Fact Sheet – Highway Funding & Finance

Funding for transportation infrastructure remains a pressing challenge as needs outrun revenues. Transportation finance aims to balance alternative revenues with controlling costs to keep the transportation system safe & reliable.

This Fact Sheet focuses on highways operated and maintained by West Virginia Division of Highways (WVDOH) and the West Virginia Parkways Authority (the West Virginia Turnpike). It highlights funding from state tax and fee revenues as well as Federal sources and Turnpike toll revenues explained below. Non-highway modes are included as an Appendix and in more detail through the Funding & Finance Research Paper. WVDOH and the Parkways Authority are part of the West Virginia Department of Transportation (WVDOT).

Sources - Where Roadway Funding Comes From

Non-Tolled Roadways

West Virginia uses a combination of funds from local and State taxes as well as revenues from fees to operate, maintain, and improve the State’s extensive public roadway system. In addition to federal funds earmarked for bond debt service and federal roadways, the WVDOH work is funded from the State Road Fund which receives revenues from motor fuel taxes on fuel purchases, consumer sales and service taxes from vehicle sales and leases (privilege taxes1), as well as vehicle registration and license fees paid when vehicles are registered.2

- **Federal Aid** – Supports Federal-aid eligible highway investments and FHWA GARVEE bond debt service.

- **Motor Fuel Taxes** – Includes a flat rate ($0.205 per gallon) and a variable rate ($0.152 per gallon based on 5% of motor fuel average wholesale price).3

- **Privilege Taxes** – Applied at time of sale/lease of vehicles purchases in or out of state but registered in state; charged on vehicle net sale price (6% on purchased vehicles, 5% on leased vehicles).

- **Vehicle Registration and License Fees** – Annual fee: $51.50 registration, $200 EV fee, $100 plug-in-hybrid.

- **Miscellaneous and Litter Control** – From map and permit sales, tonnage fees, interest earned on investments, and litter control fee ($1 of each vehicle registration fee).

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3 Page 13. “The West Virginia Tax Commissioner calculates the average wholesale price and variable tax rate from sales data from the previous July through October, and the calculated tax rate goes into effect for the next calendar year. The average wholesale price may not deviate by more than 10% from the average wholesale price of motor fuel as determined by the Tax Commissioner for the previous calendar year.” State of West Virginia 2019 $600M General Obligation State Road Bonds Final Official Statement (OS).
TRENDS, DRIVERS, AND OPPORTUNITIES

Tolled Roadways

The WV Turnpike is an 87-mile tolled roadway managed by the WV Parkways Authority. The Turnpike is a separate operating entity that generates its own funds for daily operations and capital improvements. Toll revenues alone cover 95% of daily operations, and users pay tolls with cash or use an E-ZPass transponder. The remaining 5% of operating revenues come from concessions sales at service plazas and tourist information centers along the Turnpike.4

Funding for capital improvement projects comes from selling Turnpike bonds. Bond proceeds cannot be used to pay for regular operating expenses. Capital improvement projects are separate from daily operations and are listed in the Authority’s Capital Improvement Plan (CIP). To issue bonds, the WV Parkways Authority sets toll rates high enough to generate enough toll revenue to first pay regular operations and maintenance expenses and then cover at least 1.25x annual debt service amounts (debt service coverage ratio) on all outstanding bonds.5

Strong debt service coverage ratios over the past ten years has enabled the Authority to sell $166 million of Toll Road Revenue Bonds in 2018 but receive $172 million from the sale for capital improvement projects due to strong investor interest.6 The $172 million is funding six (6) capital improvement projects along the Turnpike which include improving existing roadway pavement; installing new paved lane miles along existing roadways; reconstructing, replacing, and/or rehabilitating bridges; installing curve widening sites as well as truck turnouts; and improving existing intersections.

Toll rates were increased on June 30, 2019 and will be increased again 1.60% for all users on January 1, 2022.7 Despite reduced toll traffic from the COVID-19 pandemic, the WV Parkways Authority has been able to maintain ample debt service coverage ratios and expects to issue an additional $333 million of Toll Road Revenue Bonds in June 2021.

