



Virginia Department of Rail and Public Transportation

Performance-Based Operating Assistance Allocation Guidance

Fiscal Year 2021

July 1, 2020 – June 30, 2021

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INTRODUCTION AND OVERVIEW

Virginia's Department of Rail and Public Transportation (DRPT) allocates funding for operating assistance to transit agencies across the Commonwealth through an allocation process pursuant to the *Code of Virginia* and Commonwealth Transportation Board (CTB) policy. This document describes the methodology for allocating state operating assistance.

The metrics and their weights were considered during several meetings of the Transit Service Delivery Advisory Committee (TSDAC) and CTB in 2018. The proposed methodology balances the need for reliable annual funding as well as the availability and reliability of performance data to support the six policy goals TSDAC identified:

- Promote Fiscal Responsibility
- Support Robust Transit Service
- Improve Transit Patronage
- Incentivize Efficient Operations
- Promote Mobility
- Support Social Safety Net

OPERATING ASSISTANCE METHODOLOGY

The performance-based operating allocation methodology distributes operating assistance based on a combination of an agency's sizing and performance factors. Sizing factors represent an agency's relative size to other agencies across the Commonwealth. Performance factors represent an agency's performance trend for a given metric relative to statewide trends for all agencies.

The data required from each agency to compute the operating allocation formula includes:

- **Operating Cost for System Sizing (Reimbursable Expenses on Application):** Most recent audited operating cost available, less depreciation, less expenses for projects funded in other DRPT programs, and less non-transit related expenses. New transit service will be based on budgeted operating costs for the year of implementation until audited operating costs are available. The Finance group will be reviewing the operating expenses in your financial statements and may contact you during their review.
- **Operating Cost for Performance Metric:** Total operating costs less depreciation, ineligible costs, and less non-transit related expenses. . . . The Finance group will be reviewing the operating expenses in your financial statements and may contact you during their review..
- **Ridership:** Unlinked Passenger Trips - Number of passengers who board public transportation vehicles, regardless of whether a passenger is transferring from another transit vehicle.
- **Revenue Vehicle Hours (RVH):** Hours traveled by revenue vehicles (buses, vans, railcars, etc.) while in revenue service. For uni-directional commuter routes greater than 20 miles in length, non-revenue hours associated with deadhead trips will be considered as revenue vehicle hours for the purpose of allocating operating assistance. These non-revenue hours associated with deadhead trips should not be reported through OLGA, but provided to the DRPT Transit Program Manager in conjunction with your operating application.
- **Revenue Vehicle Miles (RVM):** Miles traveled by revenue vehicles while in revenue service. For uni-directional commuter routes greater than 20 miles in length, non-revenue miles associated with deadhead trips will be considered as revenue vehicle miles for the purpose of allocating operating

assistance. These non-revenue miles associated with deadhead trips should not be reported through OLGA, but provided to the DRPT Transit Program Manager in conjunction with your operating application.

- **Passenger Miles Traveled (PMT):** Cumulative sum of the distances traveled by each passenger. This metric is used for calculation of the Commuter Rail Pool, and is estimated for small transit agencies based on reported ridership relative to statewide average distance traveled by commuter rail and commuter bus agency passengers.

Ridership, RVH, and RVM are to be reported by each agency on a monthly basis in OLGA. For PMT, those agencies that are required to report PMT to the National Transit Database annually will be required to provide PMT annually to their Transit Program Manager or through the Operating Application to support calculation of the Commuter Rail Sizing Metric. PMT must be reported for the most recently completed fiscal year (ex. for the FY21 DRPT grant cycle, agencies must report FY19 PMT). All data is subject to review and validation by DRPT staff prior to the annual allocation process and will be subject to audit.

COMMUTER RAIL SIZING

Due to the unique cost structure of Commuter Rail compared to other transit services, Commuter Rail receives a unique treatment in the sizing process. Currently, the only Commuter Rail agency in the Commonwealth of Virginia is Virginia Railway Express (VRE). The **size-weight** for the Commuter Rail pool is calculated by taking the percentage of VRE's Passenger Miles Traveled, Revenue Vehicle Hours, and Revenue Vehicle Miles compared to statewide totals. Each factor is weighted at 1/3 (33.33%) and multiplied by the total amount of operating assistance available statewide.

