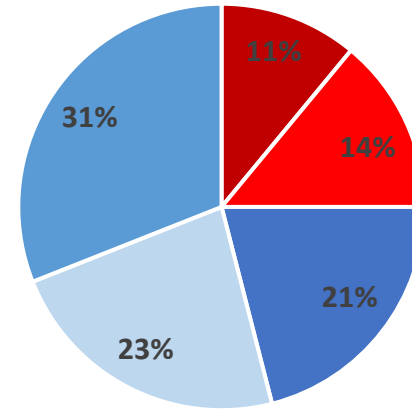
SOURCE: APTA FACT BOOK ANALYSIS

Sources of Transit Agency Funding

Operations

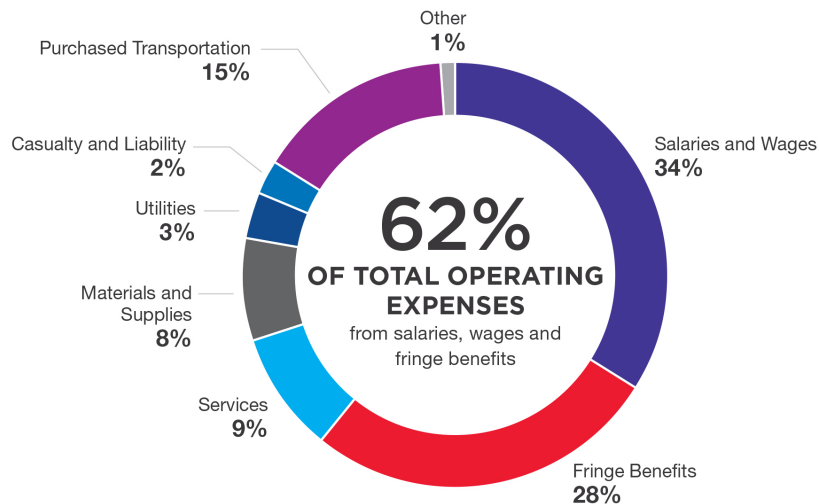


Capital



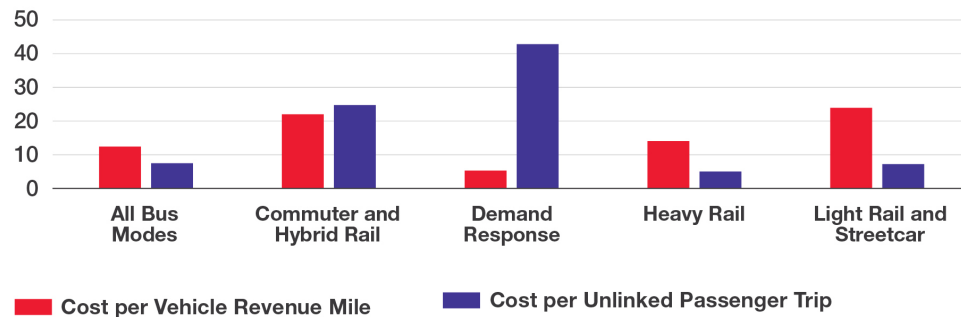
■ Operating Receipts ■ Taxes and Tolls ■ Local ■ State ■ Federal ■ Operating Receipts ■ Taxes and Tolls ■ Local ■ State ■ Federal

Total Public Transit Operating Expenses



SOURCE: APTA FACT BOOK ANALYSIS

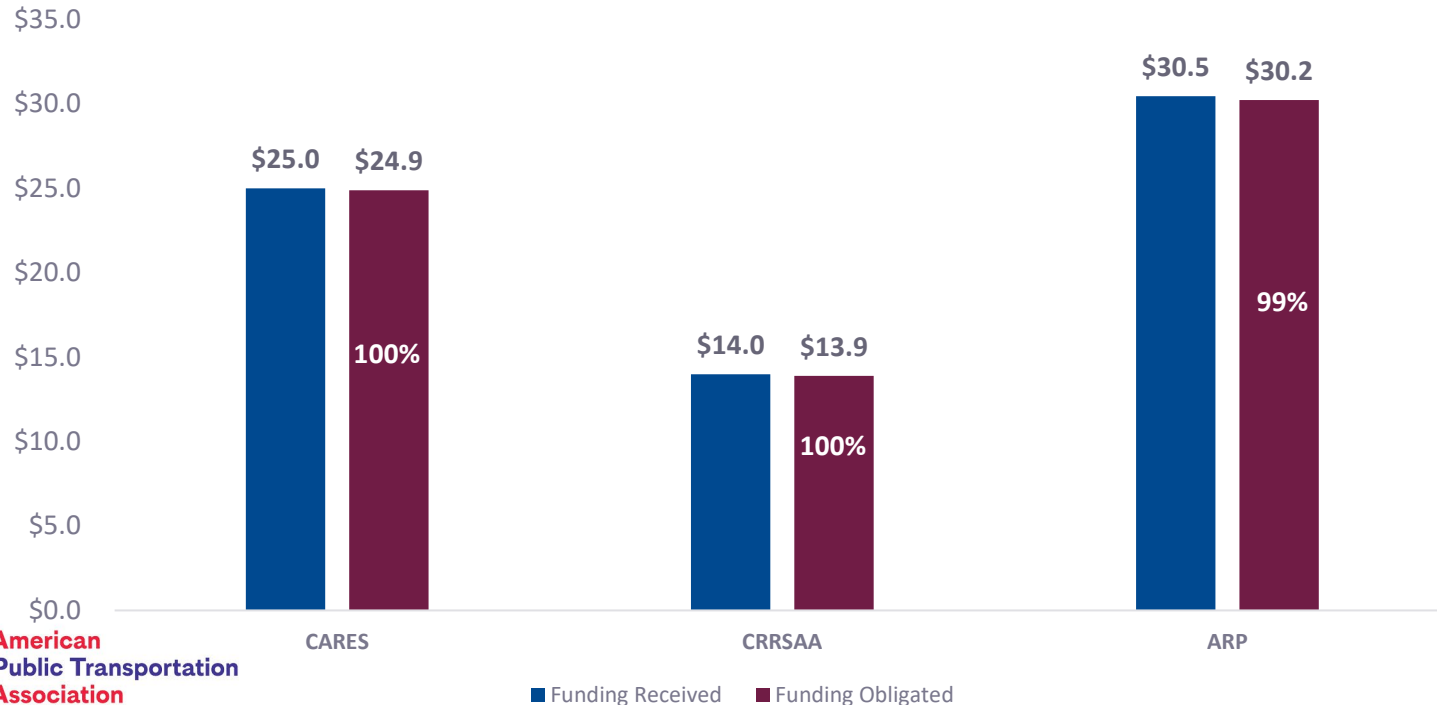
Operating Expenses by Mode



SOURCE: APTA FACT BOOK ANALYSIS

COVID-19 Public Transit Funding

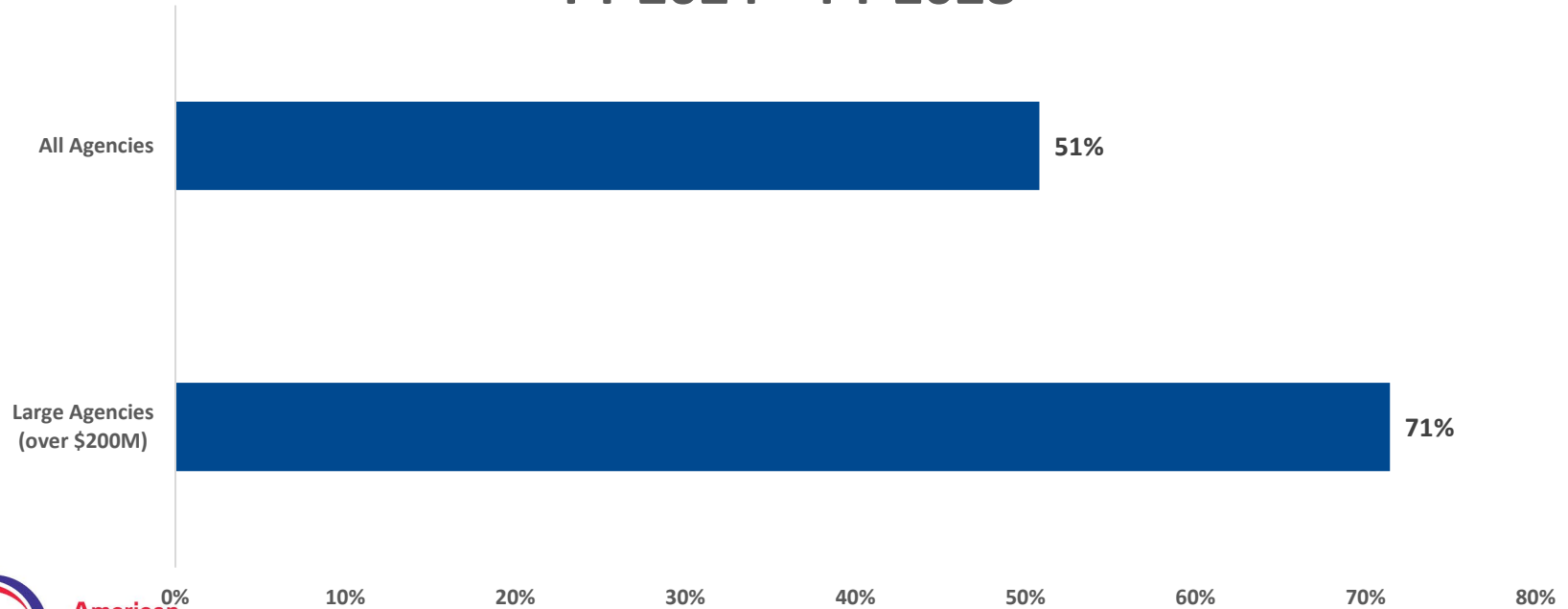
More than 99 Percent of \$69.5 Billion Obligated



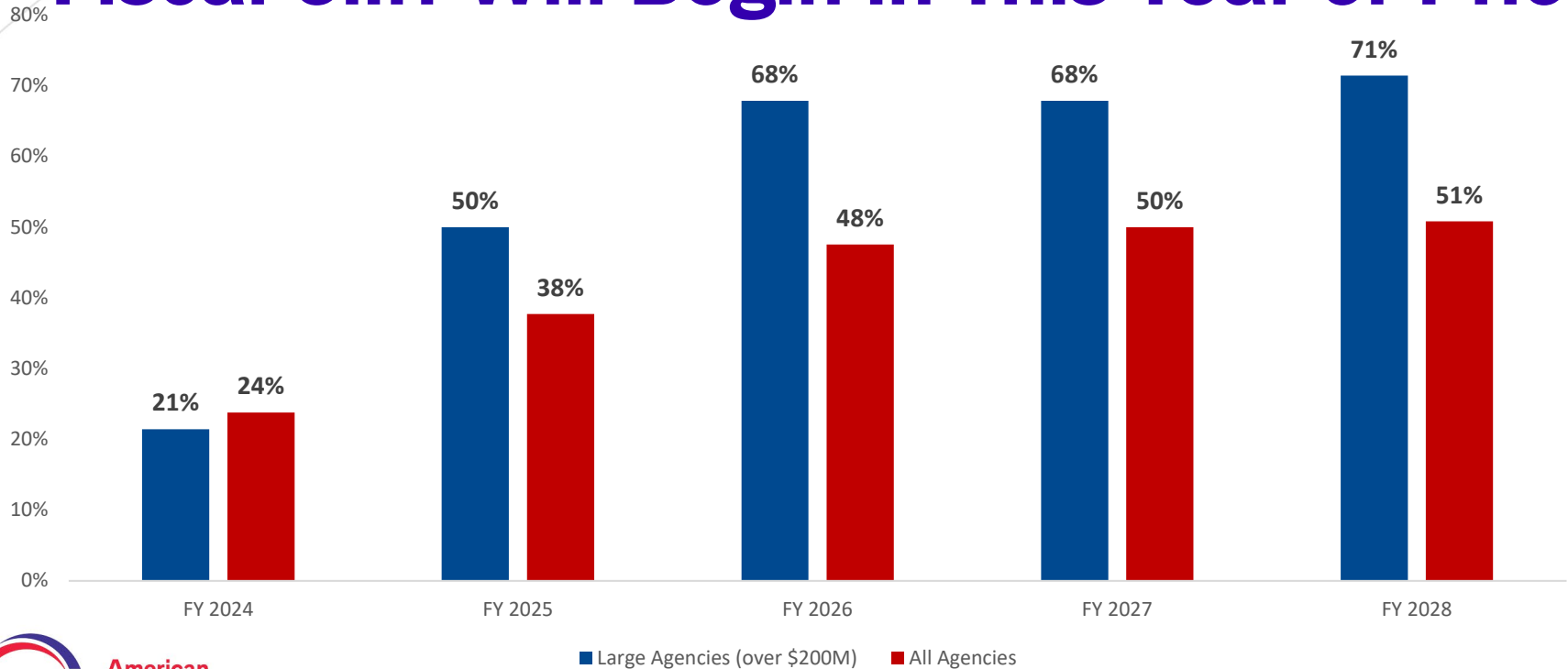
**American
Public Transportation
Association**

Transit Agencies Experiencing Fiscal Cliff

FY 2024 – FY 2028



Fiscal Cliff Will Begin in This Year or Prior



Transit Agency Responses to Fiscal Cliff

Ranking of Potential Responses to Fiscal Cliff	
Most Likely to Pursue →	Seek Increased State Funding
	Reduce Public Transit Agency Costs
	Seek Increased Local Funding
	Seek New Dedicated Tax Revenues
	Seek Other New Revenues (e.g., Advertising, Naming Rights)
	Reduce Service
	Shift Funds from Capital Budget to Operating Budget
	Seek Increased Fares
Least Likely to Pursue →	Reduce Workforce

- ✓ More Likely to Seek Increased Funding
- ✓ Less Likely to Reduce Service or Increase Fares
- ✓ Seek New Sources of Funding that Do Not Impact Ridership Recovery

Biden Administration Proposals

- ✓ **Authorize Large Public Transit Agencies to Use Urbanized Area Formula Grants for Operating Assistance in FY 2024**
 - ❖ Neither House nor Senate Transportation Appropriations Bills Include this Proposal
- ✓ **Increase the Federal Share to 100 Percent for Mobility for Seniors/Persons with Disabilities Formula Grants and Rural Formula Grants in FY 2024**
 - ❖ Included in Senate Transportation Appropriations Bill

Creating Jobs

430K+
People

work for public
transportation agencies



50K Jobs

created and supported
per \$1 billion investment
in job creation

5-to-1

ECONOMIC RETURN

produced by long-term
investment in public transit

\$382 Million

IN TAX REVENUE

supported per \$1 billion
investment in job creation

(According to APTA's "Economic Impact of Public Transportation Investment: 2020 Update")



**American
Public Transportation
Association**

Supporting the Private Sector

2,000+
SUPPLIERS

in 48 states and DC

Nearly

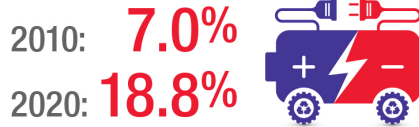
\$42 Billion
IN TRANSIT SPENDING

flows to the private sector
(65% increase since 2000)

Fostering Energy Independence

Leading in Clean Technology

Share of **Hybrid Electric Buses**



(According to APTA's 2020 Vehicle Database)

Lowering Carbon Emissions



less CO₂ emissions by using the subway rather than a car

(According to TCRP "Report 226: An Update on Public Transportation's Impacts on Greenhouse Gas Emissions")

Reducing Gasoline Consumption

**6.0
BILLION**



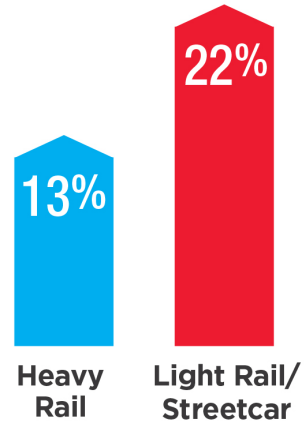
 **Gallons of Gas Saved**
each year by using public transportation

(According to TCRP "Report 226: An Update on Public Transportation's Impacts on Greenhouse Gas Emissions")

More Efficient



Increase in vehicle miles operated per kilowatt-hour
over the Past 30 Years



Questions?