While WVDOH does not operate the Turnpike, WVDOH maintains a partnership with the WV Parkways Authority for certain roadway and bridge capital improvement projects which allows certain funds to be interchangeable between both agencies through the Roads to Prosperity Program. Proceeds from the state’s 2018 General Obligation (GO) Bonds are financing the I-77/I-64 Turnpike widening project through the Beckley region included within the Roads to Prosperity program, while proceeds from the 2018 Turnpike Bonds have been deposited into the State Road Fund.

WVDOH does not pay debt service expenses on Toll Road Bonds issued by the Parkways Authority; WVDOH only pays debt service expenses on General Obligation (GO) Bonds issued under the Roads to Prosperity Program. As all proceeds from the 2018 Turnpike Bond sale were deposited in the State Road Fund, this partnership also allowed the Turnpike to receive back $13.7 million in now state funds (originally from the Turnpike bonds) for Turnpike capital projects.8 The Turnpike usually only receives about one quarter (the $13.7 million in FY2019) in state funds for capital improvement projects because excess revenues from Turnpike tolls are able to fund the majority (76% or $44.5 million in FY 2019) of capital improvements.

5 Debt Service Coverage Ratio = (Total Toll Revenues – O&M) / Total Debt Service = 1.25x.
7 Effective January 1, 2022, tolls will increase 5% for EZPass users and 1.6% for cash users. EZPass toll rates are effective for the following three (3) years while cash toll rates will increase an additional 1.6% in the second and 1.6% in the third year, for a total approx. 5% increase. Page 79. West Virginia Parkways Authority 2019 Comprehensive Annual Financial Report (CAFR). https://transportation.wv.gov/Turnpike/about/investorrelations/Documents/WV%20Parkways%20CAFR%2006302019.pdf; and Page 5. West Virginia Parkways Authority 2018 $166M Senior Lien Turnpike Toll Revenue Bonds.
TRENDS, DRIVERS, AND OPPORTUNITIES

Uses: What Transportation Systems Needs Funding?

WVDOH takes care of the sixth (6th) largest State-maintained highway network in the US. The majority of transportation funding in West Virginia takes care of 38,850 miles of public roads and 7,269 bridges that receive daily use. In addition to maintaining the roads and bridges, WVDOH also maintains and operates ancillary infrastructure and facilities, like signs, lights, sidewalks and paths, maintenance facilities, and fleet vehicles. WVDOH is wholly responsible for routine activities like painting, mowing, and other upkeep in addition to long range planning, engineering, acquiring additional right-of-way, new construction, highway research, outdoor advertising and development along State roads, enforcement of safety and weight regulations, and distribution of highway information.

Source: WV Parkways Authority

38,850 miles of public roads

Of which, WVDOH owns 35,038 miles (90% of the total system), including:

- WVDOH owns 34,961 miles, including
  - 468 Interstate miles
  - 1,433 non-Interstate NHS miles
  - 10,477 Federal aid eligible miles

The WV Turnpike owns 87 Interstate miles

7,269 WVDOT maintained bridges

Of which, WVDOH owns:

- 556 Interstate NHS bridges
- 639 non-Interstate NHS bridges
- 92% of bridges and deck area (22.5 million sq ft)

The WV Turnpike owns 95 Interstate bridges and 2 non-Interstate NHS bridges

Note, all miles presented as centerline miles. All mileage stats from FHWA 2018 Highway Statistics series.

Other asset facts:

- 8 welcome centers, 10 Interstate rest areas, 4 Turnpike travel plazas
- 10 District offices and 55 county maintenance headquarters
- 1,400+ traffic signals and over 50,000 signs
- Over 60,000 roadway lights
- Fleet of over 2,000 passenger cars, 1,131 dump trucks, and 781 other pieces of maintenance and construction equipment

WVDOT 2050 Multimodal Long-Range Transportation Plan
**Trends, Drivers, and Opportunities**

**Uses: How Are Transportation Funds Spent on Roadway Operations?**

**Non-Tolled Roadways**

Over 80% of transportation funds go to maintenance and construction on non-tolled roadways. These roads, including West Virginia and Interstate highways, local access roads, and neighborhood streets address the overwhelming majority of transportation needs in West Virginia from personal and commercial vehicles.9

