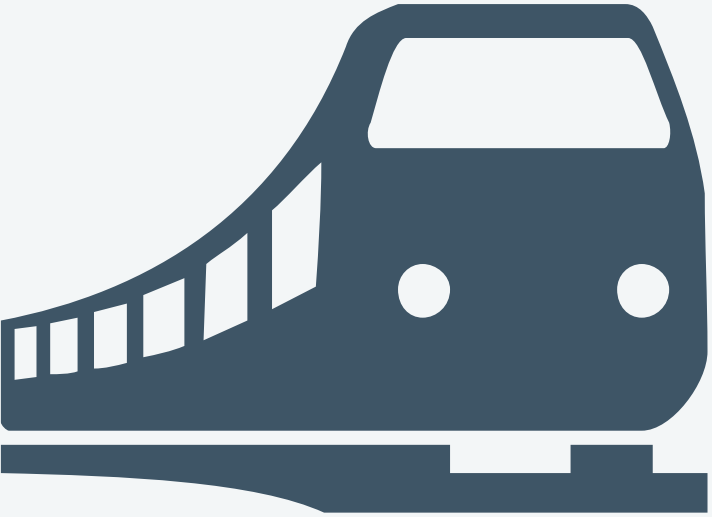
Report Year 2018

NTD

National Transit Database



2018 National Transit Summaries and Trends: Appendix

Office of Budget and Policy

December 2019

U.S. Department of Transportation
Federal Transit Administration

Table of Contents

Table of Exhibits

Transit in the United States

Total Federal Assistance Applied to Transit and Unlinked Passenger Trips

The Federal Transit Administration (FTA) uses federal funds to offset operating, capital, and planning costs for agencies. Since 2009, both ridership and federal assistance for transit (2018 constant dollars) have decreased, 3.1 percent and 3.7 percent, respectively.

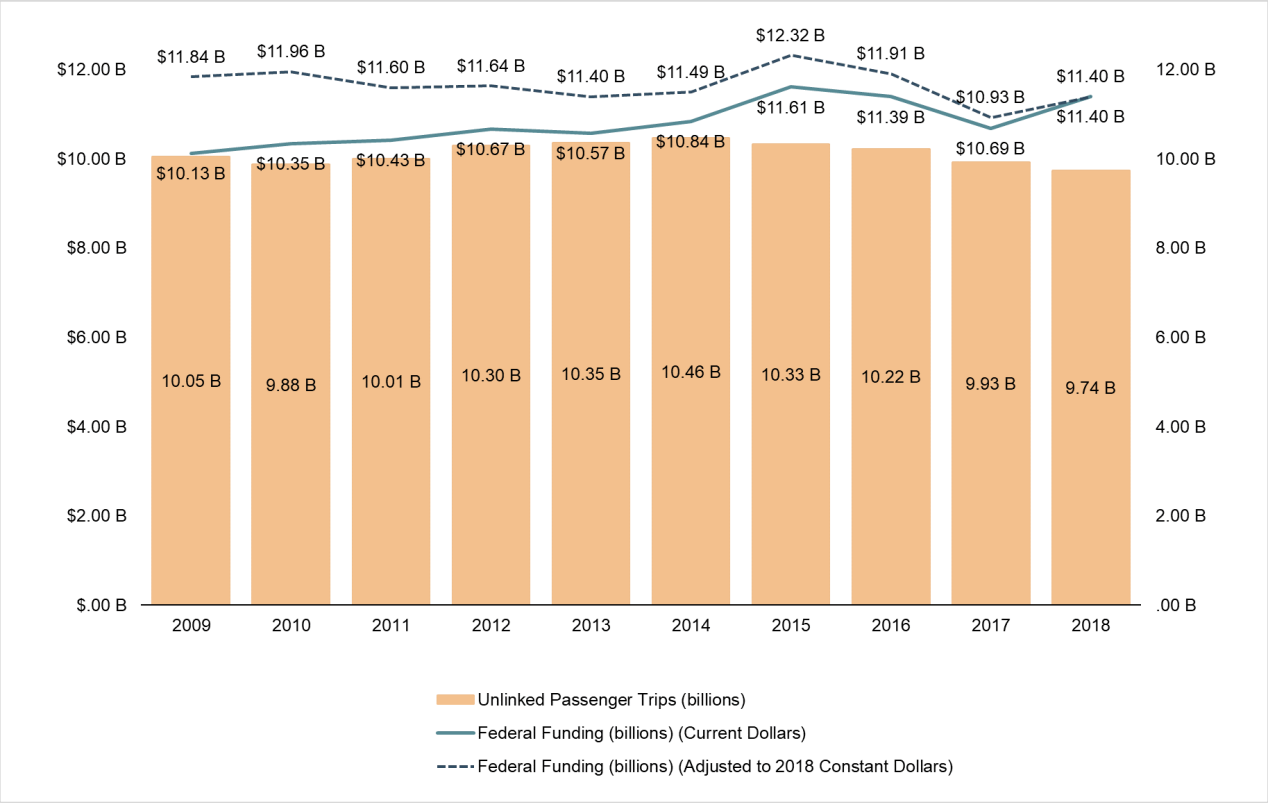


Exhibit A- 1: ***Unlinked Passenger Trips and Funds Applied to Transit (2009–2018)***

Number of Transit Agencies

Transit agencies that receive or benefit from FTA Urbanized Area Formula Program (5307) or FTA Formula Grants for Rural Areas (5311) are required to report financial data and non-financial operating statistics to the National Transit Database (NTD) program. To receive funding from FTA, transit agencies must report to the NTD and follow NTD requirements. FTA uses NTD data to apportion funding to transit agencies in the United States. Transit agencies not receiving FTA funds are encouraged to submit data to the

NTD on a voluntary basis to help create a clearer picture of the public transit system throughout the United States. Some of the trends in these exhibits could be due to changes in the reporting population (new reporters) rather than changes in the national industry.