Public Transit Agencies Face Severe Fiscal Cliff

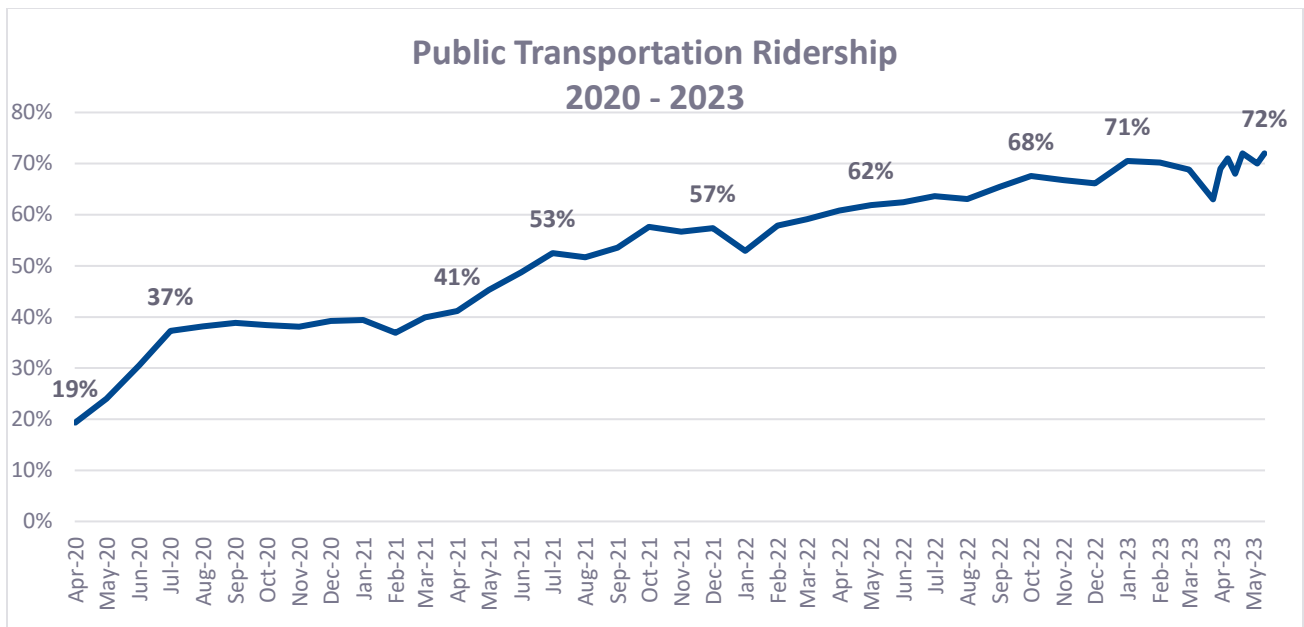
Key Takeaways

1. In May 2023, APTA surveyed its public transit agency members on future potential operating budget shortfalls, also known as the “Fiscal Cliff” that many agencies are facing.
2. One-half (51 percent) of 122 responding agencies say they are facing a Fiscal Cliff in the next five years.
3. For the largest agencies (i.e., agencies with operating budgets greater than \$200 million), the percentage is higher—71 percent.
4. The operating budget shortfalls that the largest agencies expect to encounter range from 10 to 30 percent of their operating budgets.
5. Agencies facing a Fiscal Cliff rank finding new revenue sources (e.g., state and local funds or dedicated revenues) as more likely courses of action than cutting service or raising fares.

Background

Public transit agencies experienced unprecedented decreases in ridership and fare revenue because of the COVID-19 pandemic. Congress provided emergency funding as part of three separate laws in 2020 and 2021. This emergency funding helped public transit agencies avoid major service cuts or layoffs by replacing lost fare revenue and local and state funding due to the pandemic. Transit agencies have obligated more than 99 percent of these COVID-19 emergency relief funds. While ridership levels have recovered to more than 70 percent of pre-pandemic levels nationwide, those levels vary by agency, and there is some evidence that fare evasion has increased in the last three years. In addition, operating costs have increased substantially since 2019. As a result, transit agencies are facing a situation where COVID-19 relief funds are expended and operating costs have increased, but fare revenues have not returned, presenting a looming operating budget shortfall, or “Fiscal Cliff”.

Public transportation ridership has recovered steadily over the past three years. As of the first half of 2023, public transportation ridership has recovered to more than 70 percent of pre-pandemic levels. Bus ridership has generally recovered more compared to pre-pandemic levels than rail modes. Rail ridership has seen more impact from work-from-home and downtown occupancy trends. Bus systems tend to serve more non-commute trips which have more closely returned to pre-pandemic levels. These ridership trends have had a profound impact on transit agency fare revenues.



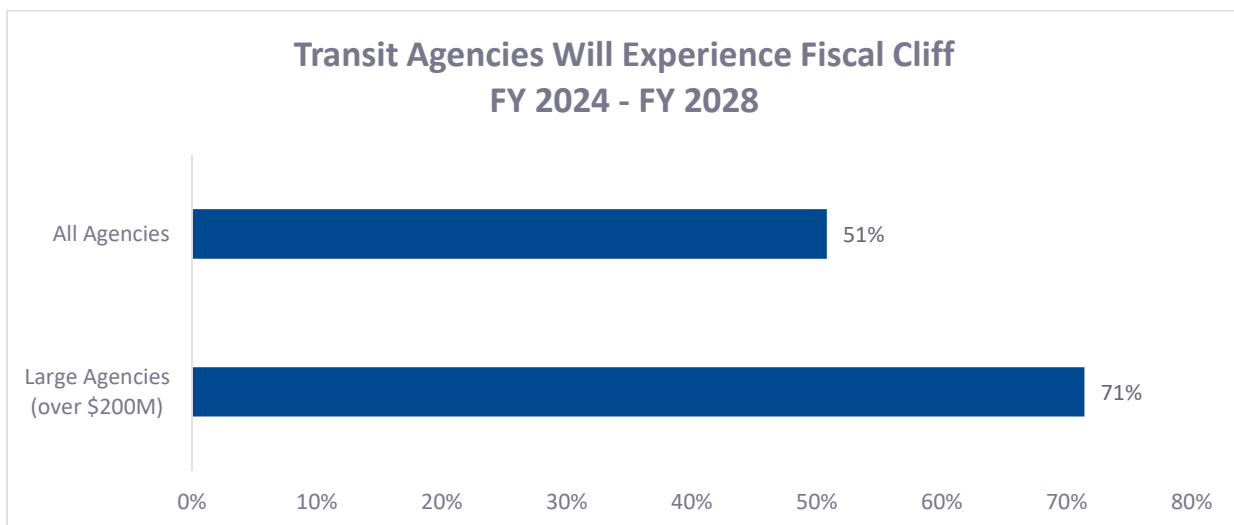
Public Transportation Ridership 2020 – 2023, Percent of Same Period in 2019.

In May 2023, APTA surveyed its members on future potential operating budget shortfalls that many agencies are facing. One hundred and twenty-two (122) APTA transit agency members responded.

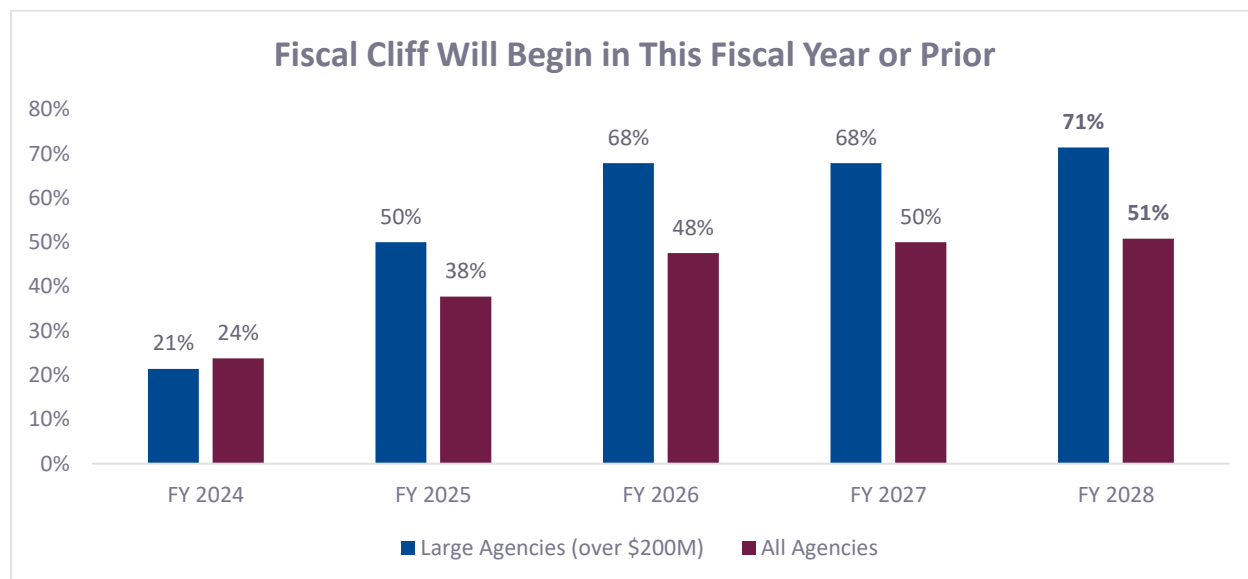
For the survey results, we established two categories for analysis: all respondents and large agency respondents (i.e., agencies with annual operating budgets greater than \$200 million). Seventy-five percent of large agencies responded to the survey and all responding agencies represent nearly \$32 billion of approximately \$50 billion in total fiscal year (FY) 2021 transit industry operating expenses.

Survey Results

One-half of responding agencies (51 percent) indicated that they will experience a Fiscal Cliff in the next five fiscal years. Seven of 10 large agencies (71 percent) stated that they are likely to experience a Fiscal Cliff in the next five years. These results correlate with what APTA members have shared at recent APTA conferences and committee meetings.



A majority of those agencies that anticipate a Fiscal Cliff stated that the Fiscal Cliff would begin to hit in FY 2024 or FY 2025.



Responding agencies were presented with a list of potential responses to operating budget shortfalls and were asked to rank them. Agencies indicated that they are more likely to pursue increased funding from state or local sources, or find efficiencies to reduce their own costs, rather than increase fares or reduce service. Agencies are thinking proactively about how they retain riders and grow ridership and are aware that reducing service and increasing fares have negative impacts on ridership. As one respondent commented, “as we are recovering ridership, fare increases and service cuts are not viable options.”

Public Transit Agency Responses to Fiscal Cliff

Most Likely to Pursue →	Seek Increased State Funding
	Reduce Transit Agency Costs
	Seek Increased Local Funding
	Seek New Dedicated Tax Revenues
	Seek Other New Revenues (e.g., Advertising, Naming Rights)
	Reduce Service
	Shift Funds from Capital Budget to Operating Budget
	Seek Increased Fares
Least Likely to Pursue →	Reduce Workforce

Some agencies are considering longer-term solutions, such as pursuing local ballot initiatives to create dedicated funding sources. In the meantime, they are seeking local or state funds to bridge the gap.

In conclusion, one-half of public transit agencies, including 71 percent of large transit agencies, face a Fiscal Cliff in the next five years. Agencies facing a Fiscal Cliff are seeking new revenue sources (e.g., increased state and local funding and new dedicated revenues) and reducing transit costs. The agencies are less likely to cut service and raise fares as they continue to aggressively work to restore transit ridership. Some state and local governments have begun to provide the necessary operations funding to continue these essential services.

The American Public Transportation Association (APTA)

The American Public Transportation Association is a nonprofit international association of 1,500 public- and private-sector organizations that represents a \$79 billion industry that directly employs 430,000 people and supports millions of private-sector jobs. APTA members are engaged in the areas of bus, paratransit, light rail, commuter rail, subways, waterborne services, and intercity and high-speed passenger rail. This includes transit systems; planning, design, construction, and finance firms; product and service providers; academic institutions; transit associations and state departments of transportation. APTA is the only association in North America that represents all modes of public transportation. APTA members serve the public interest by providing safe, efficient, and economical transit services and products.

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APTA Vision Statement

APTA leads public transportation in a new mobility era,
advocating to connect and build thriving communities

AGENDA ITEM 7

The Gas Tax In America: Time is Running Out

A 2023 Outlook on Fuel Tax Sustainability

Ed Regan
Transportation
Consultant

Presented to:

**Md. Commission on Transportation
Revenue and Infrastructure Needs**



Annapolis, Md. | August 24, 2023

The Motor Fuel Tax in America: A System at Risk



The motor fuel tax has served as the primary source of funding for transportation in America for almost 100 years

- An efficient proxy for a direct user fee



It has served us well; but its days may be numbered

- Increasing fuel efficiency
- Dramatic shift toward fully electric vehicles

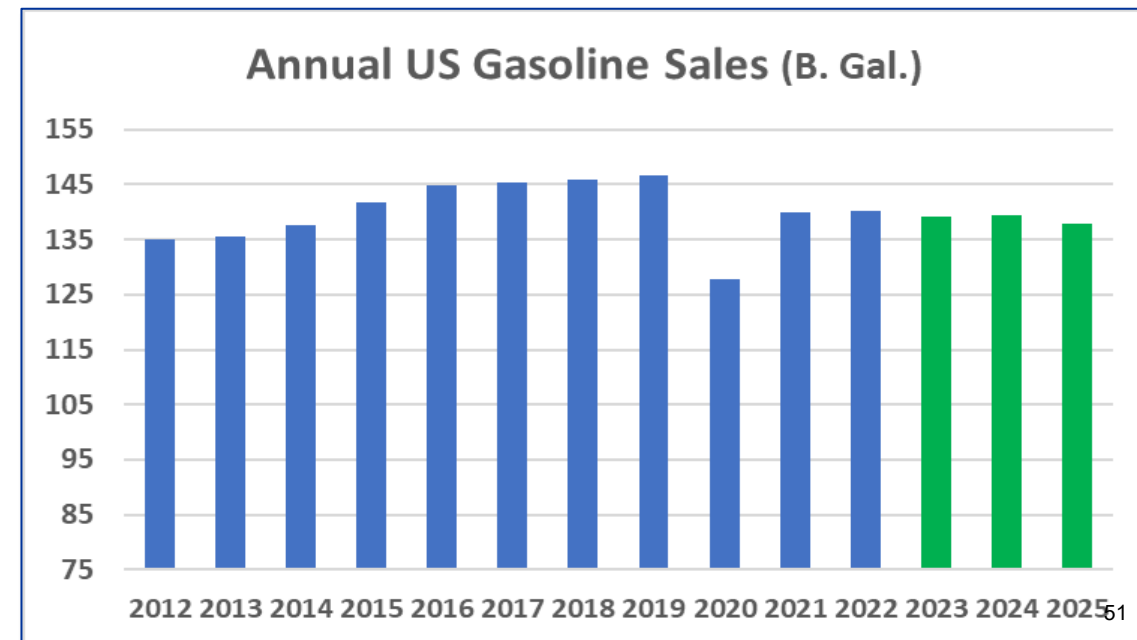
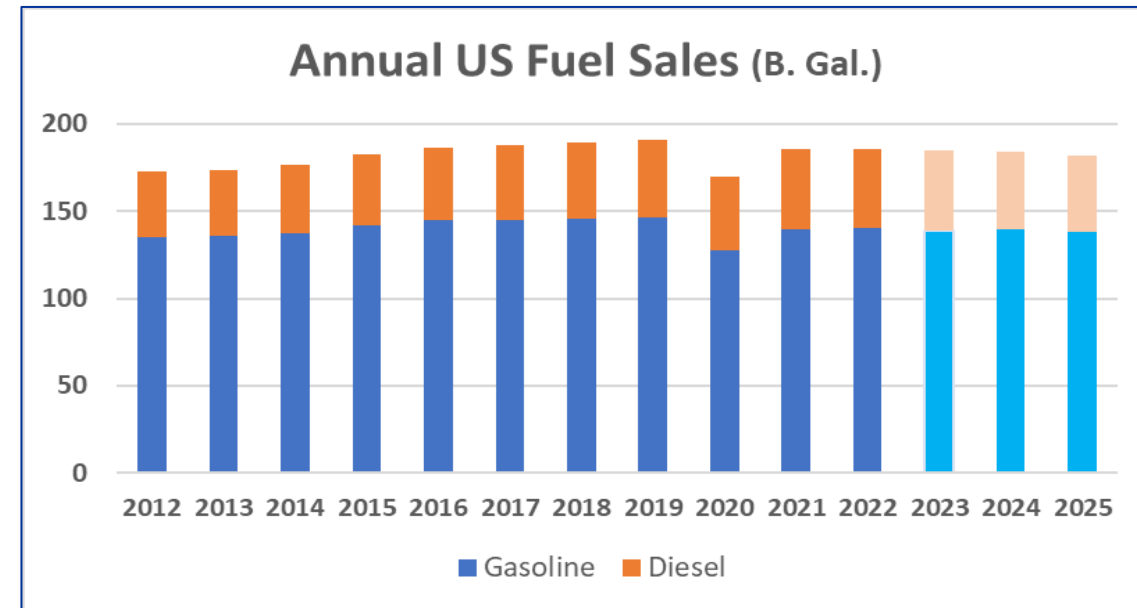


Today's presentation: an updated look at the sustainability of the gas tax

- Builds upon the latest 2023 EIA Annual Energy Outlook
- Three alternative future scenarios