**DOH Operating Revenues – FY 2020 = $1.256B ($1000s)**

- Gasoline & Motor Carrier Taxes
- Automobile Privilege Taxes
- Litter Control Program
- Motor Vehicle Registrations & Licenses
- Federal Aid Reimbursement
- Miscellaneous Revenues

**DOH Total Expenses – FY 2020 = $1.378B ($1000s)**

- Road Construction
- Road Maintenance
- Support & Admin
- GO & GARVEE Debt Service

**DOH Other Expenses – FY 2020 $46.57M ($1000s)**

- DMV
- Courtesy Patrol
- Office of Admin Hearings
- DOH & DMV Claims

**Tolled Roadways**

The WV Turnpike spends nearly half (45%) of operating revenues on regular roadway maintenance expenses, followed by regular toll collection activities, admin, and traffic enforcement.

As explained above, the WV Turnpike generates operating income and does not operate at a deficit, most recently generating about $44.1 million in profits over 2019 due to the recent toll increase.

In FY 2019, the WV Turnpike collected $138 million in total revenue, with $131 million (audited figure) from tolls and $7 million from concessions and other revenue. Debt service is classified as a capital expense as bond proceeds cannot be used to pay for regular operations, and the unaudited revenue bond coverage calculation is shown below.10

**Turnpike Operating Expenses – FY 2019 = $50.17M (excluding Depreciation, $1000s)**

- Maintenance
- Toll Collection
- Traffic Enforcement
- General & Admin

In 2019, total net revenues available for debt service were $88.87 million. Total debt service was $9.03 million. In 2019, the Parkways Authority debt service coverage ratio (revenues available for debt service / total debt service) was 9.85, well above the 1.25x requirement. Note, as part of the bond covenants, replacement and rehabilitation (R&R) reserves are required in order to maintain turnpike assets in an operating condition to ensure reliable and high-quality services. The total revenue bond coverage include the R&R reserve is $26.01 million.

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Funding Gap: Why Isn’t There Enough?

Transportation’s capital improvement needs combined with regular operations and maintenance expenses exceed transportation revenues. The increasing gap between total needs and revenues in West Virginia is due to traditional revenue sources generating less than transportation needs and regular maintenance expenses.

Total revenues remain flat because of limited increases in existing main sources (motor fuel taxes, registration and license fees, privilege taxes) generally due to slow population growth, limited economic development with declines in some sectors, and relatively somewhat low income in comparison to peer states. At the same time, material and labor costs all are increasing faster than inflation, requiring more money to deliver the same projects over time.

Explored in depth in the 2050 LRTP Needs Assessment, the challenge of determining as well as quantifying needs depends on addressing trade-offs. Furthermore, WVDOH is legislatively mandated to pay debt service, administrative costs, and provide system maintenance before any capital outlays are made to protect and/or modernize the system.

Key insights driving the results presented in the above figure include:

*Increased Maintenance Costs Exceeds Inflation*

Materials and labor costs exceed the consumer price index (CPI) and further increase the burden on overall maintenance as well as improvements by affecting non-construction and construction-related costs, routine operating and/or capital expenses, administrative expenses, fuel and/or utility costs, and/or technology costs.

*Deterioration of Roads and Bridges Outpaces Resources to Repair*

The scope of the highway network managed by WVDOH, combined with topography, weather, and other factors create challenges for asset management. In addition, a significant scope of assets, including much of West Virginia’s Interstate and National Highway System are nearing the end of their useful life as these assets were designed to last around 60 years, requiring significant rehabilitation and replacement activities, especially for bridges. As highlighted in the Transportation Asset Management Plan (TAMP), these needs will continue to grow, straining WVDOH resources to maintain the system.

*Restricted Funds – Affects State of Good Repair*

WVDOH has ten (10) districts to receive and administer funding to maintain roadways in their districts, but funding allocations continue to fall short of maintenance expenses and certain revenues can only be spent on certain expenses.¹¹ Selling bonds has raised funds for roadway projects and repairs, but WVDOH must pay debt service on the bonds before paying other operating expenses, and bond funds can only be used on a limited number of projects without previous specification.