The NTD separates urban and rural recipients and beneficiaries into two reporting groups: urban reporters and rural reporters. In 2018, 945 urban transit agencies, 54 States, 1,255 subrecipients and 134 Tribes reported data to the NTD program.

Reduced Reporter

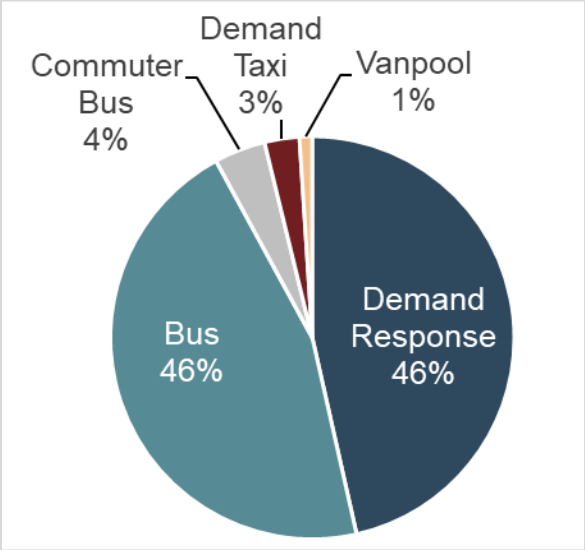


Exhibit A- 2: *2018 Reduced Reporter Modes*

Prior to 2011, urban agencies operating less than ten revenue vehicles were granted a waiver from reporting detailed financial and service data. Agencies receiving this waiver, called the 9 or Fewer Vehicles Waiver, were still required to report basic information about their agency, including the number of vehicles operated in maximum service (VOMS) for each mode of service they offered. In 2011, the 9 or Fewer Vehicles Waiver was eliminated and replaced by the Small Systems Waiver (SSW). This policy required all agencies receiving FTA Urbanized Area Formula Program funding to report financial and service data. Agencies operating 30 or fewer VOMS and no fixed guideway or high intensity busway can report a condensed version of the full NTD report with only basic financial and service data. In 2014, Small Systems Waivers were renamed Reduced Reporters.

The data in Exhibit A 2 shows transit modes operated by Reduced Reporters in 2018. Motorbus and Demand Response each make up 46 percent of the total transit modes operated by Reduced Reporters. The remaining 8 percent is made up of Commuter Bus, Demand Response – Taxi, and Vanpool modes.

Relative Impact on Data by UZA Size Group

The US Census defines urbanized areas as geographic areas with a population of 50,000 or more. According to the 2010 US Census, there are 491 urbanized areas. For National Transit Database purposes, the NTST groups urbanized areas into three size categories:

- **Large urbanized areas:** population of more than 1 million (42 urbanized areas, 371 agencies, or 39.3 percent of all agencies reporting).
- **Medium urbanized areas:** population of more than 200,000 but less than 1 million (138 urbanized areas, 246 agencies, or 26.1 percent of all agencies reporting).
- **Small urbanized areas:** population of less than 200,000 but more than 50,000 (320 urbanized areas, 327 agencies, or 34.6 percent of all agencies reporting).

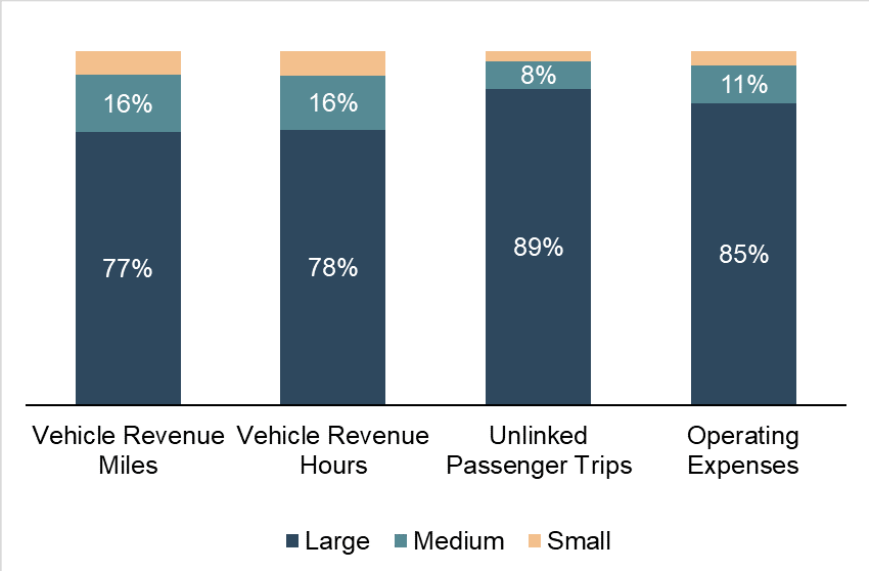


Exhibit A- 3: ***2018 NTD Service Data by UZA Size***

More than three quarters of all urban service occurs in UZAs with a population of more than 1 million people.

Rural Reporters

The US Census defines rural areas as geographic areas with a population of less than 50,000. Because many of these geographic areas are quite large, rural areas usually have low population density, resulting in low recovery ratios and high cost per trip.