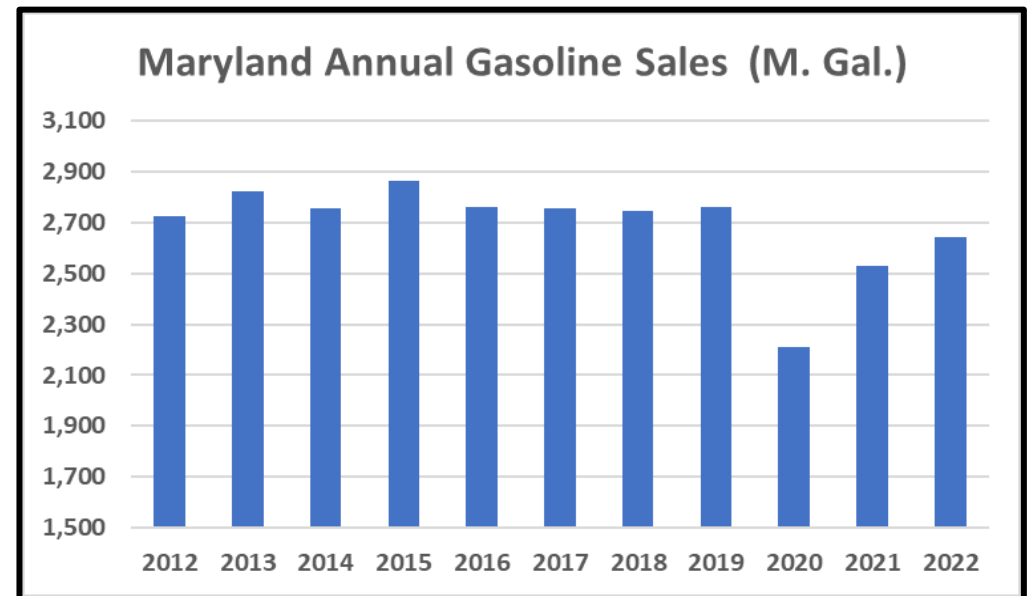
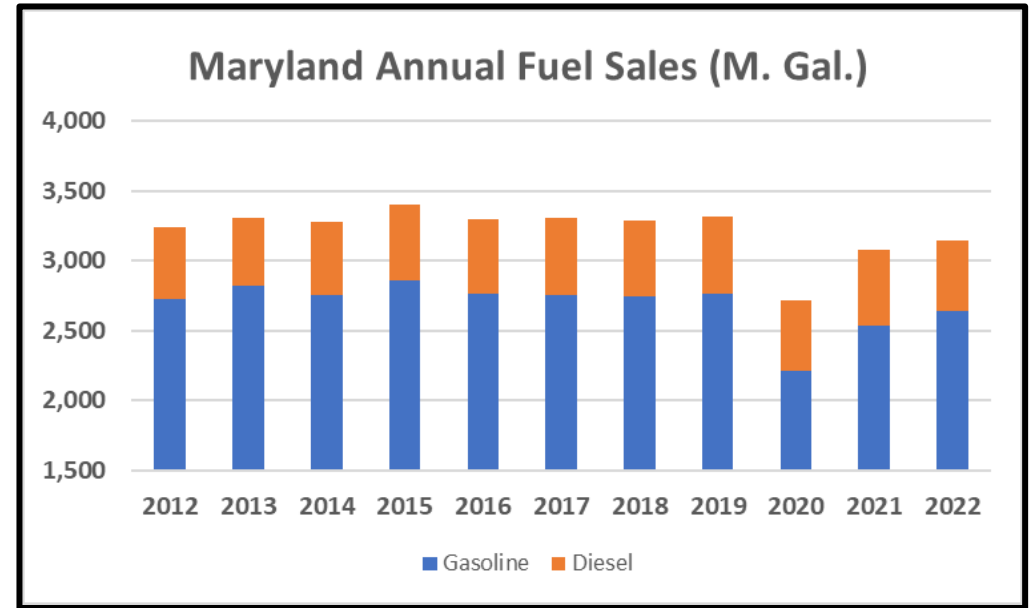
Recent US Fuel Sales Trends

- Continuous growth from 2012 thru 2019
- Big Drop in 2020 due to Covid pandemic
 - Total fuel down 11%
 - Gasoline down 13%
- Recovery in 2021; but little growth in 2022
 - VMT up by 2.75%
 - Total Fuel up by only 0.15%
 - Gasoline up by only 0.12%
- 2022 VMT within 0.5% of 2019 pre-pandemic level
 - But total fuel is still 2.7% lower
 - Gasoline sales down 4.4%
- Seems we reached “peak fuel” in 2019
 - And were headed down
 - Initial Projections using EIA 2023 AEI Ref. Case

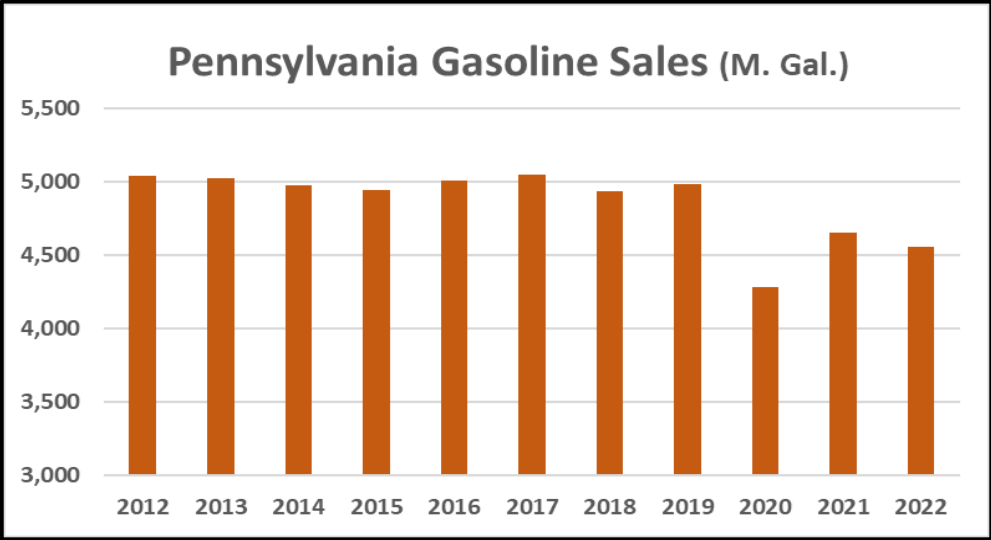
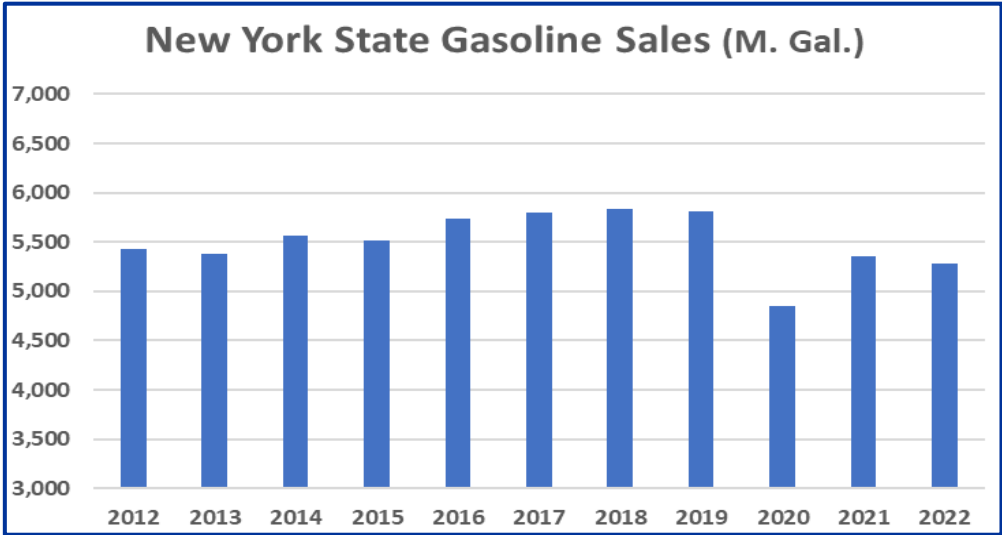
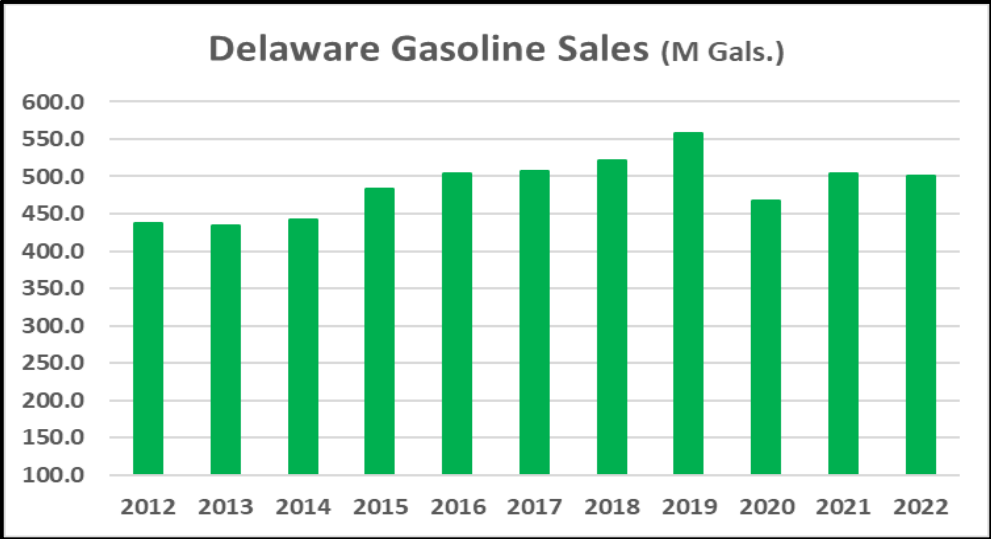
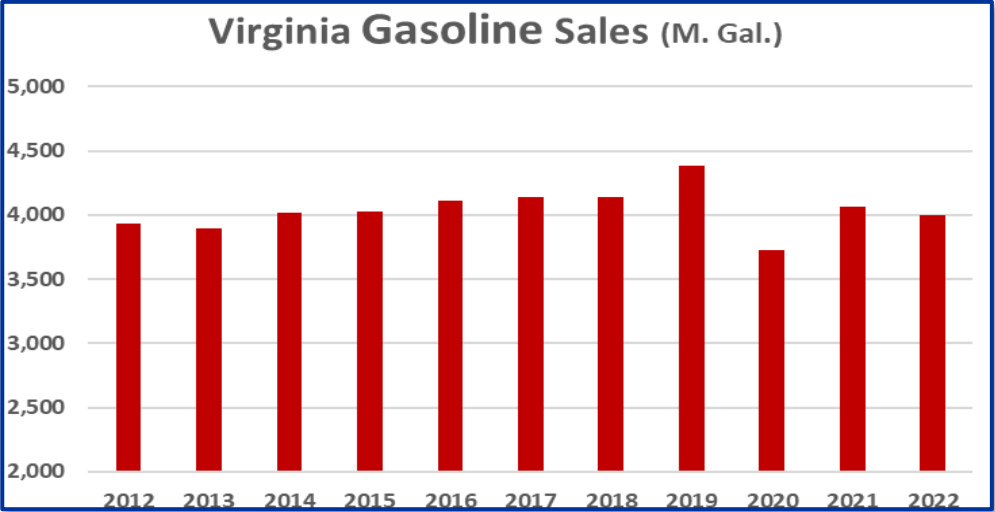


Maryland Fuel Sales Trends

- Somewhat more variable by year
- Big Drop in 2020 due to Covid pandemic
 - Total fuel down 18%
 - Gasoline down 20%
- Recovery in 2021; but well short of 2019 level
 - Total Fuel up by only 10.9%
 - Gasoline up by only 14.2%
- 2022 fuel sales still below 2019 level
 - Total fuel is still 5.2% lower
 - Gasoline sales down 4.4%

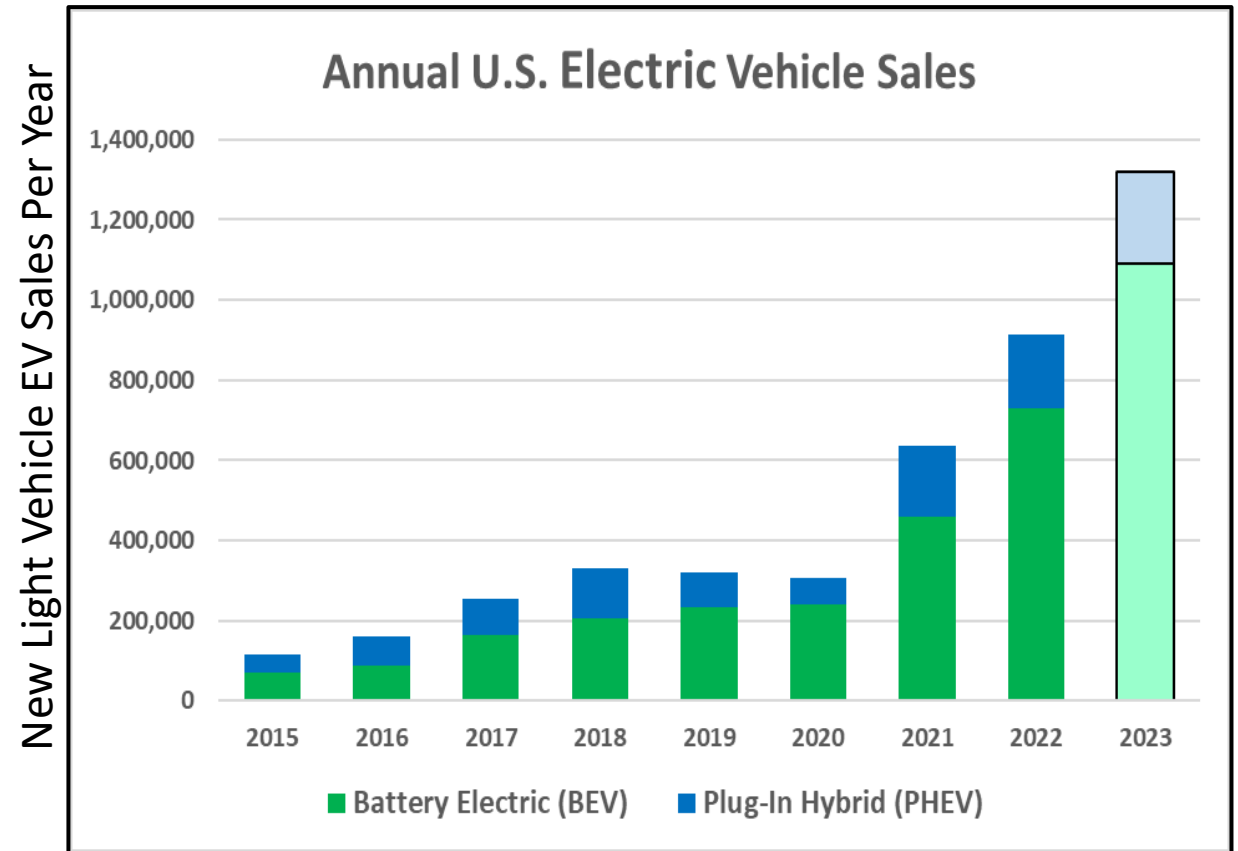


Recent Gasoline Sales in Selected States



An Emerging Surge in New Electric Light Vehicle Sales

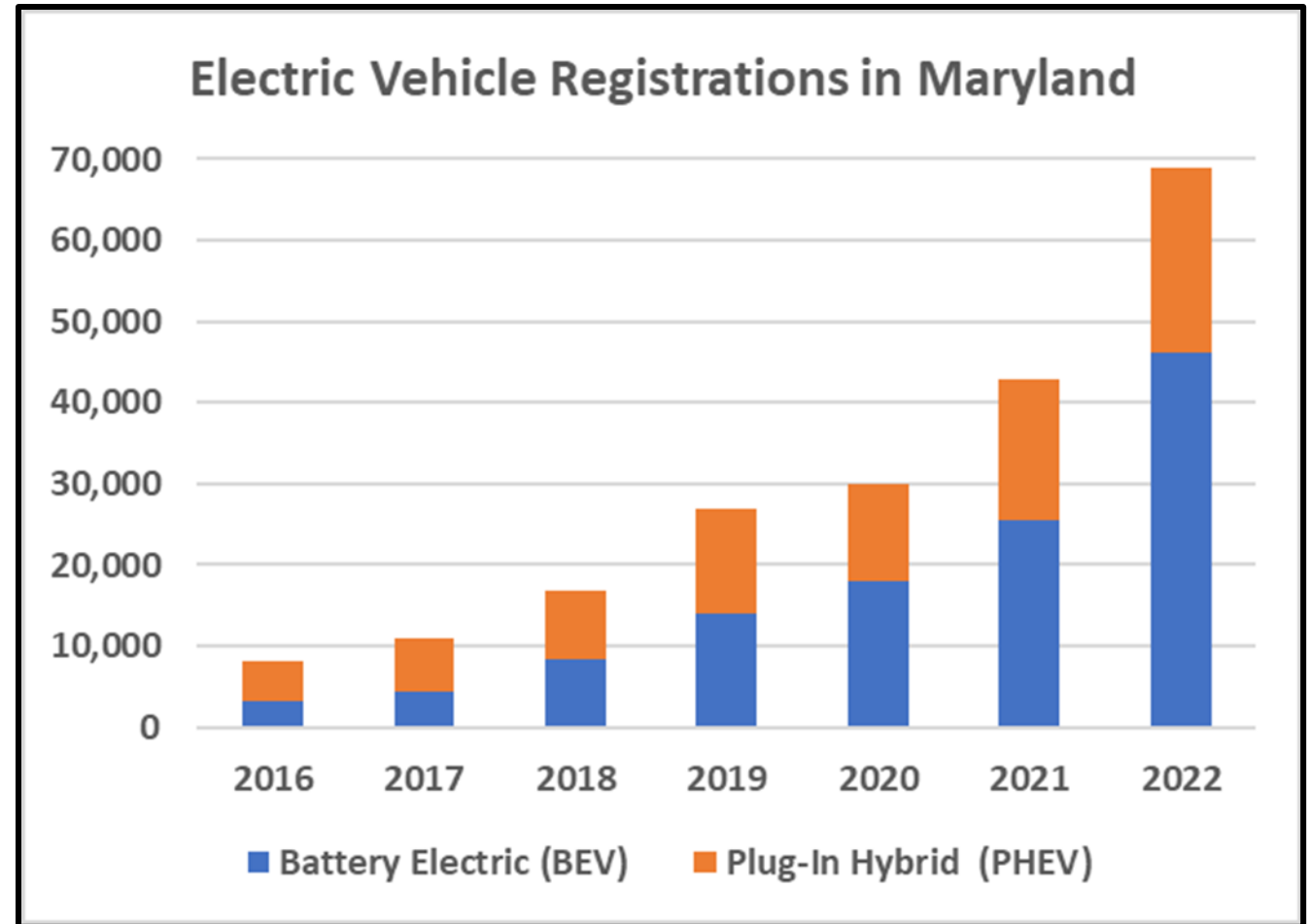
- Between 2017 and 2020, new electric vehicle sales averaged just over 300,000 per year
 - Less than 2% of total LV sales
 - About 70% BEV and 30% PHEV
- EV sales in US more than doubled in 2021 to over 635,000
 - 4.25% of total LV sales
- In 2022, BEV and PHEV sales totaled over 915,000
 - Almost 6.7% of light vehicle sales
 - A 3-fold increase over EV sales in 2020
- Based on first 6 months, EV sales in 2023 may reach 1.3 million!
 - Almost 9% of light vehicle sales