West Virginia is witnessing the consequences of past emphasis on system expansion efforts over maintaining existing infrastructure exacerbated by stagnant revenue growth, particularly on the Federal side. State purchasing power has also dropped which means more funding each year will be required for maintenance.

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Closing the Gap: What is Being Done?

The Governor, transportation agencies, and citizens acknowledge the funding gap and together have helped West Virginia raise resources to address these challenges. Constituents know if nothing is done, the funding gap will get worse and transportation safety and reliability will be at risk.

**West Virginia’s Roads to Prosperity Program**

The Governor created the Roads to Prosperity Program in 2017 to raise roadway funds through selling municipal bonds.\(^{12}\) Like the Toll Road Revenue Bonds issued under this program, Senior Lien General Obligation (GO) Bonds have also been issued to raise over $1 billion to fund work on general highway and secondary roads as well as improve and/or construct bridges throughout the State.\(^ {13}\) WVDOH must pay debt service on these bonds before other expenses, and if State funds are insufficient to cover debt service, the State must implement an annual State tax.\(^ {14}\) Outstanding bonds currently mature in 2044 which may extend to 2050 if additional bonds are issued in 2021.

**Secondary Roads Maintenance Initiative**

Both the Governor’s Secondary Roads Maintenance Initiative and the Roads to Prosperity program have freed up millions of additional dollars allowing WVDOH to increase investments in smaller roads across West Virginia. Since March 2019, WVDOH crews have completed 27,967 miles worth of work on West Virginia’s secondary roads.

**The Federal Funding Challenge**

**Federal Roadway Funding**

About one third or 33% ($405.5 million in FY2020) of WVDOH’s total revenues comes from the Federal Government as reimbursements through several sources to fund upkeep on Federally owned roads, pay Federal debt service on GARVEE bonds, and reimburse costs incurred on eligible construction as well as projects that preserve the system. While Federal funds are eligible to cover 80% to 100% of total roadway project costs, depending on the road project, WVDOH only receives a finite amount of Federal funding, limiting projects and project scope.

The HTF is funded by Federal motor fuel taxes, which are not indexed to inflation and have not increased since 1993. USDOT has continued to rely on the HTF to finance the Federal-Aid Highway Program (FAHP), administered through the Federal Highway Administration (FHWA).\(^ {15}\) The FAHP must be reauthorized periodically. The FAHP was last authorized through the Fixing America’s Surface Transportation (FAST) Act in December 2015. The Federal Government signed a continuing resolution into law in September 2020 which included a one-year extension of the FAST Act including an additional $13.6 billion into Highway Trust Fund from the general fund to help finance planning and delivery of transportation programs in 2021.\(^ {16}\)

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\(^{12}\) Funding for infrastructure projects (“bond proceeds”) comes from selling bonds and equates bond principal less legal and investments costs to issue the bonds.

\(^{13}\) GO Bonds have been issued 2017, 2018, and 2019, and an additional $200M of GO Bonds is expected to be issued as part of the Roads to Prosperity Program before June 30, 2021 to provide additional funding for roadway projects.

\(^{14}\) Each debt service payment includes a portion of the original amount borrowed (principal) and interest charged for borrowing the funds. Page 7. State of West Virginia 2019 $600M General Obligation State Road Bonds Final Official Statement (OS)


Based on a recent analysis conducted by the Congressional Budget Office (CBO), spending from the HTF exceeded revenues by $127 billion from 2008 through 2019. Congress has routinely authorized transfers between 2008 and 2019 to the HTF to address this difference, totaling almost $144 billion in addition to the $127 billion transfer. The figure below illustrates the projected shortfall if revenue remains constant and outlays continue to grow consistent with inflation without accounting for current or future general fund transfers.

Another possibility is if the HTF is exhausted, highway spending would be limited to the amounts collected in receipts. Per CBO estimates, if this occurs, and the HTF is exhausted by 2022 (in line with current assumptions and status of the FAST Act), spending will drop 25% below amounts in baseline projections. By 2030, this gap would lead to a 38% decrease in spending based on CBO projections.