- 33.33% Passenger Miles Traveled
- 33.33% Revenue Vehicle Hours
- 33.33% Revenue Vehicle Miles

Funds not allocated to Commuter Rail based on this sizing metric are allocated to the remainder of transit agencies on the basis of the sizing factors described below.

The commuter rail allocations are then adjusted by the performance metrics to establish the annual allocation by agency.

SIZING

To correlate funding allocations with the relative size of each agency, a **size-weight** factor is calculated with a combination of sizing metrics, at specific percentage weights. The size-weight for each metric is computed in the following manner:

$$\text{Agency Size-Weight} = (\text{Sum of Agency Sizing Metric} / \text{Statewide Totals}) * \text{Weight}$$

The proposed sizing metrics and weights for the sizing formula are:

- 50% Operating Cost
- 30% Ridership
- 10% Revenue Vehicle Hours
- 10% Revenue Vehicle Miles

If the statewide sum of agency size-weights does not equal 100%, then the ratios are normalized such that the statewide sum of size-weights for all agencies totals 100%.

$$\text{Agency Normalized Size-Weight} = \text{Agency Size-Weight} / \text{Sum of Statewide Size-Weights}$$

PERFORMANCE ADJUSTMENTS

Once the **normalized size-weight** for each agency has been determined, the size-weight is adjusted by the five **performance metrics**.

The proposed performance metrics are:

- Passengers per Revenue Vehicle Hour
- Passengers per Revenue Vehicle Mile
- Operating Cost per Revenue Vehicle Hour
- Operating Cost per Revenue Vehicle Mile
- Operating Cost per Passenger

For each performance metric, three years of historical data plus the most recent year of data is used to calculate performance trends for each agency and statewide. Each agency's three-year trend in year-over-year percentage change relative to the statewide trend is calculated. The formula for this trend is:

$$\text{Trend Factors} = 3\text{-Year Average of (Annual Change in each Agency's Performance Metric / Annual Change in Statewide Performance Metric)}$$

For Passengers per Revenue Vehicle Hour and Passengers per Revenue Vehicle Mile, these **trend factors** are then multiplied by the size-weight to compute a **size-performance weight**.

$$\text{Size-Performance Weight} = \text{Agency Size-Weight} * \text{Trend Factor}$$

For Operating Cost per Revenue Vehicle Hour, Operating Cost per Revenue Vehicle Mile, and Operating Cost per Passenger, an inverse function is used, and the size-weight is multiplied by 1 divided by the trend factor, to incentivize decreasing Cost trends.

$$\text{Size-Performance Weight} = \text{Agency Size-Weight} * (1/\text{Operating Cost-based Trend Factor})$$

All size-performance weights are then normalized such that the statewide sum of size-weights for all agencies for each metric is equal to 100%.

$$\text{Agency Normalized Size-Performance Weight} = \text{Agency Size-Performance Weight} / \text{Sum of Statewide Size-Performance Weights}$$

FUNDING ALLOCATIONS

At this stage, each agency has 5 normalized size-performance weight factors. These factors are multiplied by their weight (20% for each performance metric), summed, and multiplied by total available funding. This sum is the agency's total operating assistance allocation.

$$\begin{aligned} \text{Agency Funding Allocation} = & \text{Available Funding} * \\ & [(Passengers \text{ per RVH Normalized Size-Performance Weight} * 20\%) + \\ & (Passengers \text{ per RVM Normalized Size-Performance Weight} * 20\%) + \\ & (Operating Cost \text{ per RVH Normalized Size-Performance Weight} * 20\%) + \\ & (Operating Cost \text{ per RVM Normalized Size-Performance Weight} * 20\%) + \\ & (Operating Cost \text{ per Passenger Normalized Size-Performance Weight} * 20\%)] \end{aligned}$$

FUNDING CAP

A cap on funding allocations is used to minimize the volatility of funding received by each agency. The cap is proposed to be set at 30% of an Agency's latest year of operating costs. The recommended percentage was informed by the highest operating assistance grant received under the FY 2019 allocation methodology by Virginia transit agencies, which was generally below 30% of operating costs. After applying this cap to the operating assistance allocation, an unallocated funding pool remains. These funds are redistributed to agencies below this cap proportional to their Agency Funding Allocation ensuring that all available funds are distributed annually.



Virginia Department of Rail and Public Transportation

600 East Main Street, Suite 2102
Richmond, VA 23219
804-786-4440