Source: Argonne National Laboratory

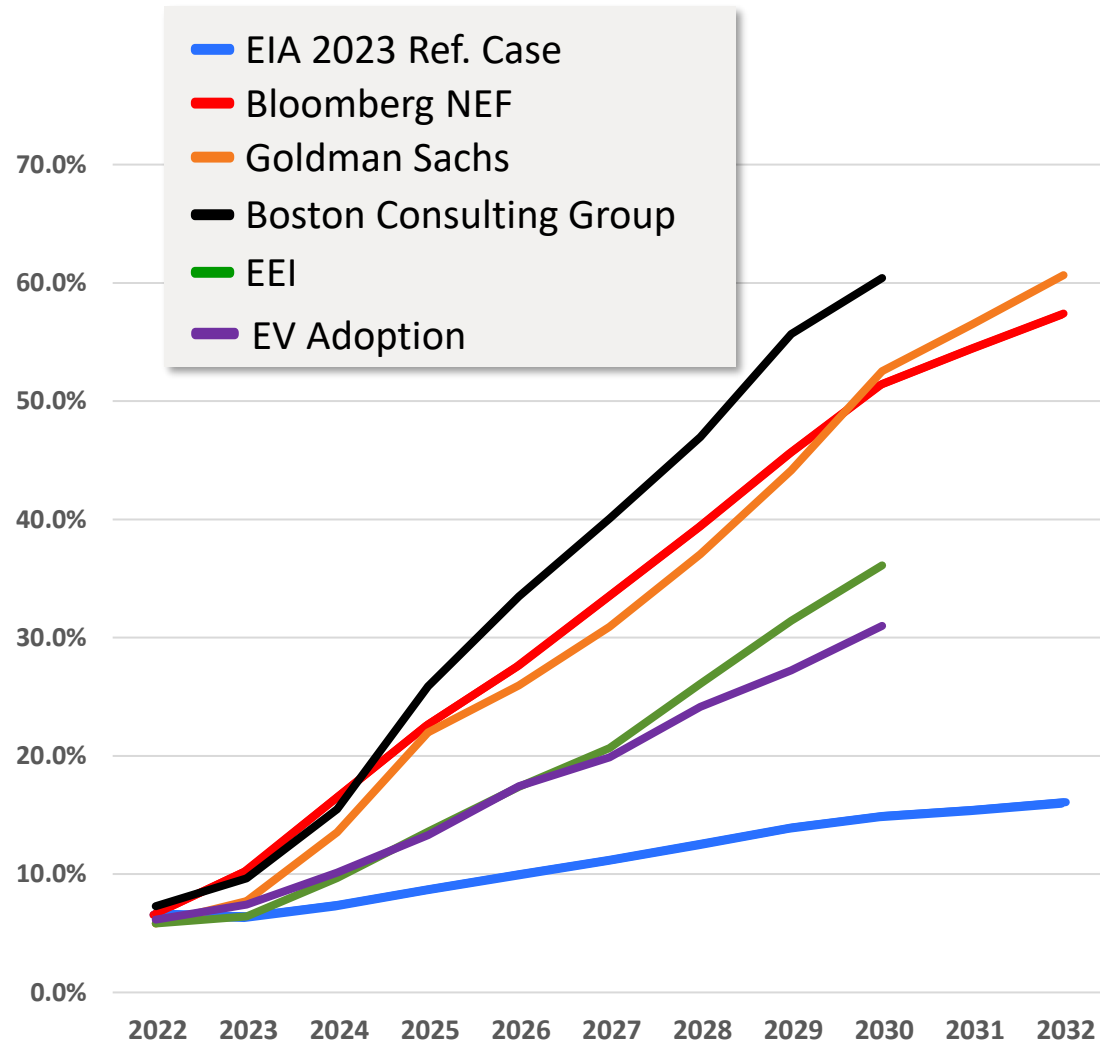
Light Duty Electric Vehicles in Maryland

- In Maryland, EV registrations have increased **9-fold** since 2016
 - Almost 70,000 in 2022
 - 1.36% of MD registered LVs (0.17% in 2016)
- EV's more than 7% of light vehicle sales in 2022
 - U.S. average about 6%
- Maryland EV's per 1,000 population
 - 2017: 2.03
 - 2022: 9.16
 - 12th highest state in 2022



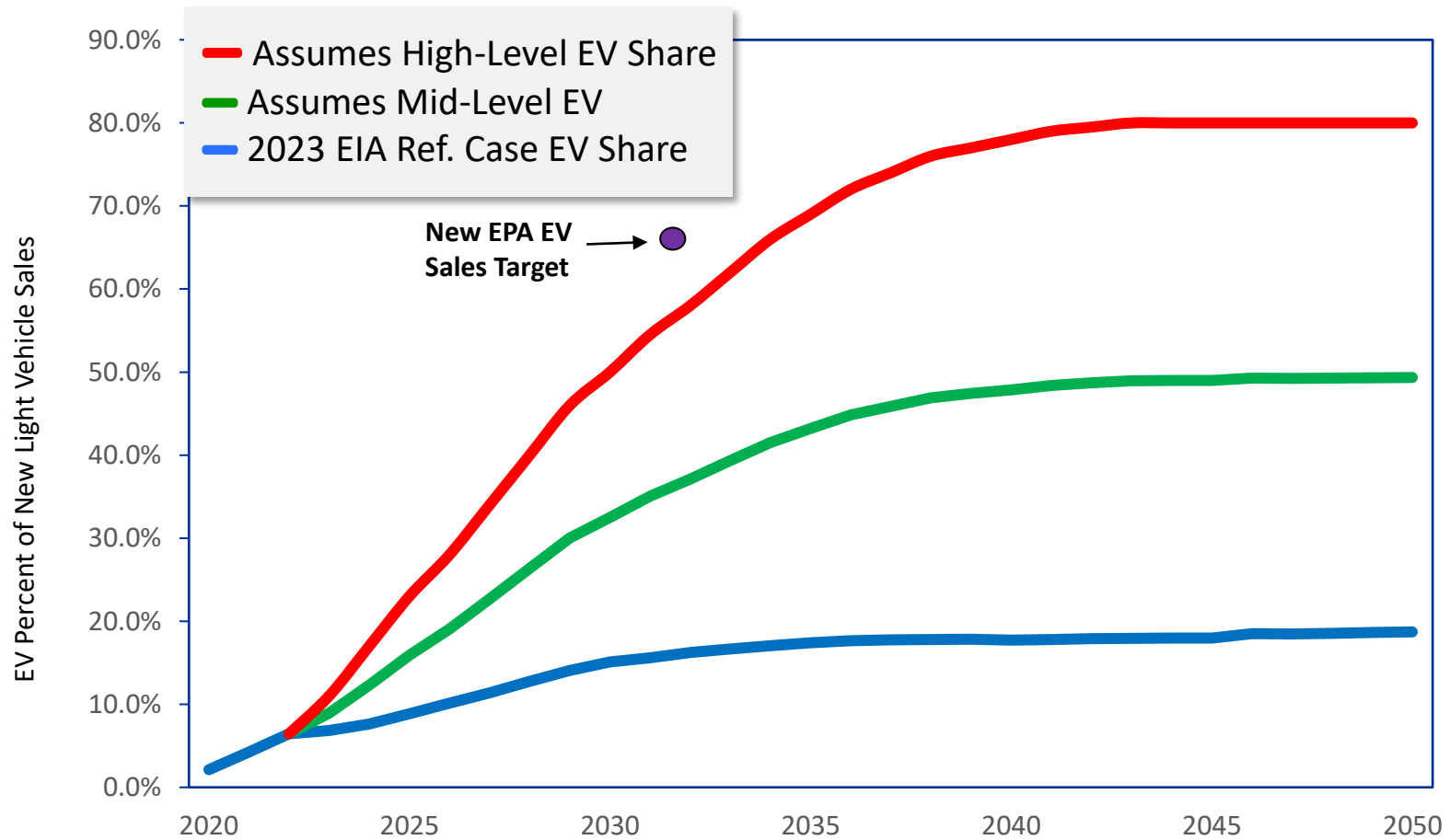
Source: U.S Dept. of Energy; Alternate Fuels Data Center

Looking Forward: Alternative Projections of EV Light Vehicle Sales Shares

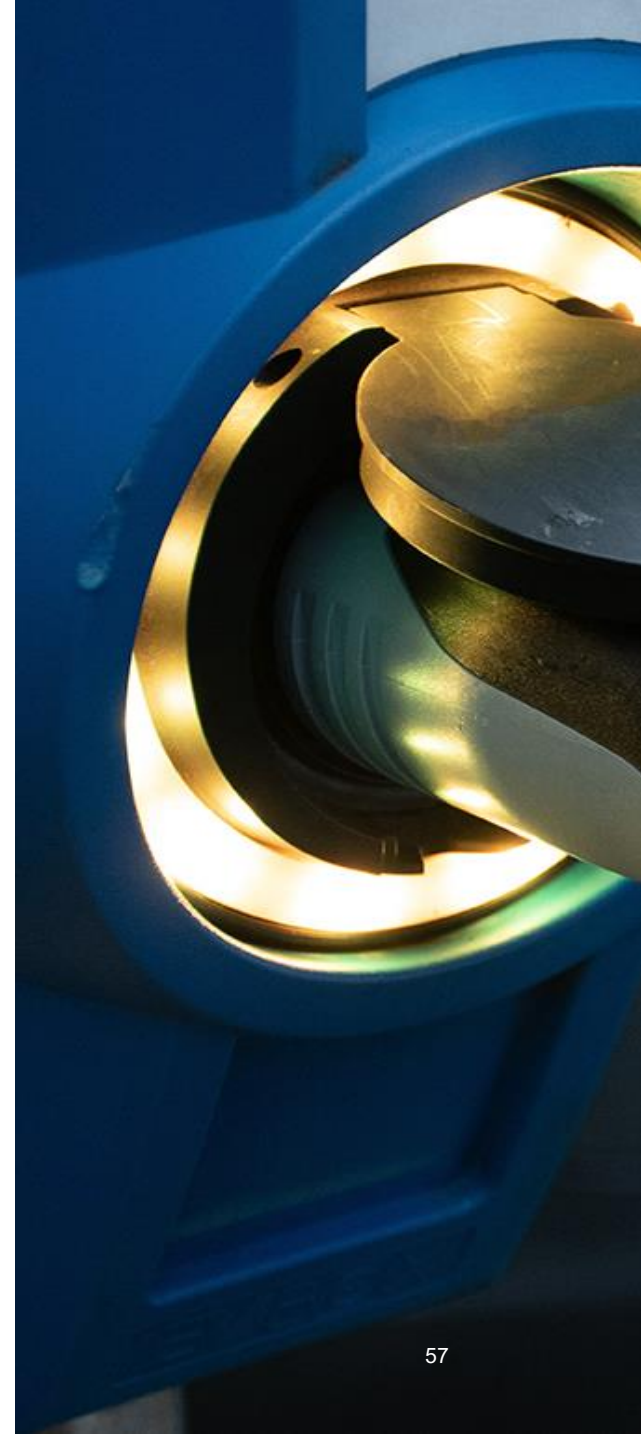


- Near term estimates over next 8-10 years
- EIA 2023 Annual Energy Outlook
 - Somewhat higher than 2022 forecast but still less than most other projections
 - Estimated to reach over 16% by 2032
- Bloomberg New Energy Finance
 - Traditionally one of the highest estimated EV share
 - Recent 2023 updated projection expects EV share to reach 50% of light vehicle sales by 2030
- Four other independent projections
 - Two in the “mid-level”, between EIA and BNEF
 - Edison Energy Institute and EV Adoption
 - Two comparable to or higher than BNEF
 - Goldman Sachs and Boston Consulting
- New EPA Proposal
 - 67% of Light and Medium Vehicle sales should be EV by 2032!

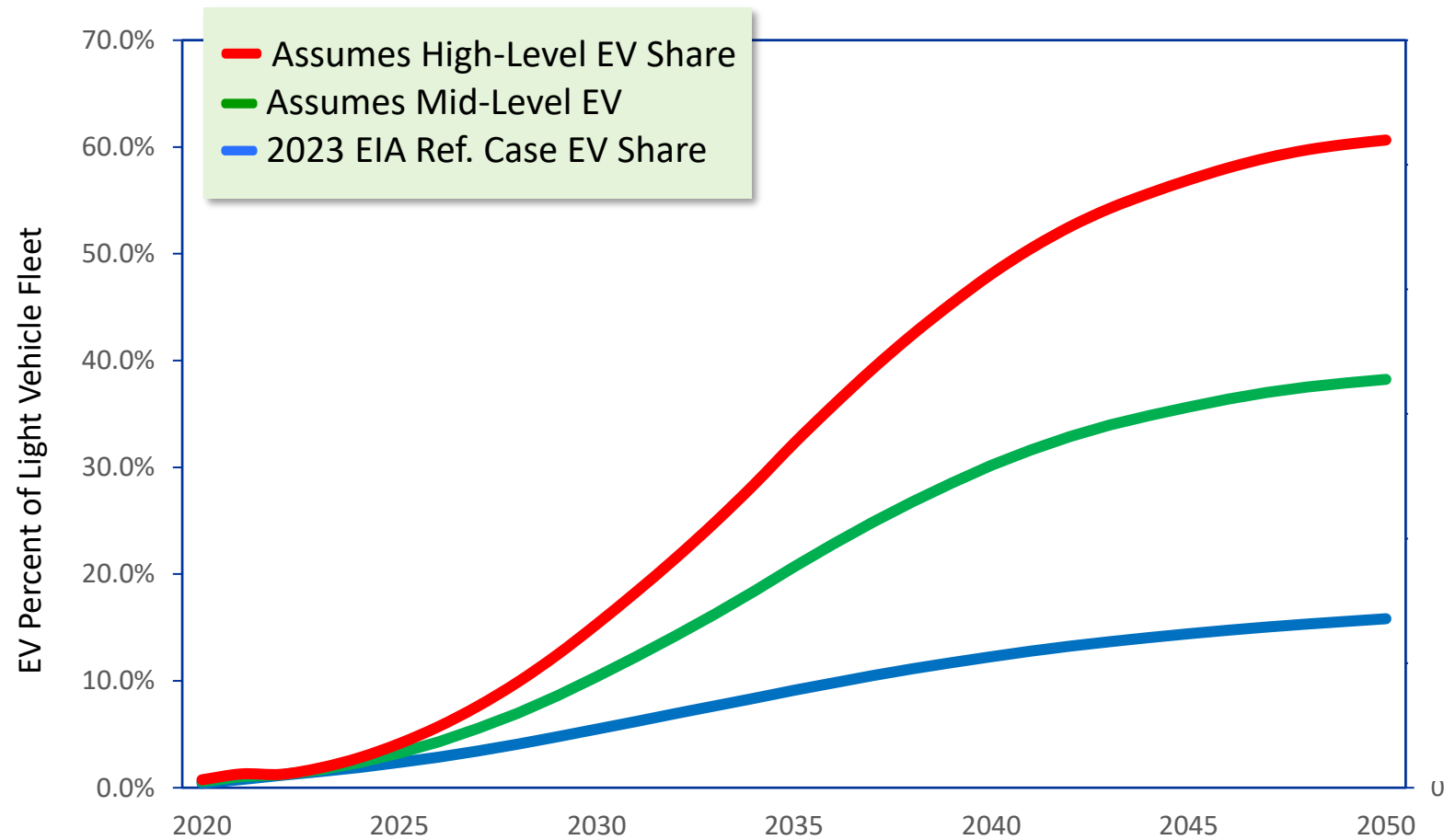
Alternative Estimates of EV Share of New U.S. Light Vehicle Sales