In fall 2019, the AASHTO Board of Directors approved ten (10) detailed resolutions outlining surface transportation funding policies AASHTO plans to support as part of reauthorization discussions occurring from 2020 to 2021. More information on these principles is here. A fundamental statement in these principles is to “enact a long-term, sustainable revenue solution for the Highway Trust Fund”. As CBO highlights, 2021 is a critical milestone for the new 117th Congress to decide how to stabilize HTF funding sources.

Source: Drive Forward, WVDOT

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Revenue Drivers: Shaping Future Trends

Travel needs are changing, infrastructure is aging, and the cost to maintain and operate the system is increasing as traditional transportation revenue sources (like motor fuel taxes) fall behind needs. Watching a variety of revenue drivers helps identify the trends impacting future revenues and consumption and spending behaviors.

- **State of Good Repair (SOGR)** – Costs will continue to increase for assessing infrastructure condition and maintaining safe plus reliable transportation for future West Virginian’s.
- **Post Pandemic Travel** – Estimating COVID-19’s short and long-term effects on transportation revenue and travel patterns.
- **Economic Changes** – Shift in demand as natural resource extraction industries decline while biotechnology and chemical manufacturing increases.
- **Addressing Demographic and Social Changes** – Continued aging of West Virginian’s outpaces birth rates and new residents, while home and auto ownership decisions possibly change.
- **Unforeseen Emergencies** – Infrastructure repair costs and the economic impacts from more frequent severe weather events or other unanticipated disasters.
- **Alternative Revenues** – Increasing ease of implementation and more willingness for supplemental funding streams like sales tax revenues and pricing strategies.
- **Focus on System Efficiency** – More focus on system efficiency rather than capacity, particularly as system management and vehicle technologies help facilitate more cost-effective improvements.
- **More Demand for Multimodal System Development** – The benefits of multimodal systems extend to West Virginia’s strong tourism industry, decreases air pollution and vehicular congestion, and provides mobility for aging residents and disadvantaged populations.
- **Private Investment** – The private sector increasingly is looking at transportation like transportation network companies, or TNCs, (Uber, Lyft, scooters, etc…) and new technologies like Hyperloop.

Revenue Risks: What Else to Watch?

In addition to insolvent Federal funding from stagnant fuel taxes, other risks could arise affecting revenues and the revenue structure as the economy as well as transportation both shift and diversify while transportation technology, personal preferences, and behavior patterns continue to change.

- **Increase in alternative fuel vehicle market share and a decrease in fuel tax receipts relative to travel demand and vehicle ownership.**
- **Growing demand for more multimodal options in urban areas and preference toward less personal vehicle ownership (or shared/on-demand arrangements).**
- **Bonding creates value today but restricts future spending opportunities.**
- **Other broad changes in population, behavior, spending, business, industry, and travel could impact transportation revenues and overall economic health: near and far term uncertainty creates both risks and opportunities for existing revenue sources.**
- **General fund transfers offer a temporary patch insufficient for long-term funding stability and safety.**
Revenue Opportunities: Alternative Sources?

Reactionary funding transfers provide immediate short-term solutions but are unsustainable for long-term maintenance. Assessing alternative revenue sources helps understand relevant and/or applicable options that fit West Virginia’s transportation and economic context. Traditional and alternative funding mechanisms both enhance transportation infrastructure, helping WVDOT meet its goals. Adding a combination of new one-time plus annual revenue streams from both existing and new sources can help provide sustainable funding for operations and capital needs, eventually plugging the current gap and ultimately preventing future gaps from forming.19

### Traditional Non-Tax-Based Funding

- **Asset-based** – Implement new corridor tolling along key routes, including time-of-day tolling and charge tolls by vehicle class similar to the Turnpike.20

- **Fee-based** – Administer annual renewal charges for EV’s, plug-in hybrids, and weight-based assessments.

- **Bond-based** – If revenues allow and voters approve, issue more transportation bonds secured by the State’s General Fund given State’s strong credit ratings.21

### Traditional Tax-Based Funding

- Increase State gasoline and motor fuels tax at an annual rate consistent with inflation (CPI) or another factor.

- Increase State diesel motor fuels tax compared to the gasoline MFT (trucks are heavier and cause more wear-and-tear on roadways than personal vehicles).