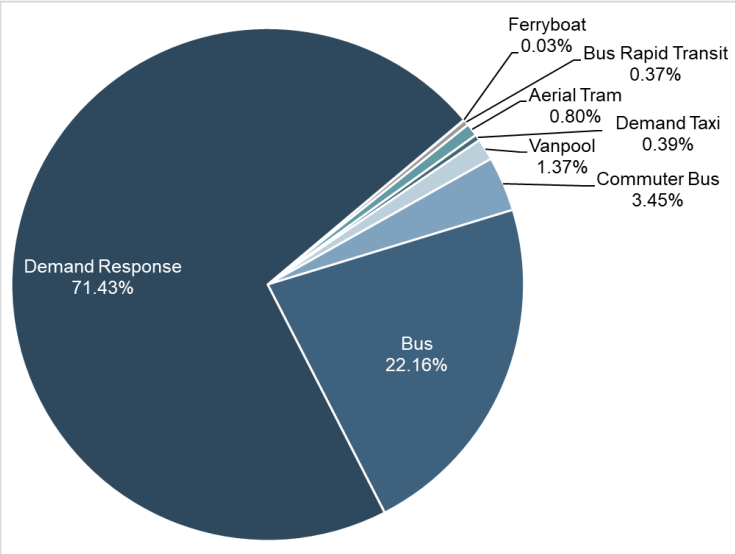


Exhibit A- 4: *2018 Breakdown of Rural Service by Mode*

For Report Year 2018, 1,255 sub-recipients and 54 states (the NTD considers Puerto Rico, Virgin Islands, American Samoa, Guam, and the Northern Mariana Islands as States for the purpose of rural data collection and funding) submitted data to the NTD through their State Department of Transportation.

The types of service provided in rural areas are similar to those in urban areas. Demand response and Bus accounted for 93.6 percent of all rural transit service in 2018 due to the low population density of rural areas. For the definitions of modes and types of service, refer to the NTD Glossary available at www.transit.dot.gov/ntd/national-transit-database-ntd-glossary.

Urban Operating Expenses and Performance Measures

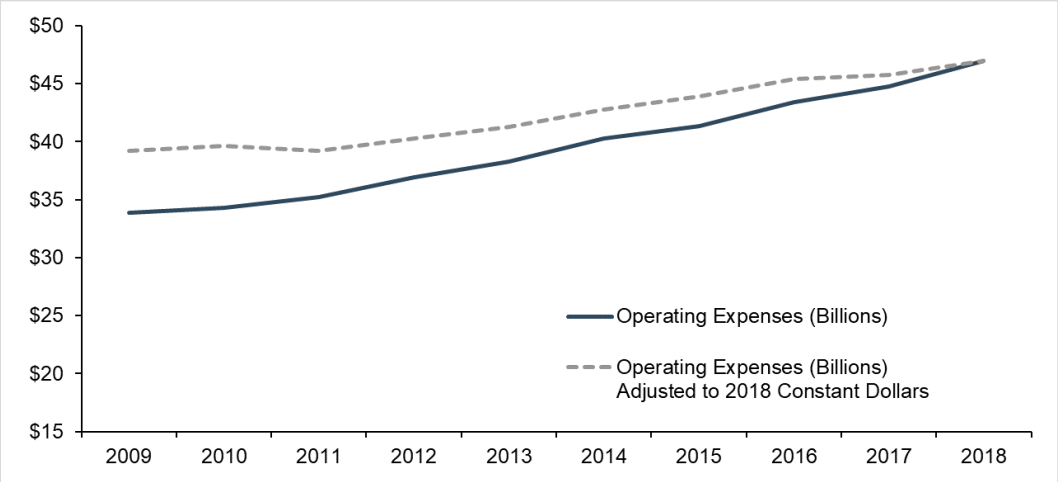


Exhibit A- 5: ***Total Operating Expenses***

Transit agencies that provide mass transportation services (vehicle operations, vehicle and non-vehicle maintenance, and administration) incur operating expenses. Transit agencies have various Reconciling items expenses because of different accounting practices implemented by local ordinances. The NTST excludes depreciation, interest expenses, leases, and rentals when accounting for Reconciling items expenses. Operating expenses have increased 20.0 percent over the past ten years (in 2018 Constant Dollars).

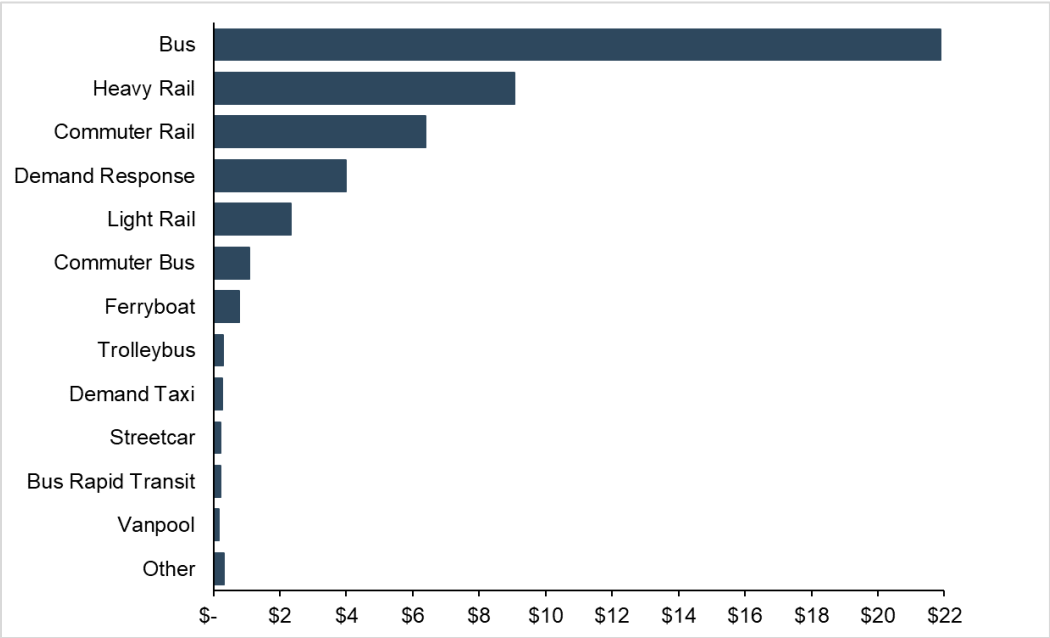


Exhibit A- 6: ***2018 Total Operating Expenses (Billions) by Mode***

Operating Funding

Operating funds are the funds transit agencies receive from federal, state, local, and directly-generated sources that are applied to operating expenditures. Transit agencies report these funds in the year that they earn them, according to accrual accounting principles.