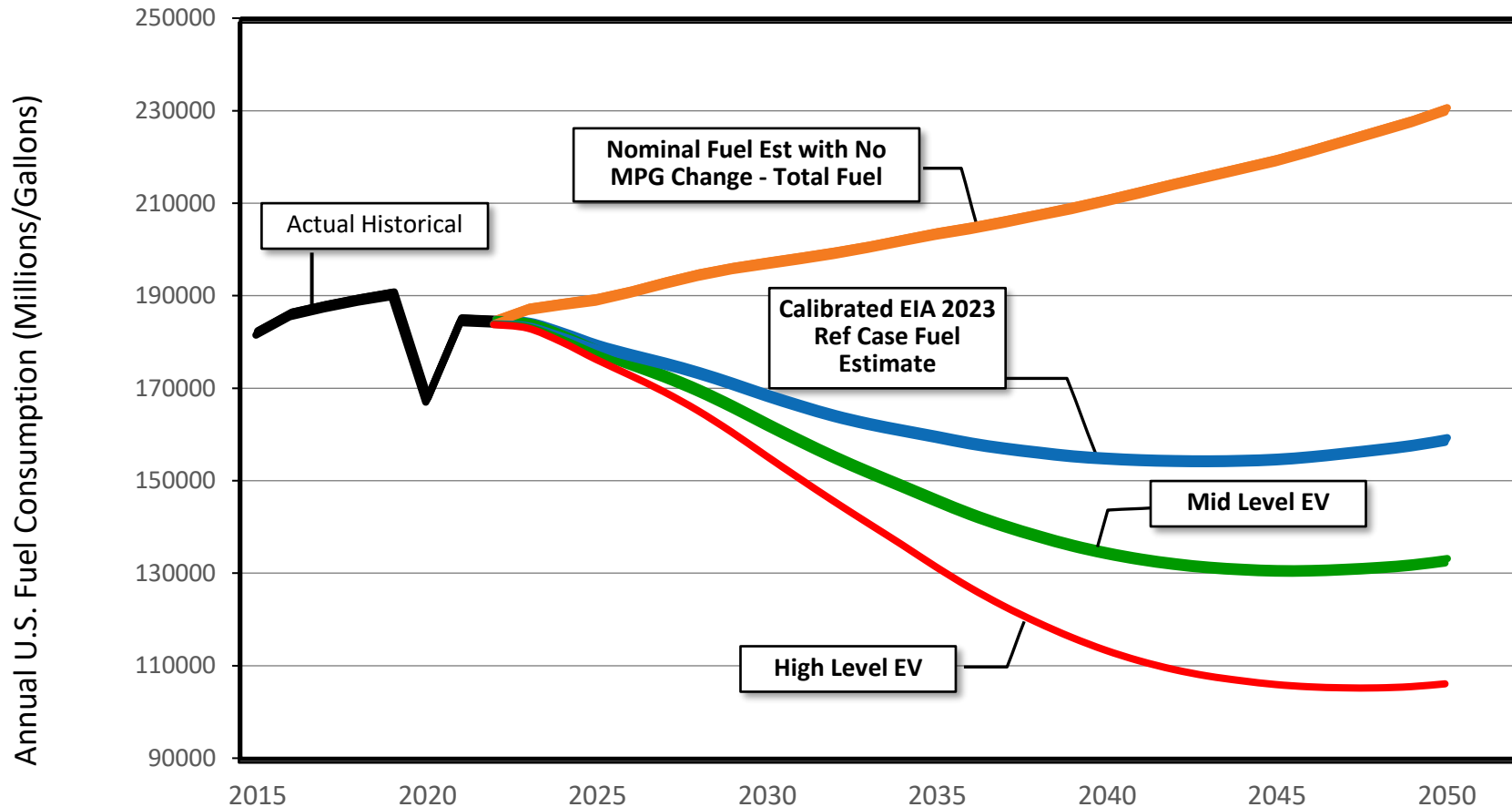
Includes BEV and PHEV Vehicles



Alternative Estimates of U.S. Light Vehicle Fleet EV Shares



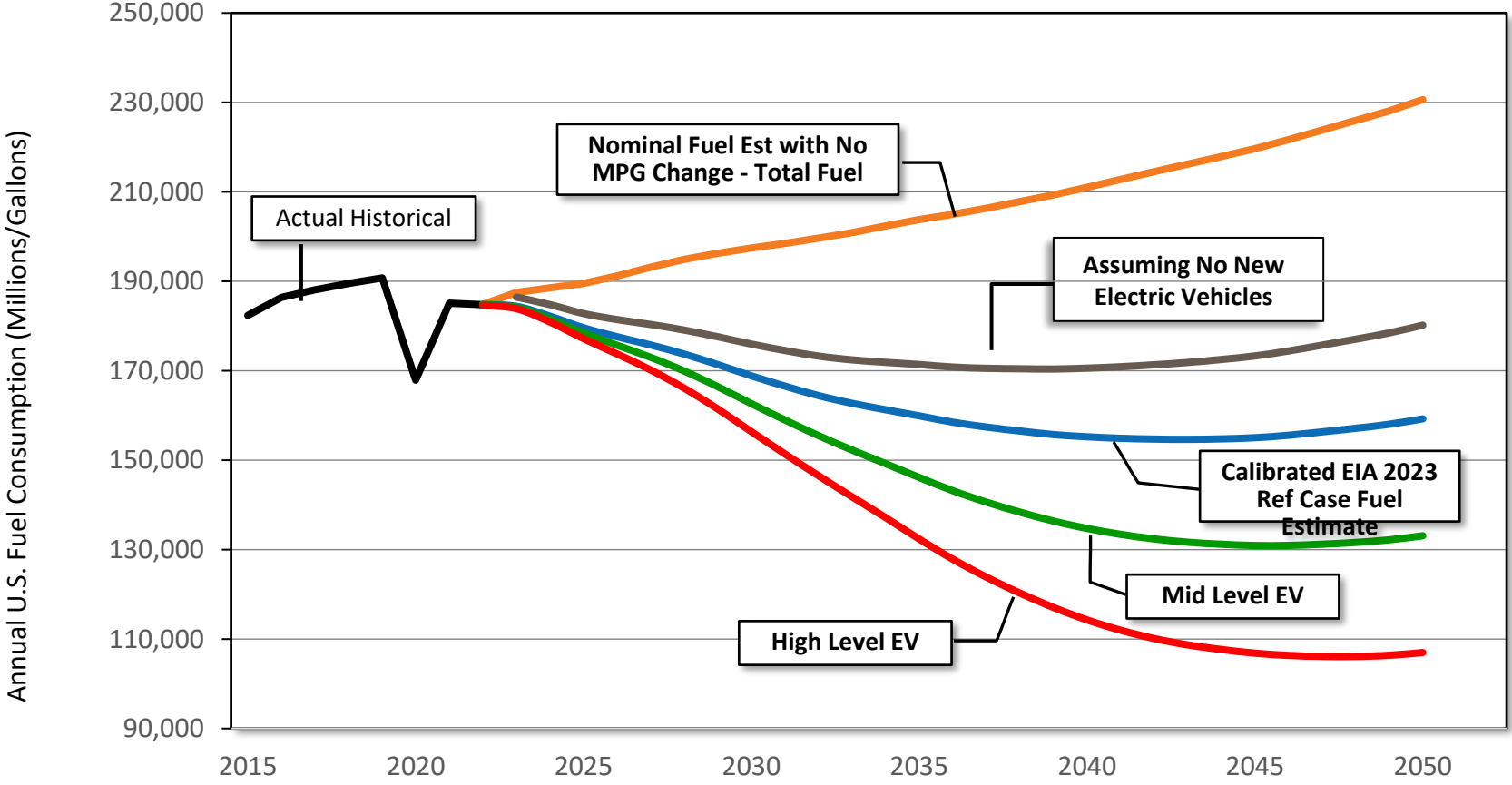
Comparison of Estimated Total U.S. Fuel Sales Forecasts



Source: US Energy Information Administration.
Bloomberg New Energy Finance.



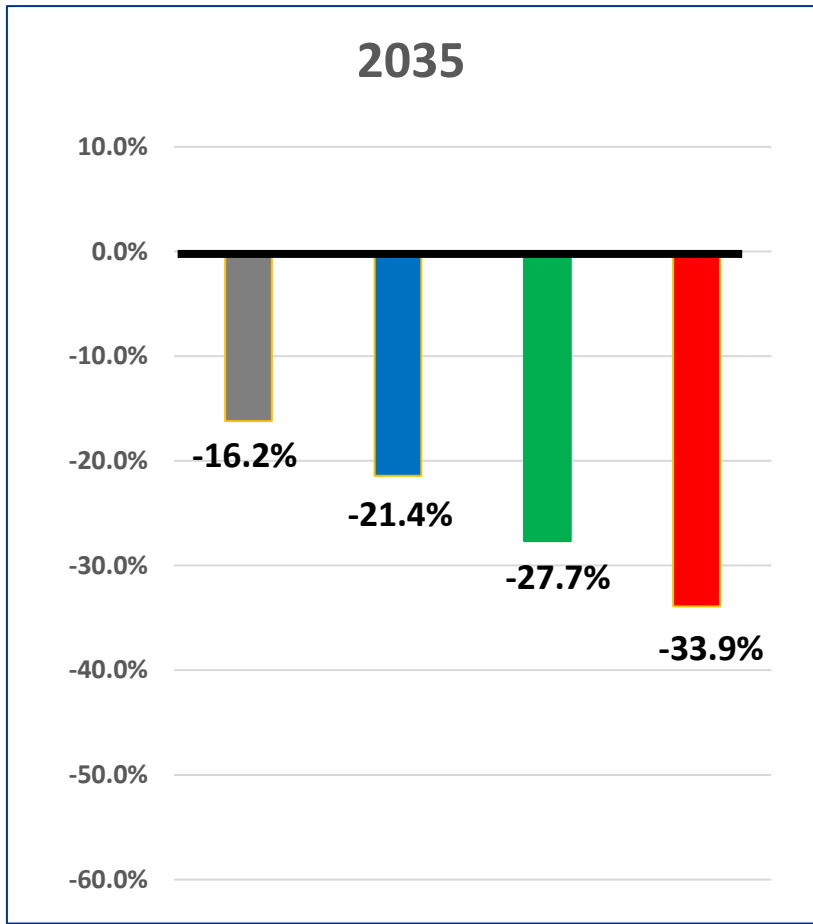
Comparison of Estimated Total U.S. Fuel Sales Forecasts



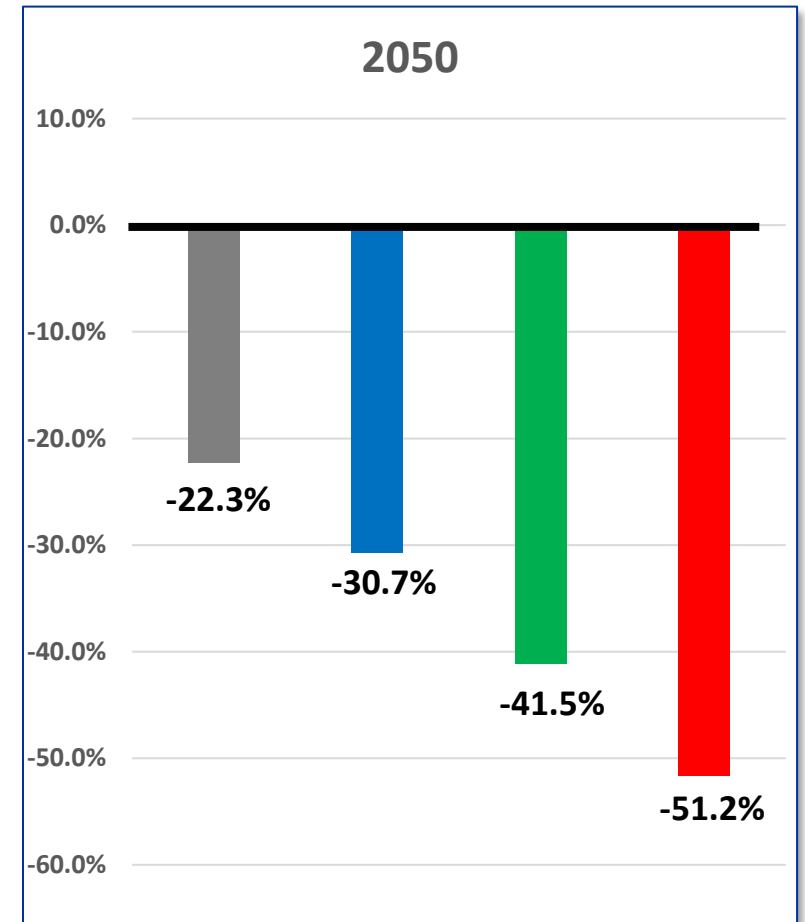
Source: US Energy Information Administration.
Bloomberg New Energy Finance.



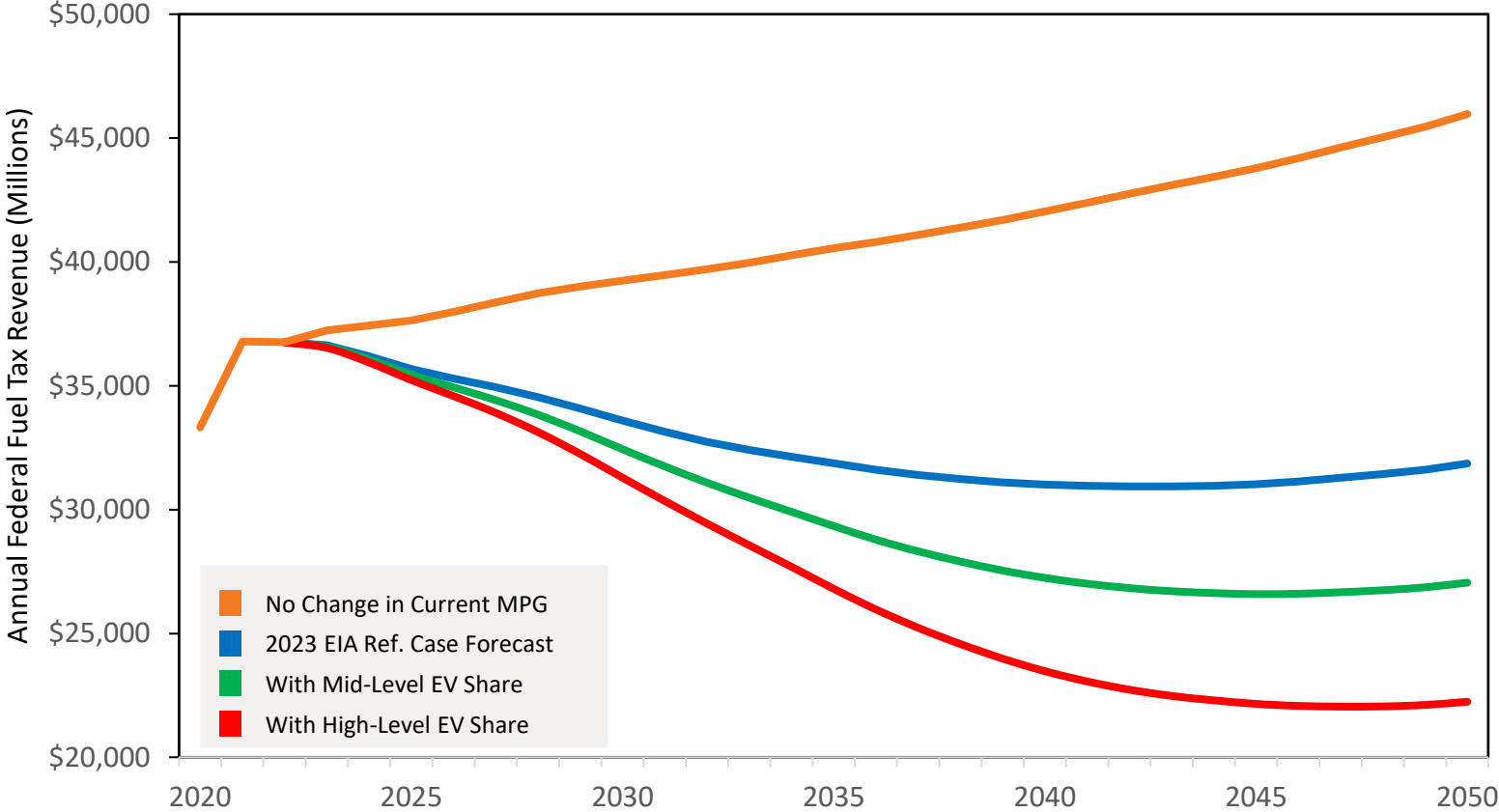
Comparison of National Fuel Sales Impacts by Scenario



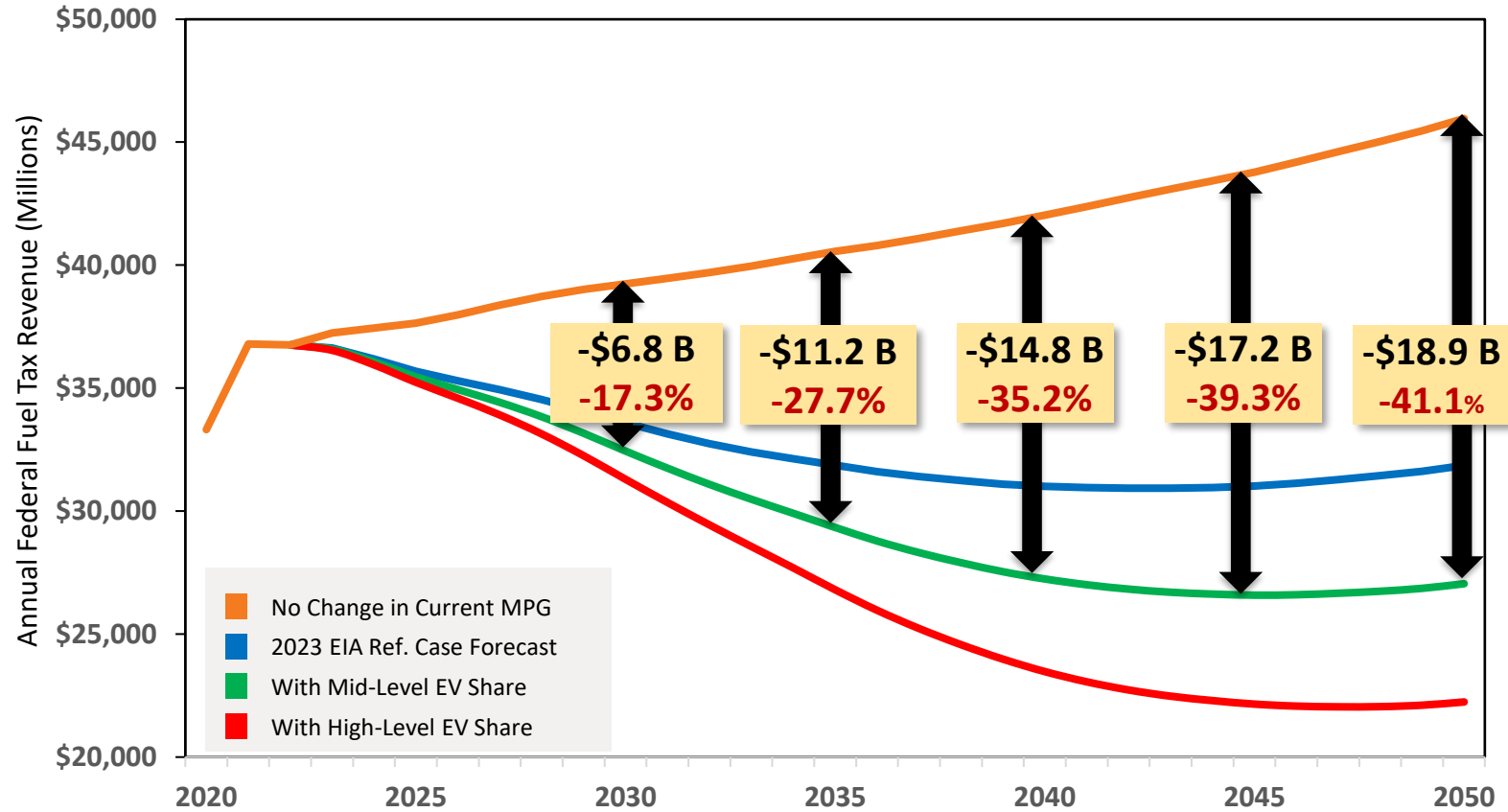
- No EVs – Incr. MPG Only
- EIA 2023 Ref. Case
- Mid-Case EV Share
- High-Case EV Share