### Alternative Funding

- **Private Real Estate** – Incentivize private developers to construct transportation infrastructure in/around developments, analyze tax-increment financing, pursue development exactions, and/or levy special assessment districts.

- **Naming Rights/Advertising** – Assess sale of roadway names or names of other assets to corporate sponsors and/or universities for a defined timeframe open to renewal.

- **Public-Private Partnerships (PPPs)** – Analyze if PPPs would be a viable solution, also including partnerships with private entities to support new mobility services or broadband expansion opportunities along roadway corridors.

- **Public Real Estate** – Assess market value of current agency land holdings to determine if a flat sale and/or lease/lease-back arrangement would be viable.

- **Time/Travel-based** – Increase tolls and/or implement vehicle miles traveled, MUL (Managed-Use-Lane) or other mileage-based revenue approaches.

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Appendix – Non-Highway Modes

How Are Other Modes Funded?

Non-highway modes are funded through a combination of revenues from users, fuel taxes, Federal aid, intergovernmental transfers, and private operators. WVDOT’s most recent Statewide Transportation Improvement Program (“STIP”) outlines a variety of federal-aid projects from 2020 through 2025 within seven core programs to better manage assets and meet program needs instead of focusing on funding type. The STIP includes projects for roadways, bridges, bicycles, pedestrian, safety, as well as public transportation (transit). The STIP is also used to identify state funding for non-traditional multimodal transportation projects on top of regular funding for paving, bridge work, as well as roadway traffic and safety programs, in total exceeding $900M for 2020.22

Transit

Alongside both public and private public transportation (transit) agencies, the WV Division of Public Transit helps improve public transportation facilities, services, and assets by administering all Federal and State programs. Many residents and visitors rely on public transportation to commute to work, visit recreational facilities, and access education and/or medical services. On behalf of the WVDOT, the Division of Public Transit is the State agency able to receive funding from the Federal Transit Administration (FTA). The Division of Public Transit also applies for and receives other Federal grant funding to improve transit services and facilities like Federal Transit Capital Improvement Grants, Federal Transit Technical Studies Grants, and grants for Public Transportation in Nonurbanized areas. Fare revenues from passenger provide some operating revenues, but State subsidies are needed to cover the majority of operating costs.23

Aviation

The West Virginia Aeronautics Commission regulates aviation within the state and is funded from aviation fuel tax revenues, general aviation usage fees, as well as commercial cost-per-enplanement (CPE) charges and gate revenues from commercial airlines. West Virginia’s tourism relies on the State’s robust aviation services, and commercial airports in key locations (Charleston, Huntington, Lewisburg, Clarksburg, Morgantown, Beckley and Parkersburg) provide access to outdoor recreation. Sixteen (16) general aviation airports allow private carriers to also access State attractions.

Ports
The West Virginia Public Port Authority studies maritime needs to administer feasibility studies on deciding the best locations for terminals, ports and harbors, and foreign trade zones. Revenues from carriers and Federal grants supplement other State funding.  

Rail
Railroads throughout West Virginia move freight and passengers, and the West Virginia State Rail Authority (Rail Authority) rehabilitates, improves, and restores the State’s railway system in the State. Like WVDOH, the Rail Authority can issue bonds to raise funds for projects in addition to revenues received from usage fees and Federal as well as State grants that supplement cost of operations.  

CSX Transportation and Norfolk Southern Corporation are the two (2) Class I Freight Railroads serving West Virginia in addition to seven (7) local railroads, one (1) regional railroad (MARC Commuter Railroad), as well as one (1) switching and terminal railroad.  

Most of actual operating revenues come from the freight railroads which move about 160 million tons of freight each year. Some actual operating revenues come from miscellaneous sources including right-of-way leases, royalty revenues from gas wells, and revenues from recreational excursion train operators. The Rail Authority also receives State funds through Legislative Appropriation to assist operations.

State Rail Authority FY 2020 Revenue Sources ($1000s)

- Legislative Appropriation: $453,000 (7%)
- Freight Revenues: $1,648,000 (25%)
- Contributions from Other Agencies: $1,319,000 (20%)
- Miscellaneous Revenues: $3,100,000 (48%)

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