Transit agencies use federal funds to defray some of the operating costs of providing transit service.

Operating funding sources include:

- Fare revenues
- Federal sources
- State sources
- Local sources
- Other sources

Other sources include non-transportation funds, subsidies from other sectors of operations, auxiliary funds such as advertising and concessions, charter service, freight tariffs, and school bus funds.

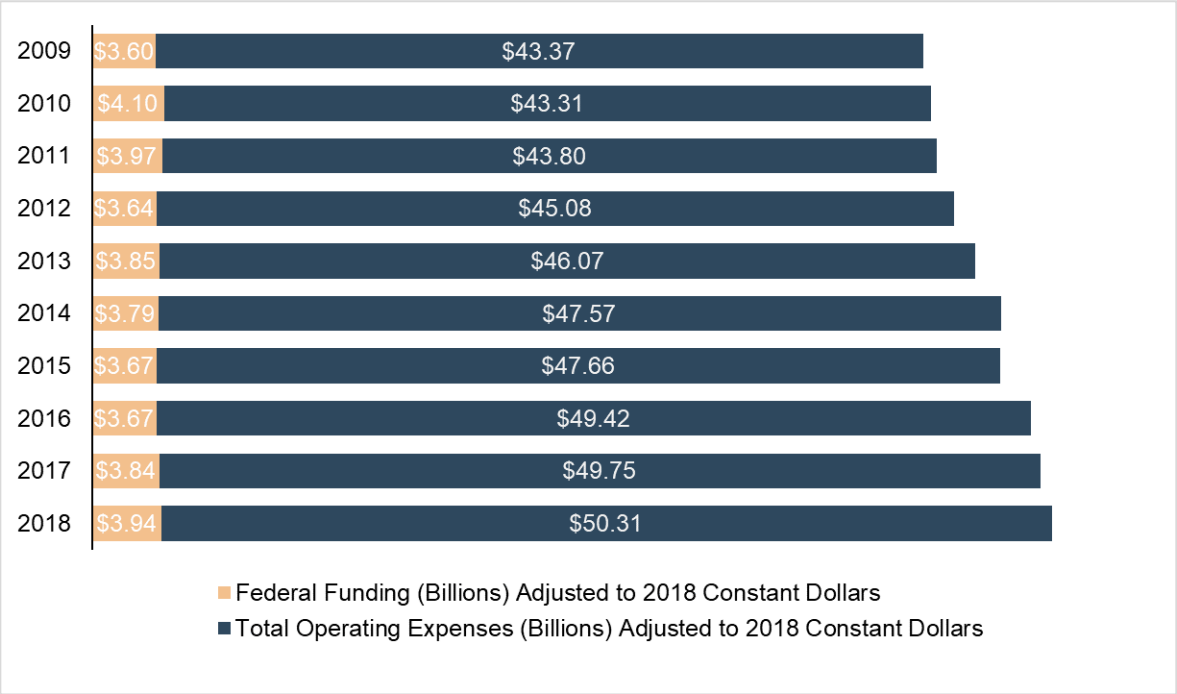


Exhibit A- 7: *Total Operating Expenses*

Year	Federal	State	Local	Other
2009	$3,604 M	$10,987 M	$12,592 M	$16,183 M
2010	$4,097 M	$10,796 M	$12,172 M	$16,244 M
2011	$3,969 M	$10,718 M	$12,406 M	$16,706 M
2012	$3,635 M	$11,674 M	$12,663 M	$17,105 M
2013	$3,848 M	$11,672 M	$13,090 M	$17,463 M
2014	$3,795 M	$11,615 M	$14,308 M	$17,849 M
2015	$3,672 M	$10,434 M	$15,048 M	$18,505 M
2016	$3,674 M	$11,371 M	$15,819 M	$18,553 M
2017	$3,838 M	$11,484 M	$16,131 M	$18,296 M
2018	$3,936 M	$11,471 M	$16,718 M	$18,190 M

Exhibit A- 8: ***Total Operating Funding by Source***

When using 2018 constant dollars, the total operating funds applied to transit operations increased 16.0 percent over the past ten years.