Estimated Annual Federal Fuel Tax Revenue

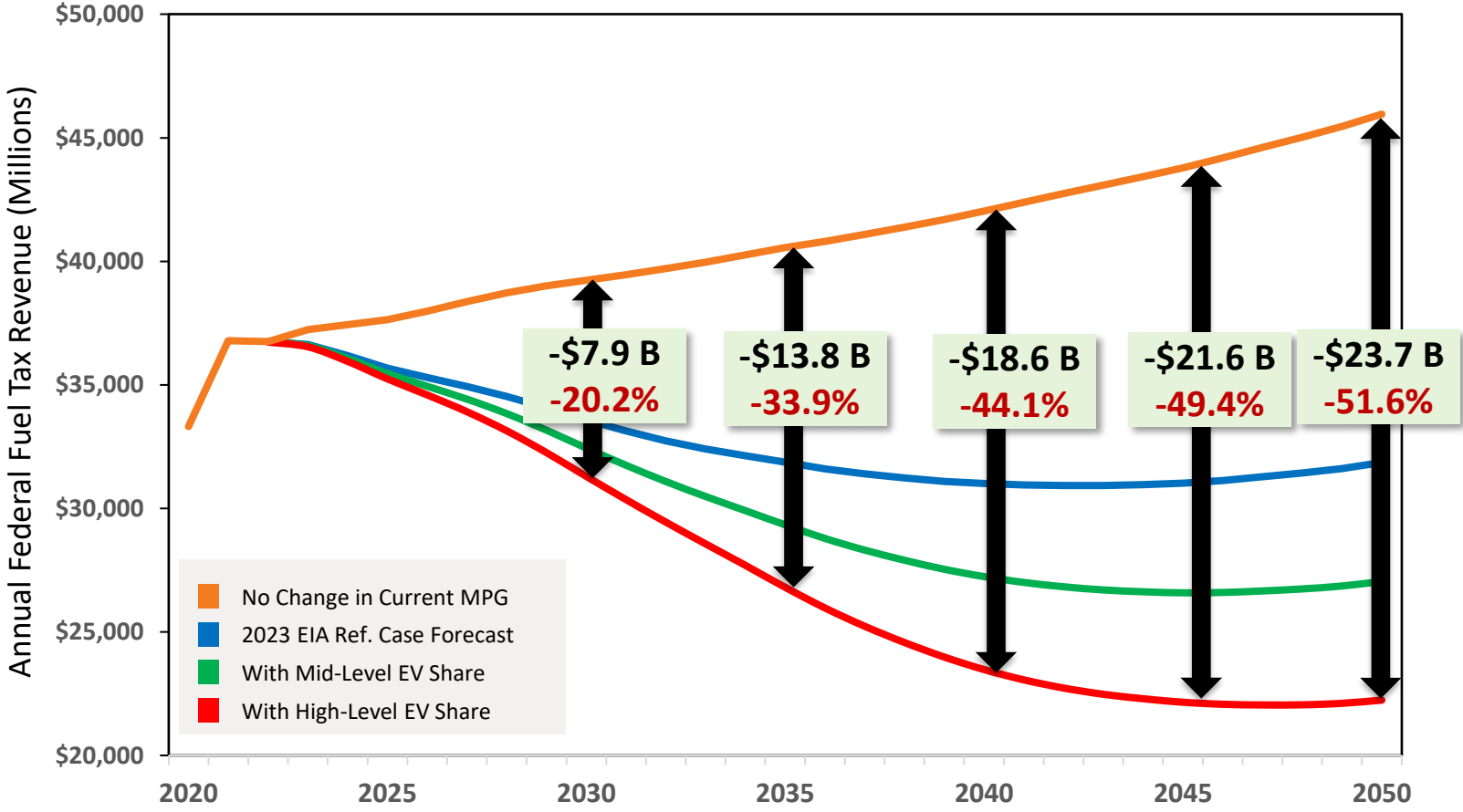


Estimated Annual Federal Fuel Tax Revenue Impacts With “Mid-Level” EV Penetration

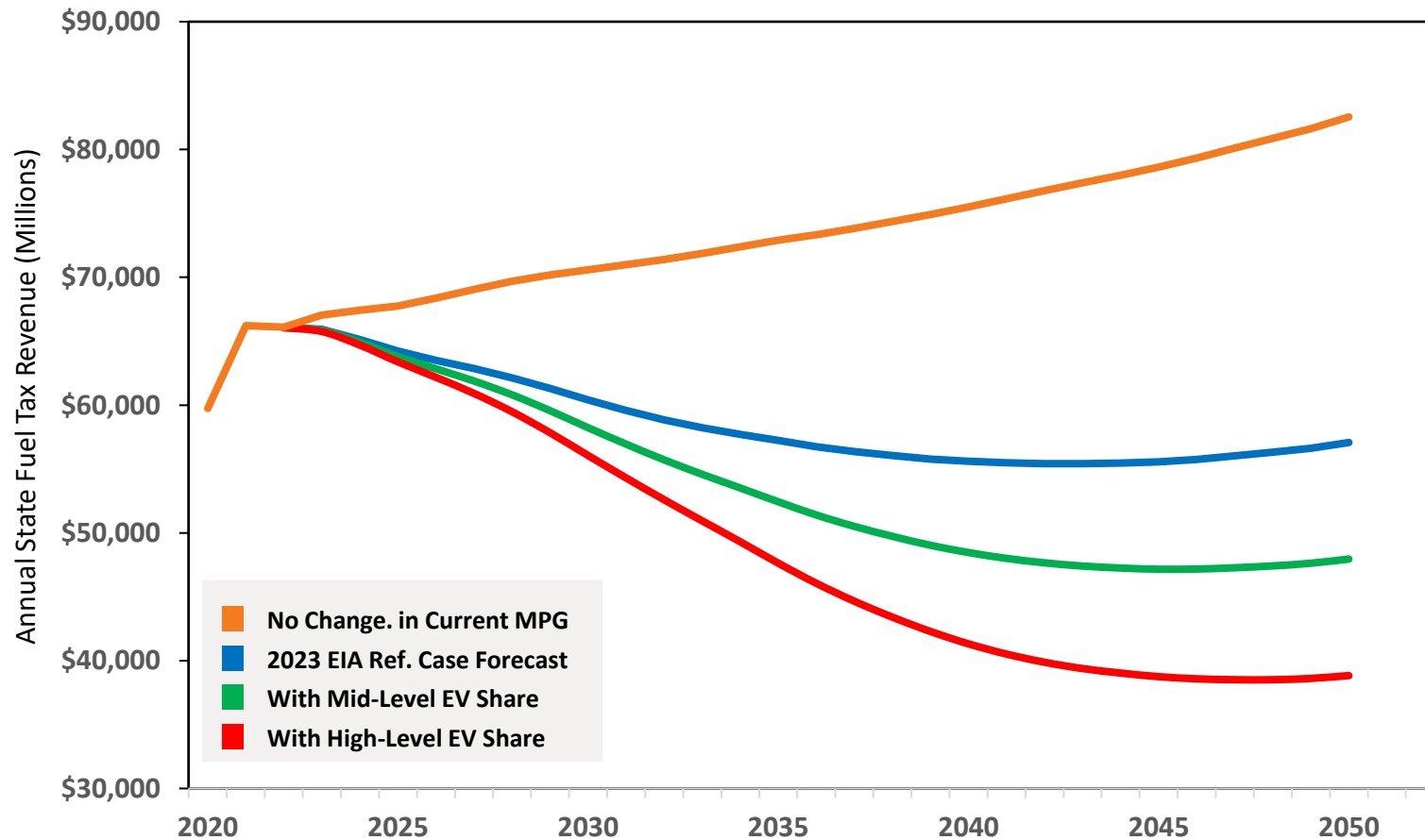


Estimated Annual Federal Fuel Tax Revenue

Impacts With “High-Level” EV Penetration



Estimated Annual State Fuel Tax Revenue



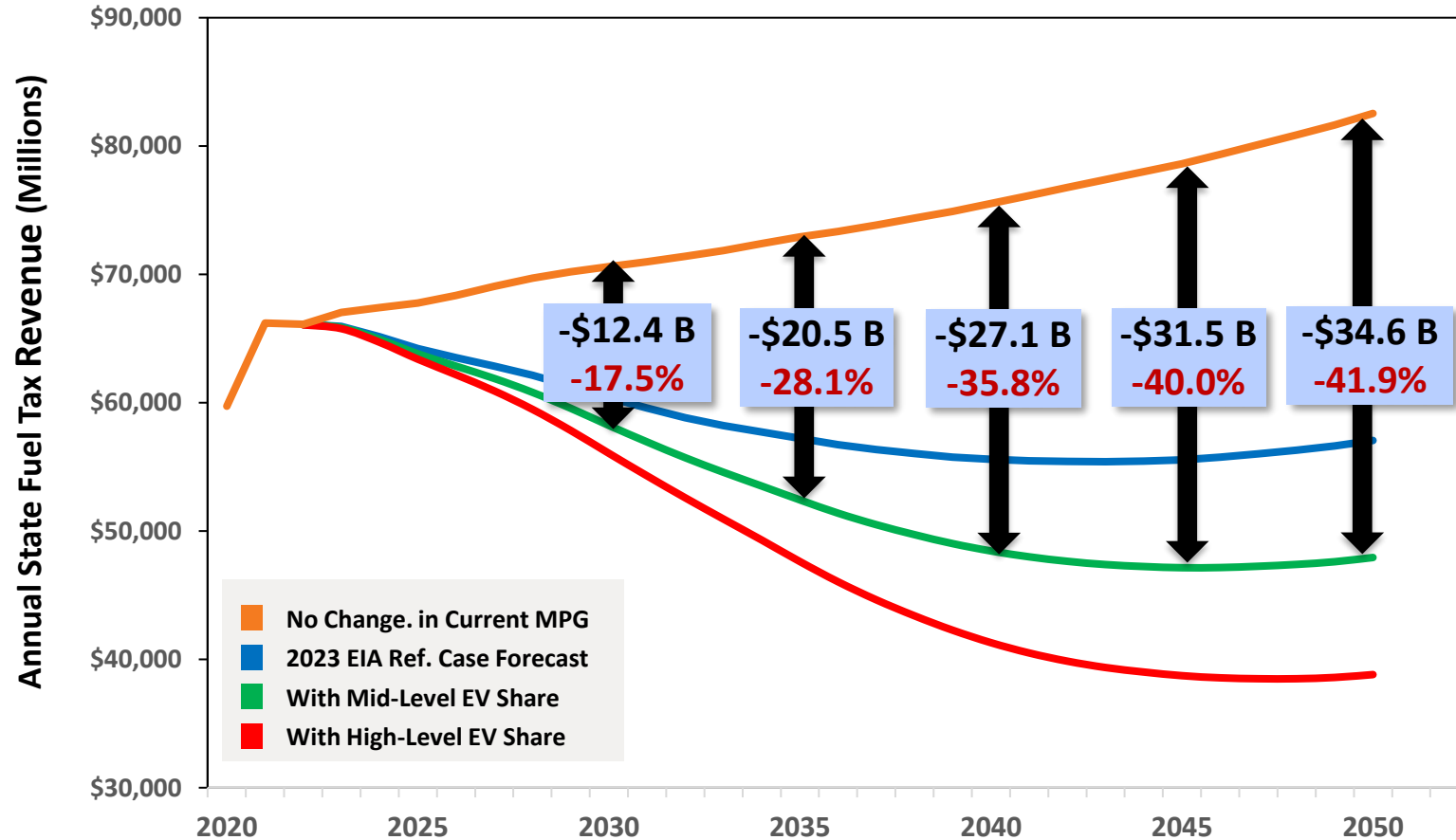
**2023 Weighted
Average State
Motor Fuel Taxes**

**Gasoline: \$0.349
Diesel: \$0.384**

***Excludes additional state
sales tax
and other special fees**

Estimated Annual State Fuel Tax Revenue

Impacts With "Mid-Level" EV Penetration



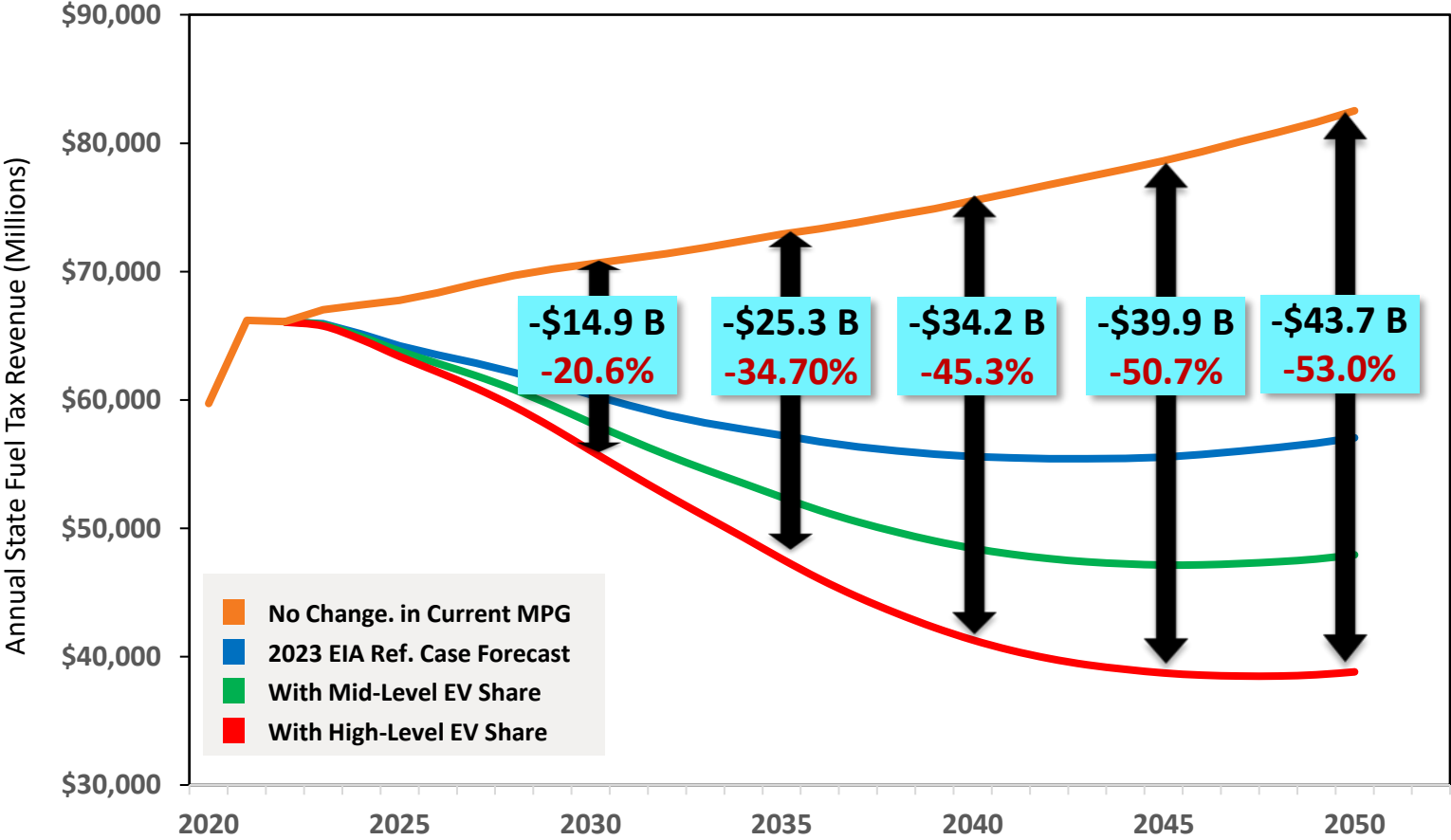
2023 Weighted Average State Motor Fuel Taxes

Gasoline: \$0.349
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*Excludes additional state sales tax and other special fees

Estimated Annual State Fuel Tax Revenue

Impacts With “High-Level” EV Penetration



2023 Weighted Average State Motor Fuel Taxes

Gasoline: \$0.349
 Diesel: \$0.384

*Excludes additional state sales tax and other special fees

In Conclusion....



- America likely reached “Peak Fuel” consumption in 2019
 - We are already beginning to see a long-term decline in fuel sales
- Electric vehicle sales beginning to surge
 - Expect up to 1.3 million new PEVs sold in 2023
 - Could reach 50 percent of all new vehicle sales by 2030-35
- Due to increasing fuel efficiency and EV penetration, future fuel consumption (and gas tax revenue) will decline significantly
 - 25-35 % by 2035
 - 35-50% by 2050
 - Will decline by 25% even with no new EVs due to improving MPG
- The days of the motor fuel tax as the primary source of funding for transportation in America are numbered
 - Will likely see widespread shifts to RUC by 2030 or so

Thank You.

Ed Regan | Reganed3@gmail.com



AGENDA ITEM 8



IIJA in Action: Transportation Construction and Market Conditions Update

Dr. Joshua Hurwitz- Senior Economist, ARTBA

Maryland Commission on Transportation Revenue and Infrastructure Needs | Aug. 24, 2023

U.S. Highway & Bridge Construction Market Pipeline



Example: Arkansas Federal-Aid Bridge Formula Project (Replaces 14 Bridges)

January 2022:

Arkansas bids Job 100955 to replace 14 bridges, awarding the project to Manhattan Road & Bridge Co. for \$48.7 million.

March 2022:

The work order is released by Arkansas DOT, which allows work on the project to begin.

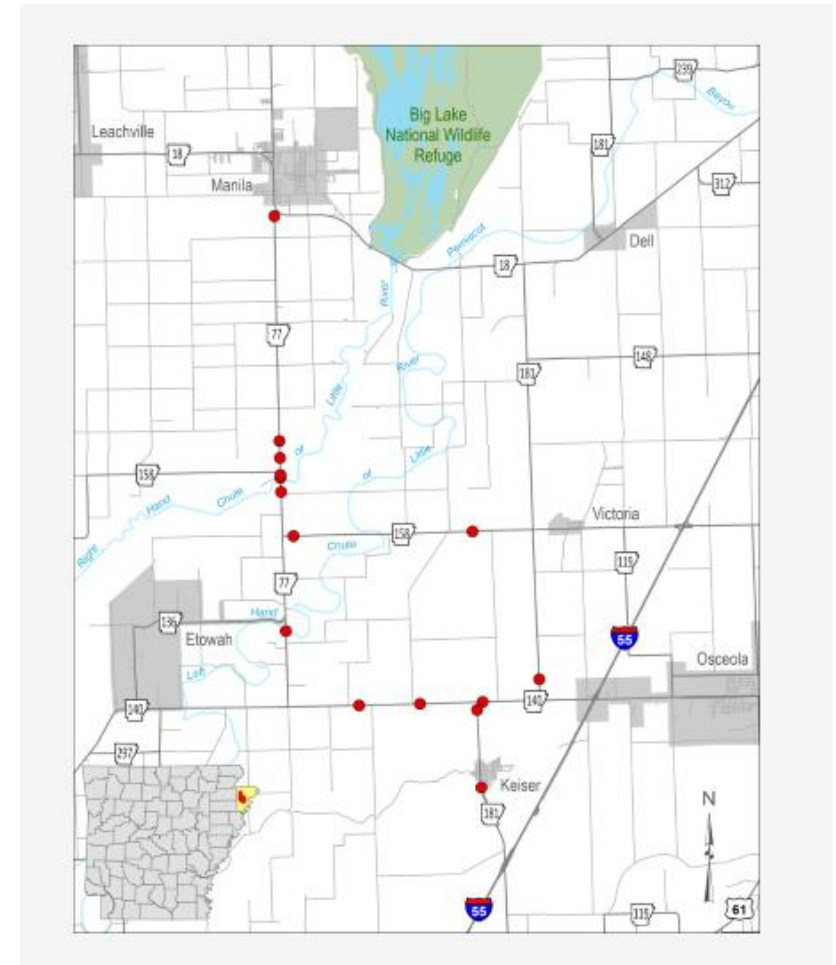
May 2022:

Arkansas DOT obligates \$20 million from the new federal formula bridge program to the project. The state may choose to obligate additional federal funds at a future date.

Late 2025:

Construction work is expected to last through 2025.

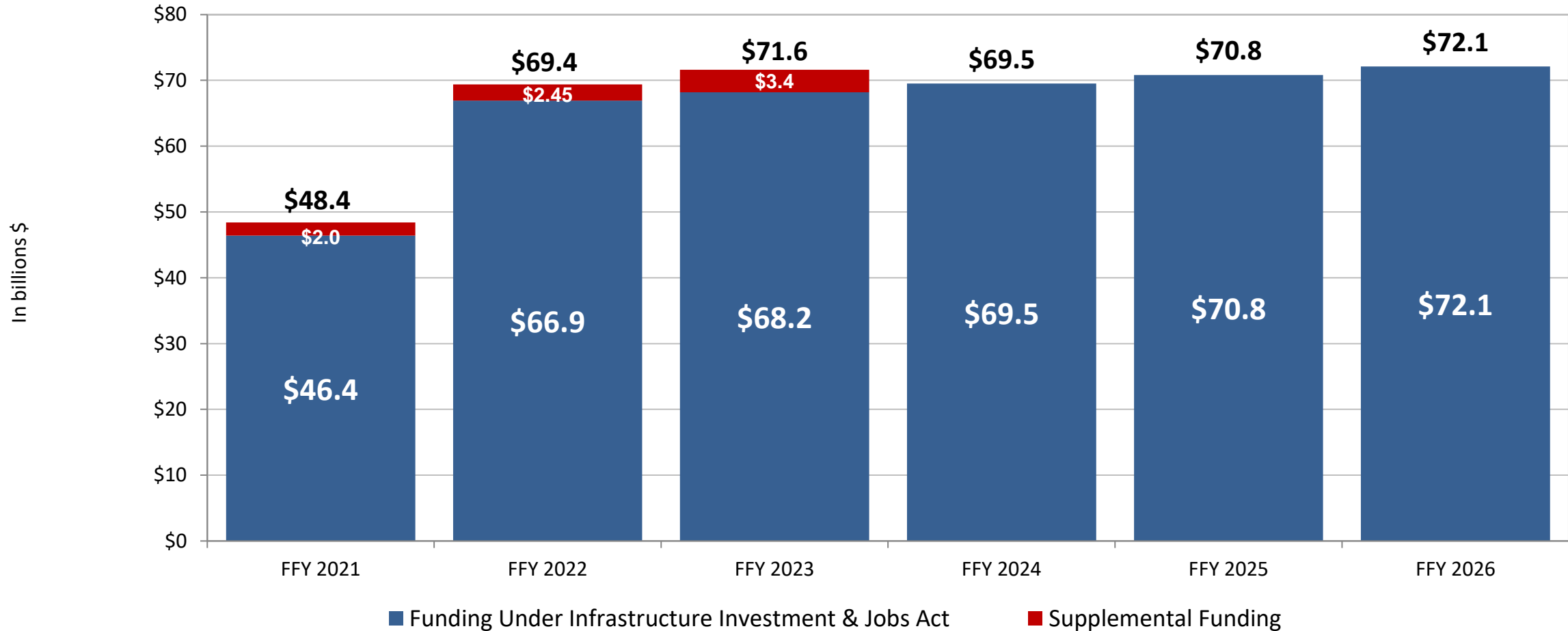
Project outlays from Arkansas to the contractor and federal-aid reimbursements to Arkansas continue until the project is complete.



The project includes replacing 14 bridges on Highways 77, 140, 158, and 181 in Mississippi County.

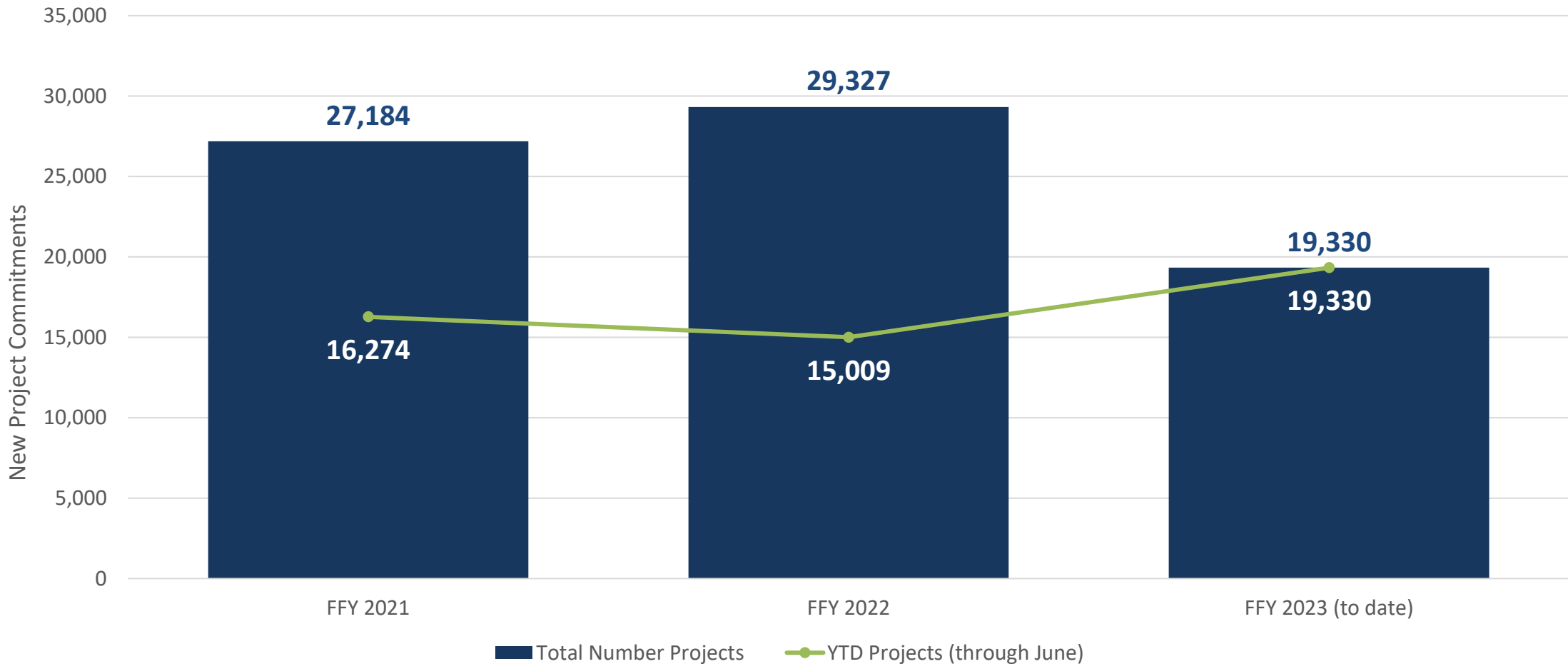
Federal-Aid Highway Investment Under the IJA

IJA Total Highway Investment



Source: FHWA final notices for annual highway program obligations and supplemental programs, Infrastructure Investment & Jobs Act

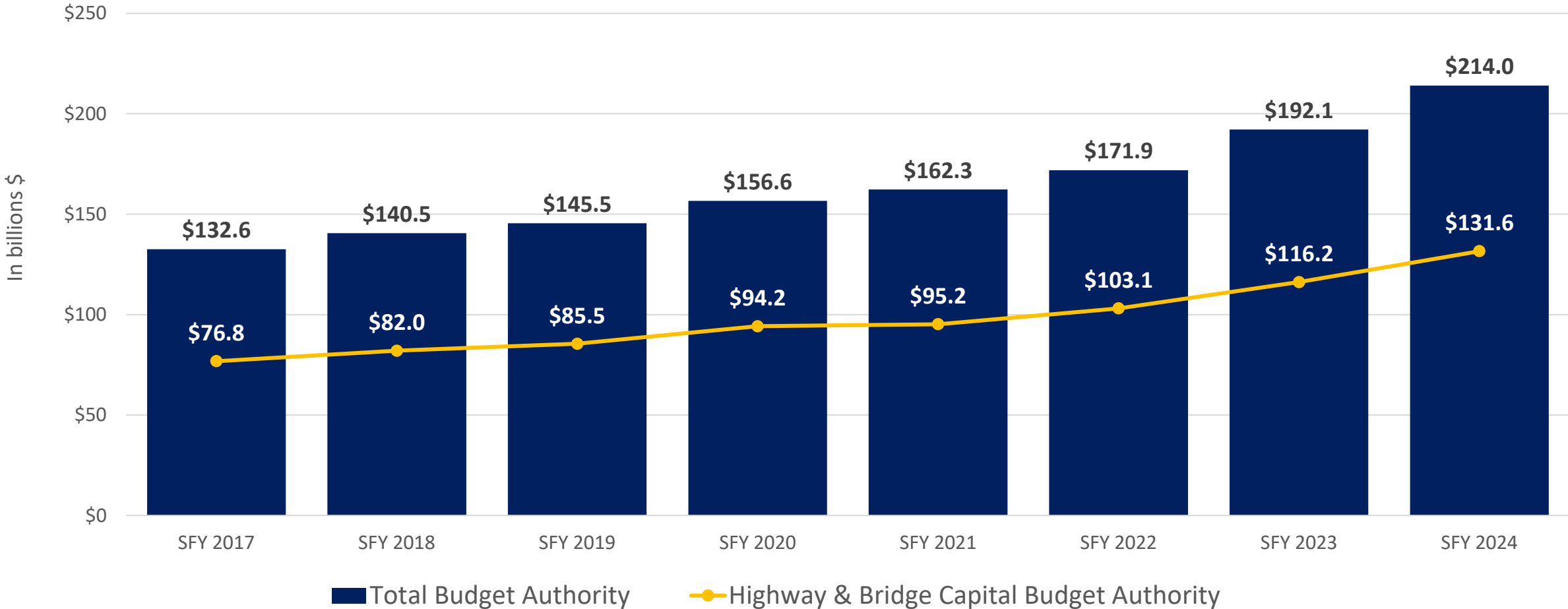
Number of New Federal-Aid Highway Project Commitments



Source: U.S. Treasury data, Treasury accounts for federal aid highway and bridge formula and discretionary funds that must be obligated within the federal fiscal year, based on state and project descriptions. Multiple obligations for one project in a year have been consolidated. Does not include COVID funds, appropriations funds or other federal funding sources. Projects are classified as new based on the base year of obligation, included in the data.

State DOT Budgets Increased 11% in FY 2024; Highway Capital Budgets Up 13%

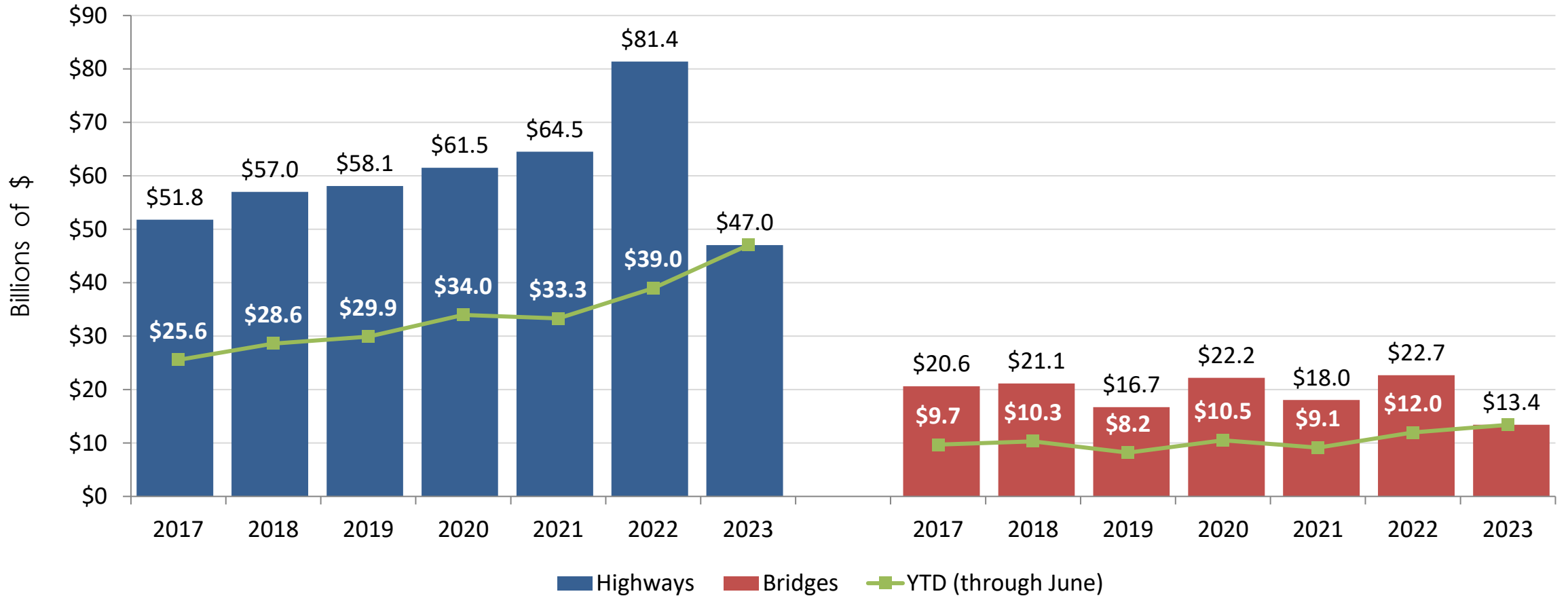
State DOT Budgets



Source: ARTBA analysis of state legislative budgets and DOT work programs.

Note: Coding of "highway capital" portion of budget is based on ARTBA's classification of available line items. This is an imperfect measure, given limitations and differences in reporting, but useful as a growth proxy over time.