Operating Funding Sources by UZA

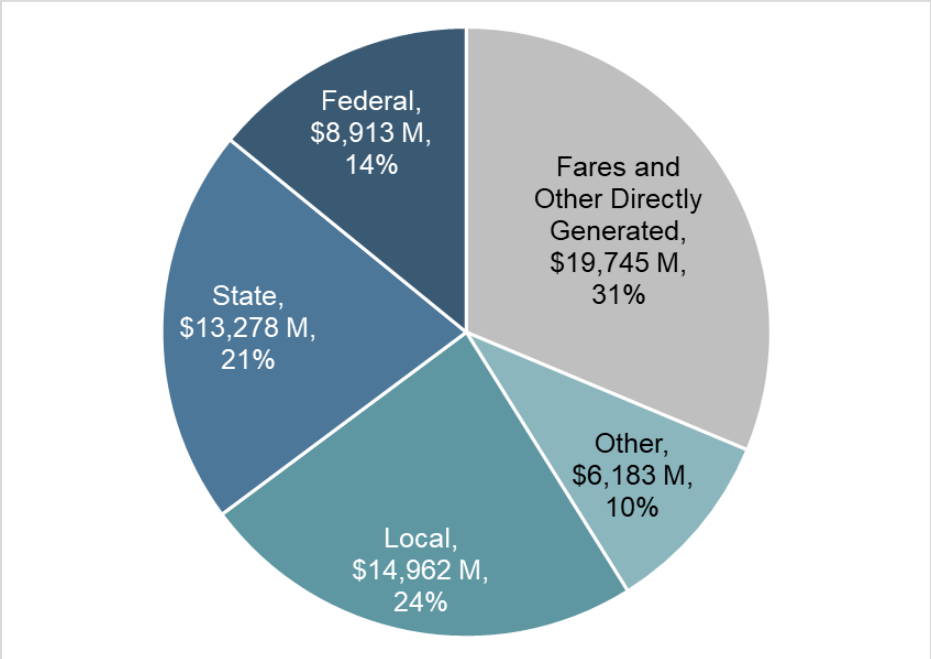


Exhibit A- 9: ***Funding Sources by UZA Size (Large UZAs)***

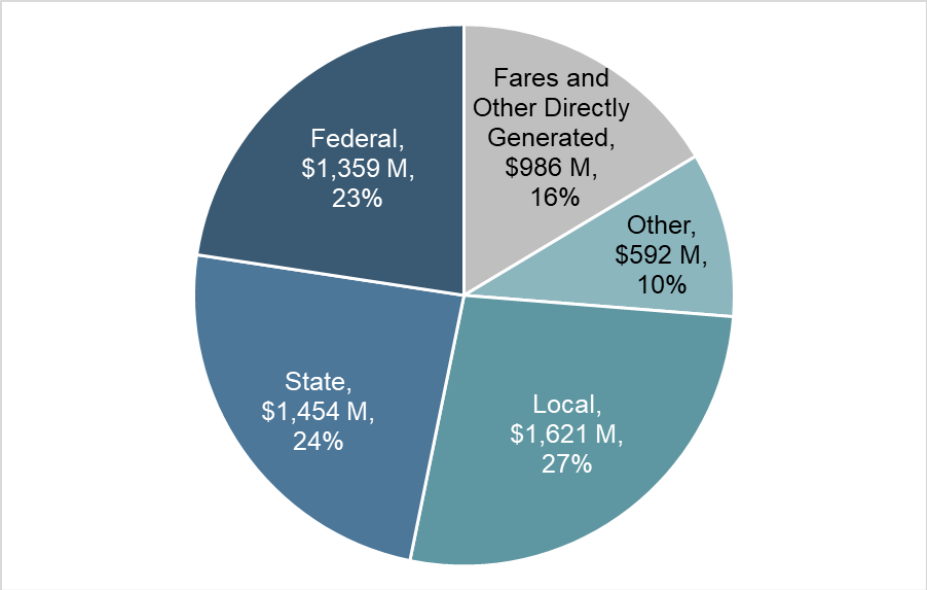


Exhibit A- 10: ***Funding Sources by UZA Size (Medium UZAs)***

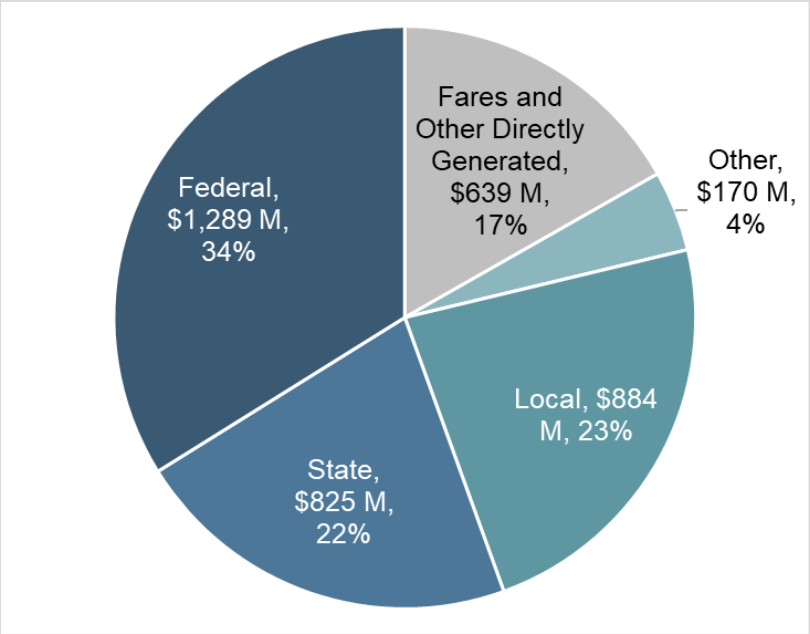


Exhibit A- 11: ***Funding Sources by UZA Size (Small UZAs)***

For large urbanized areas, fares and other directly generated revenues made up 31 percent of funding in 2018. Small and medium urbanized areas are more dependent upon operating subsidies than large urbanized areas. Fares and other directly generated

revenues account for only 17 percent and 16 percent, respectively, for these two types of UZAs in 2018.

Small UZAs received the highest amount of federal operating assistance per trip as shown in Exhibit A 12, receiving an average of $1.72 of federal funding for every passenger carried.

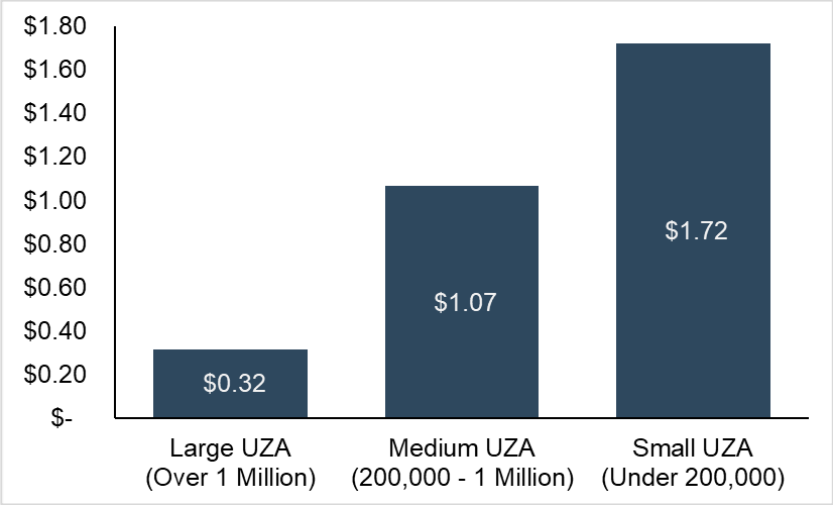


Exhibit A- 12: ***2018 Federal Operating Assistance per Trip by Urbanized Area Size***

Operating Expenses by Function and Object Class

Agencies must report finances according to the Uniform System of Accounts (USOA). The USOA contains the basic accounting structure required by Federal transit laws. Agencies must report operating expense data by mode, function, and object class. Functions refer to the activity performed, while object classes refer to the type of goods or services purchased. Agencies reporting as Reduced Reporters are not required to classify their operating expenses by function and object; therefore, data from agencies reporting as Reduced Reporters are not included in Exhibits A 13, A 14, and A 15.

Full reporting agencies group their operating expenses in the four functions listed below:

- Vehicle operations
- Vehicle maintenance
- Facility maintenance
- General administration

Funds used for Vehicle Operations account for 50.5 percent of all operating expenses. The object classes Salaries, Paid Absences, and Fringe Benefits account for 74.1 percent of the total expenditures on direct operated services.

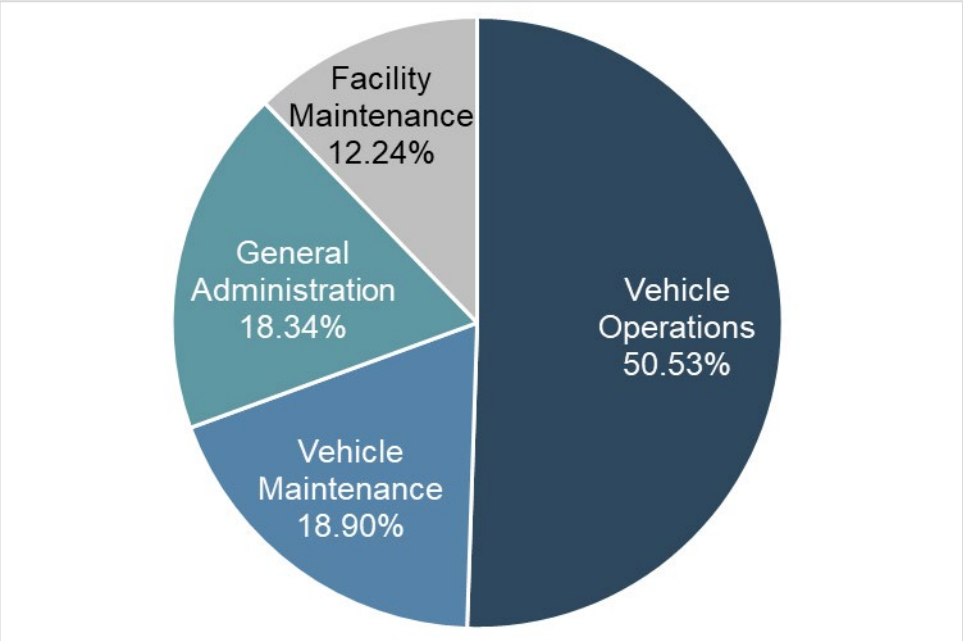


Exhibit A- 13: ***Operating Expenses by Function***

Cost Function	Operating Expenses (in millions)
Vehicle Operations	$23,377 M
Vehicle Maintenance	$8,742 M
General Administration	$8,483 M
Facility Maintenance	$5,662 M
Total	**$46,263 M**