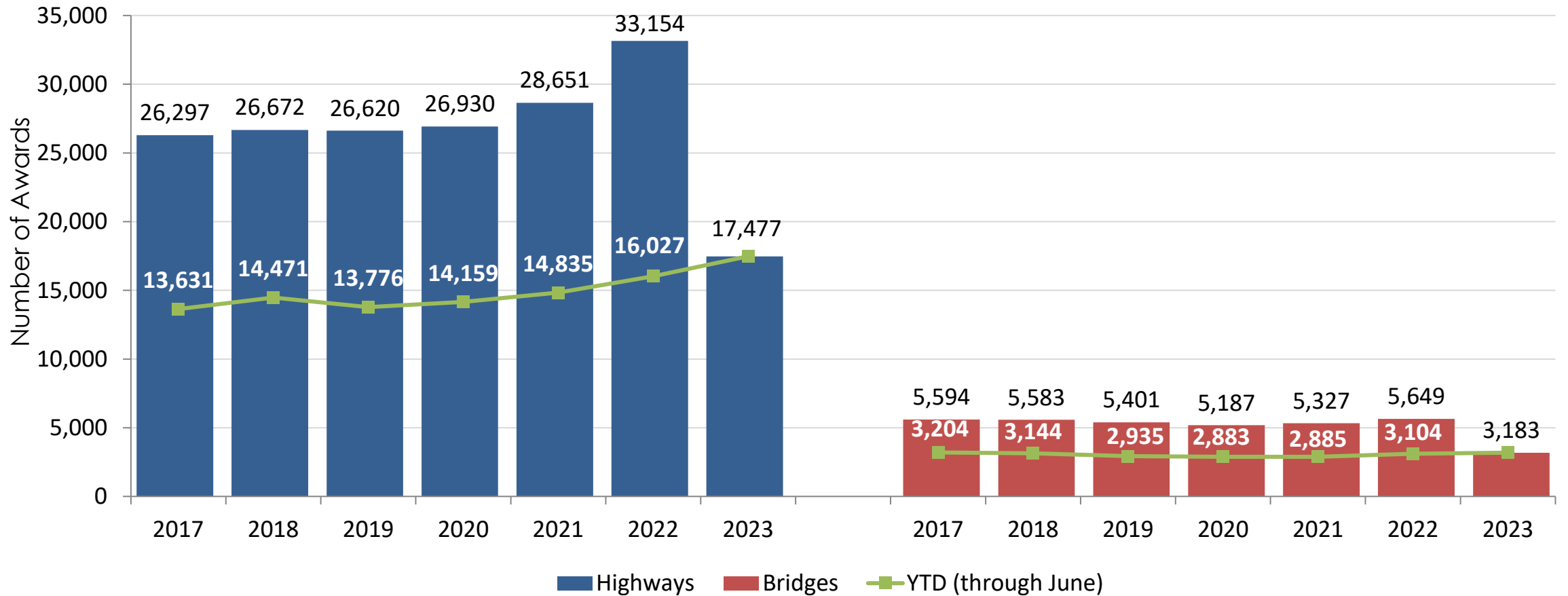
Value of State & Local Government Contract Awards



Source: ARTBA analysis of data from Dodge Data Analytics



Number of State & Local Government Contract Awards

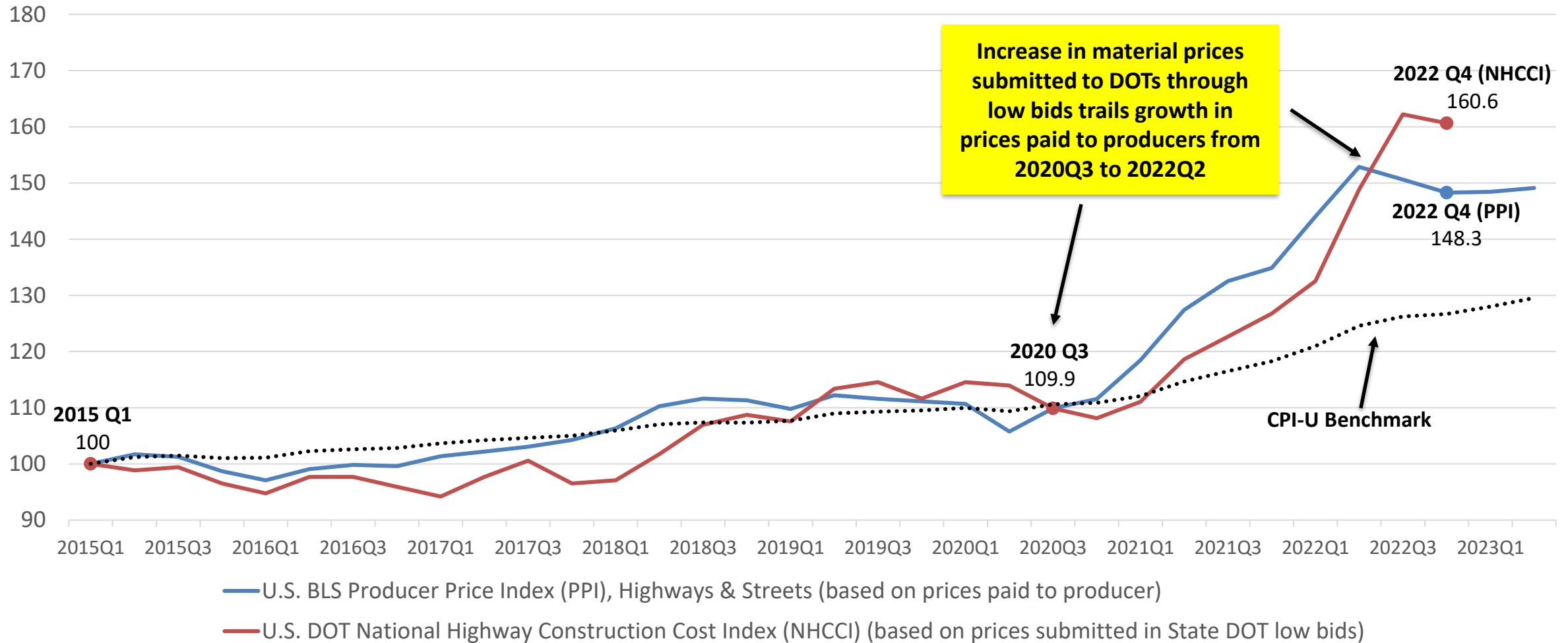


Source: ARTBA analysis of data from Dodge Data Analytics



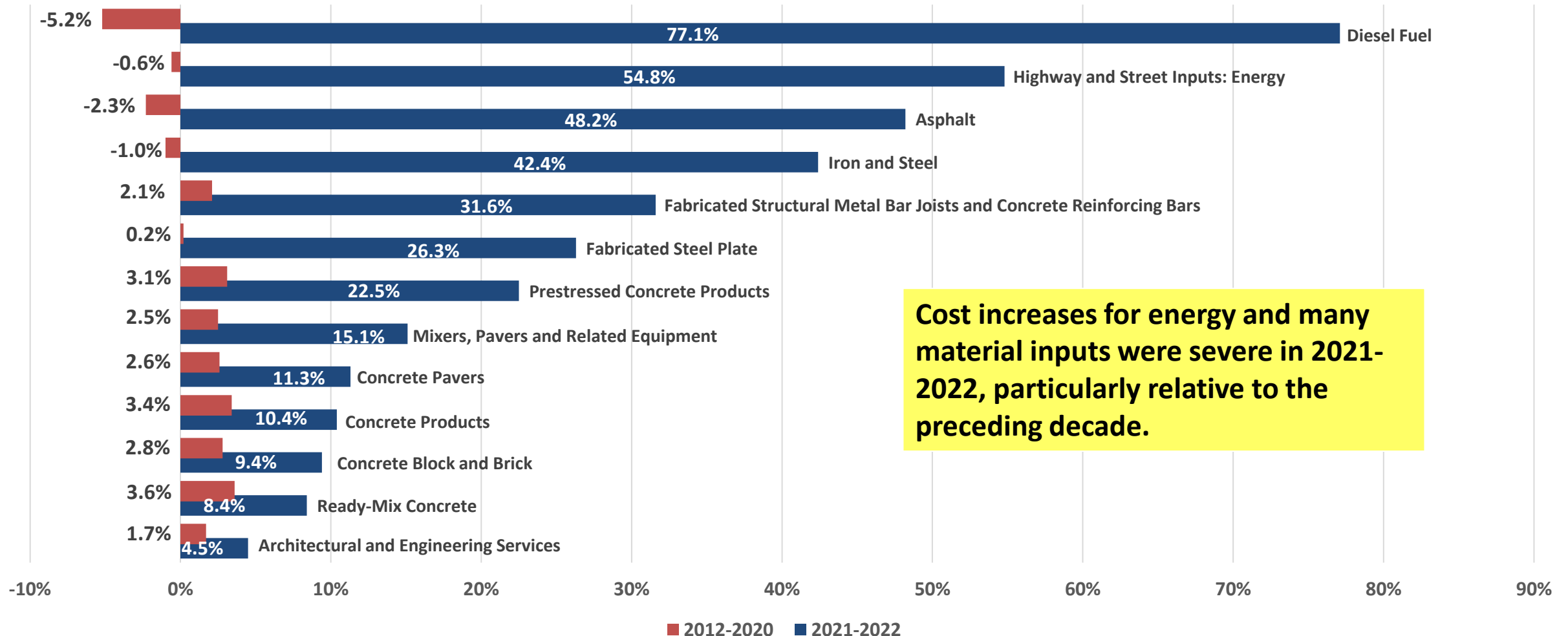
Input Price Indices for Highway & Street Construction

Producer Prices Paid by Purchaser (PPI) and Prices Paid by State DOTs through Low Bids (NHCCI)



Source: U.S Bureau of Labor Statistics and U.S. DOT.

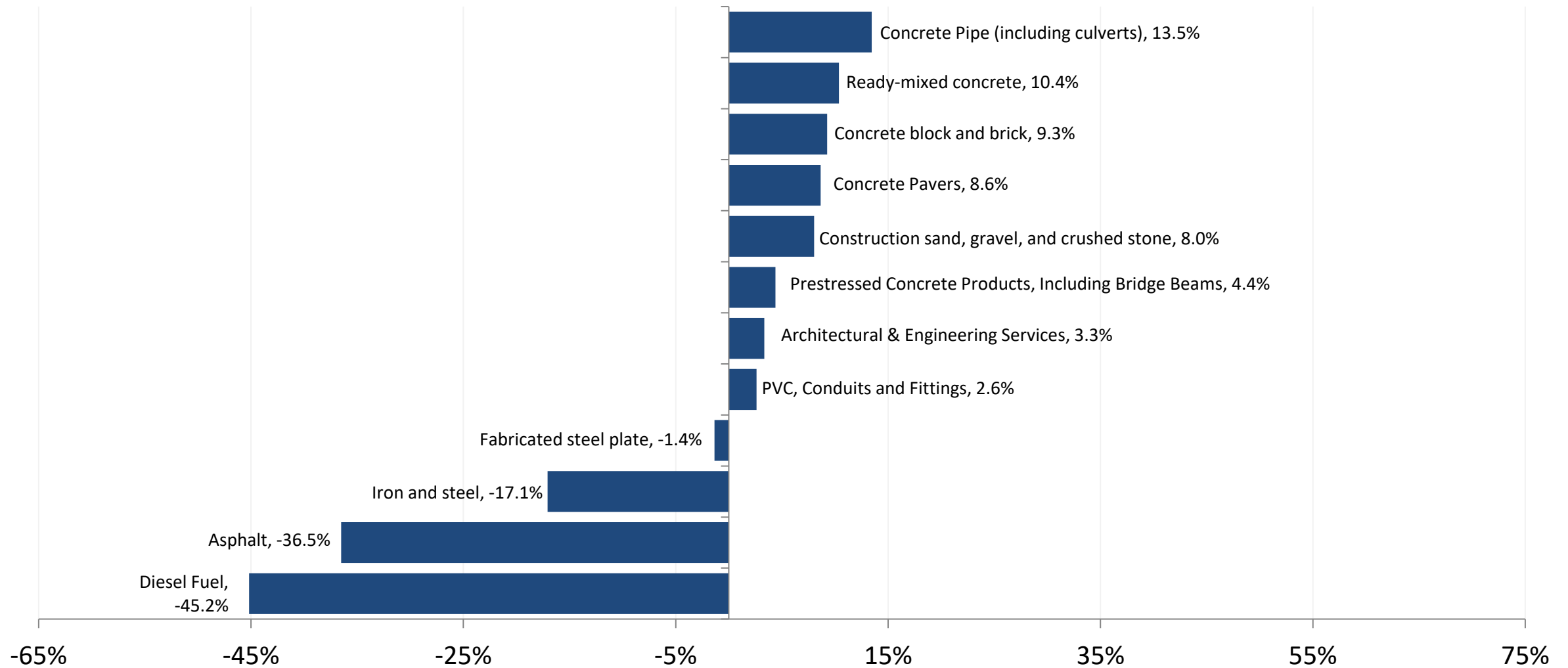
Average Annual Change in Prices for Highway Construction Inputs (September-to-September), 2012-2020 vs. 2021-2022



Cost increases for energy and many material inputs were severe in 2021-2022, particularly relative to the preceding decade.

Note: Annual changes correspond to year-over-year price growth in September of each year. The "Highway and Street Inputs: Energy" data begins in 2015.
 Source: U.S. Bureau of Labor Statistics.

Change in Prices for Highway Construction Inputs, July 2023 vs. 2022

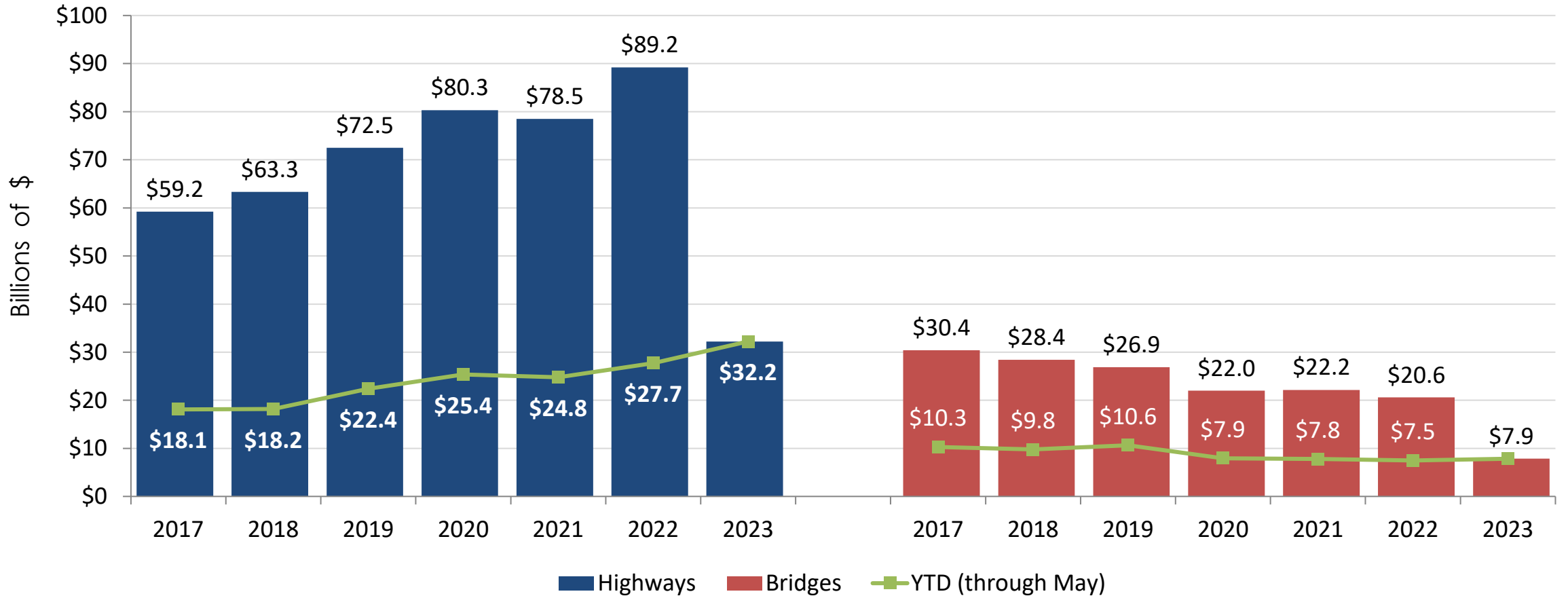


Signs of Real Growth in the U.S. Highway & Bridge Construction Market

- There were 4,825 more highway and bridge projects getting underway in 2022 than 2021
 - The number of state and local government highway and bridge projects increased 14% in 2022
 - The value of awards grew 26% to \$104 billion.
- Additional 9.2 million tons of Asphalt material demand in 2022 (+7.4%) for State DOT projects.
- Demand for Concrete Pipe up by 383 thousand linear feet (+10%) for State DOT projects.
- Additional 5,300 miles of Pavement Striping Material demand (+2%) for State DOT projects.
- Over 86,000 more Safety Markers and Delineators demanded for State DOT Projects (+1%)

Source: Number of projects from data provided by Dodge Data Analytics. Demand for materials based on ARTBA analysis of material volumes in state DOT winning bids.

Value of U.S. Highway & Bridge Construction Activity



Source: ARTBA analysis of data from U.S. Census Bureau



Transportation Construction Market Intelligence Service



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www.economics.artba.org

An Interactive Platform Empowering
Smart Business Decisions



American Road
& Transportation
Builders Association

Questions?