Exhibit A- 14: ***Operating Expenses by Function (in Millions)***

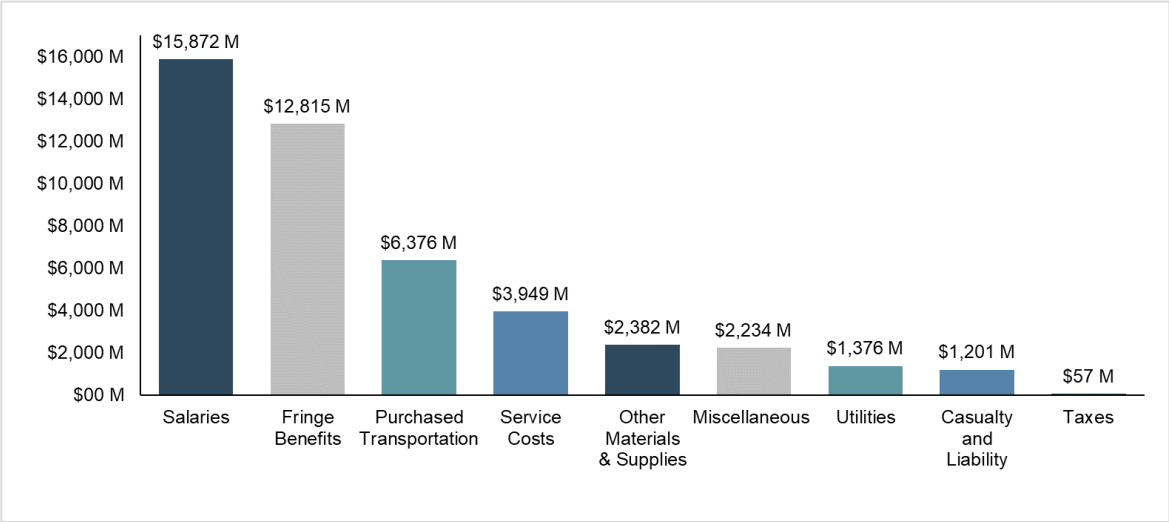


Exhibit A- 15: ***2018 Operating Expenses by Object Class***

Farebox Recovery Ratio

Farebox recovery ratio is the proportion of total operating expenses covered by fare revenues. Fare revenues are funds earned through carrying passengers in regularly scheduled service. It includes the base fare, zone premiums, express service premiums, extra cost transfers and quantity purchase discounts applicable to the passenger's ride, including any fares paid by organizations on the passenger's behalf.

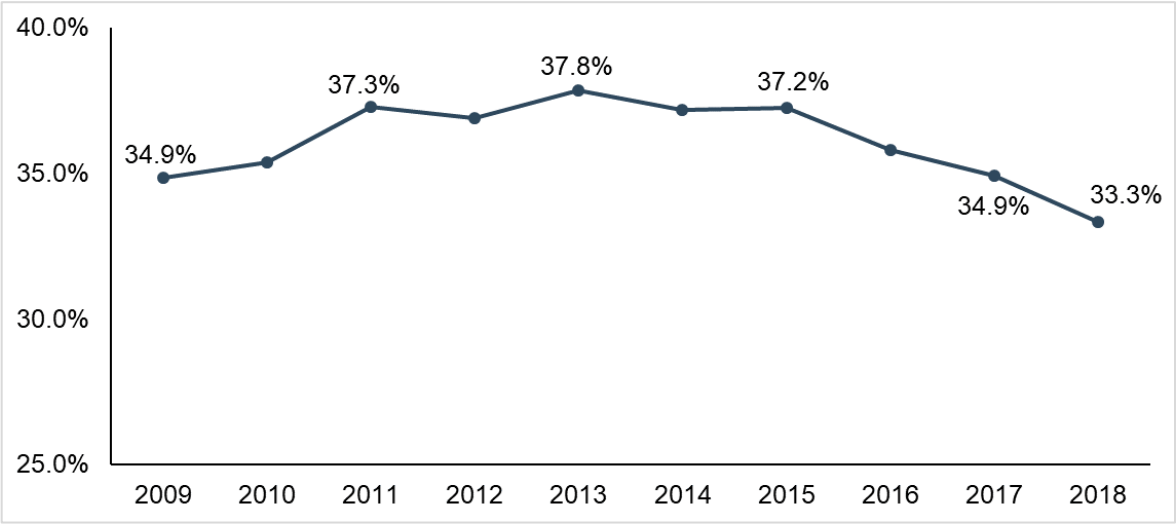


Exhibit A- 16: ***Farebox Recovery Ratio (2009–2018)***

From 2009 to 2013, farebox recovery ratios increased, peaking at 37.8% in 2013, but decreased 11.9 percent from 2013 to 2018.

Capital Expenditures

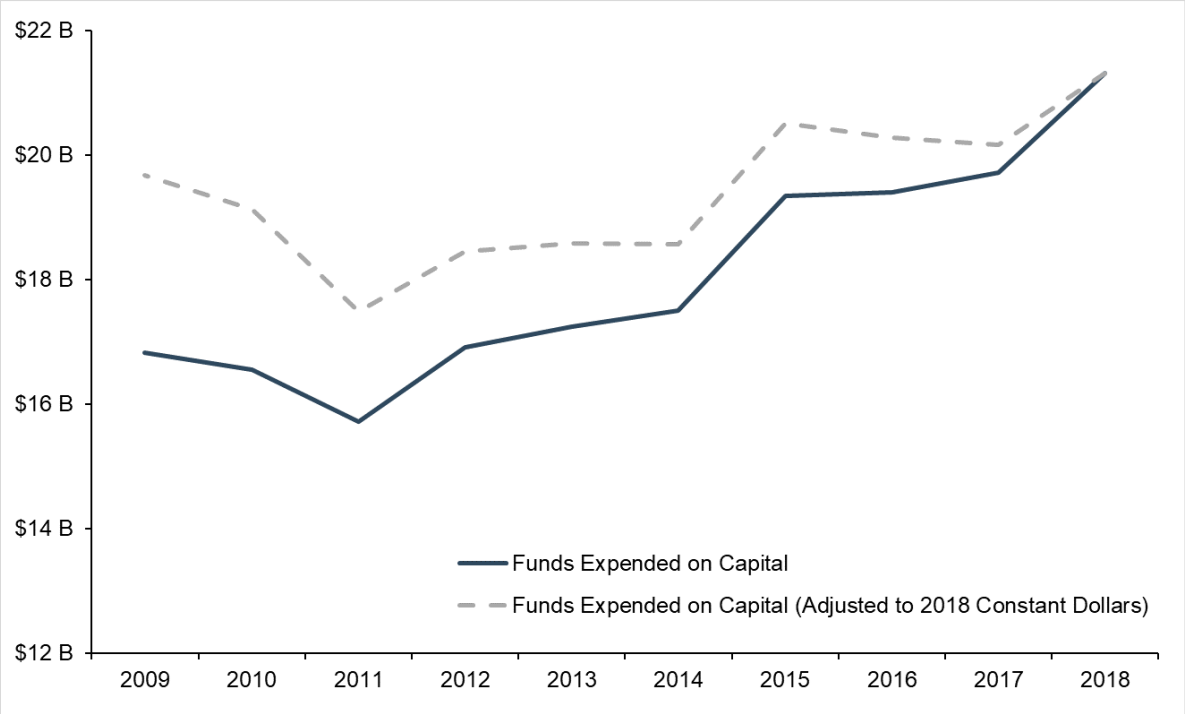


Exhibit A- 17: *Capital Expenditures*

Uses of capital include:

- **Guideway:** Buildings and structures dedicated to the operation of transit vehicles, such as: at grade, elevated and subway structures, tunnels, bridges, track and power systems for rail modes, and paved lanes dedicated to bus mode.
- **Passenger stations:** Boarding/alighting facilities with a platform, which may include stairs, elevators, escalators, passenger controls (e.g., fare gates or turnstiles), canopies, wind shelters, lighting, signs. Buildings with a waiting room, ticket office or machines, restrooms, or concessions. Includes transportation/transit/transfer centers, park-and-ride facilities, and transit malls with the above components, including those only utilized by motor buses. Does not include simple roadside bus stops.
- **Administrative buildings:** Buildings in which administration work takes place. A common example of this is an office building.

- **Maintenance facilities:** Central/overhaul maintenance facilities, light maintenance facilities, storage facilities, and major equipment located in these facilities.
- **Revenue vehicles:** Vehicles used to provide transit service for passengers. A transit agency may use capital funds for the replacement, rehabilitation, remanufacture, rail overhaul, and expansion of its fleet.
- **Service (non-revenue) vehicles:** Service, supervisory, and vehicles other than revenue vehicles.
- **Fare revenue collection equipment:** Includes the acquisition of fare revenue collection equipment such as turnstiles, fare boxes (drop), automated fare boxes and related software, money changers, and fare dispensing machines (tickets, tokens, passes).
- **Communication and information systems:** Communication systems include two-way radios for communication between dispatchers and vehicle operations, cab signaling and train control equipment in rail systems, automatic vehicle locator systems, automated dispatching systems, vehicle guidance systems, telephones, facsimile machines, and public-address systems. Information systems include computers, monitors, printers, scanners, data storage devices, and associated software that support general office, accounting, scheduling, vehicle and non-vehicle maintenance, and customer service functions.
- **Other:** Includes park and ride facilities, passenger shelters, signs and amenities, furniture, and equipment that are not integral parts of buildings and structures.

Uses of Capital by UZA Size

Large and medium-sized urbanized areas operate most of the country's rail systems. Guideway and facilities account for a significant portion of the overall capital costs. For small urbanized areas, bus and demand response are the most common modes and most uses of capital are for revenue vehicles and facilities.

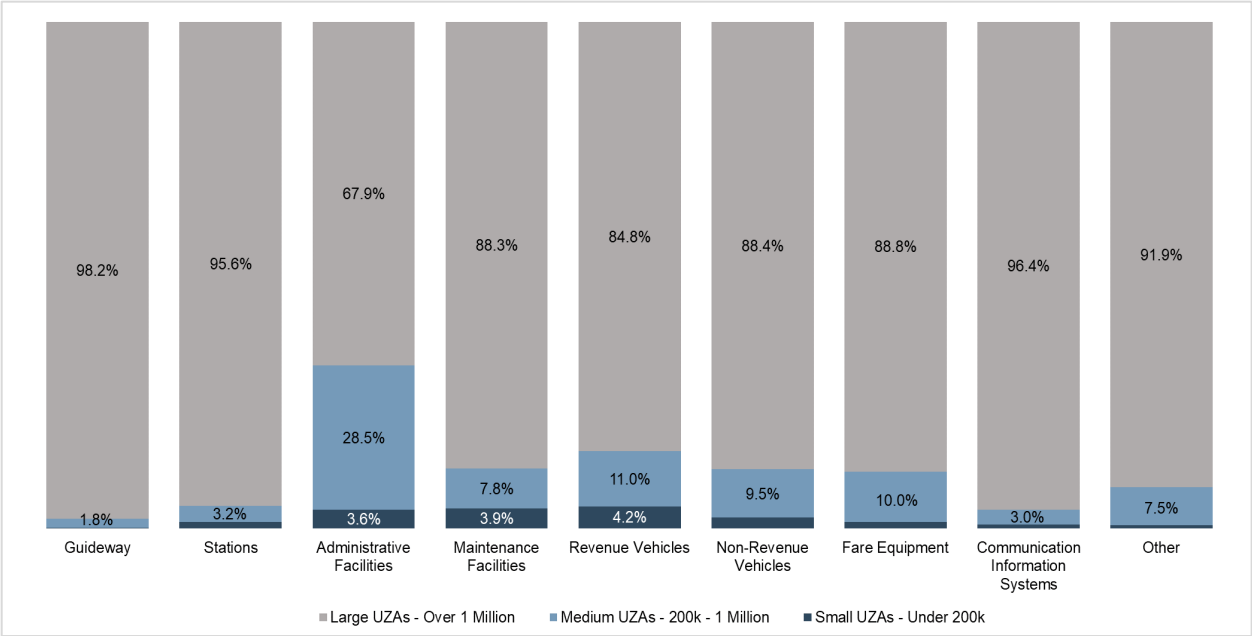


Exhibit A- 18: *2018 Capital by Urbanized Area Size*

Sources of Capital Funding by UZA

Federal sources account for about 24.2 percent of the capital invested in transit in 2018. A significant portion of capital invested in small and medium urbanized areas is from federal funds. Large urbanized areas rely primarily on local and state funds and directly levied taxes to pay for capital projects.

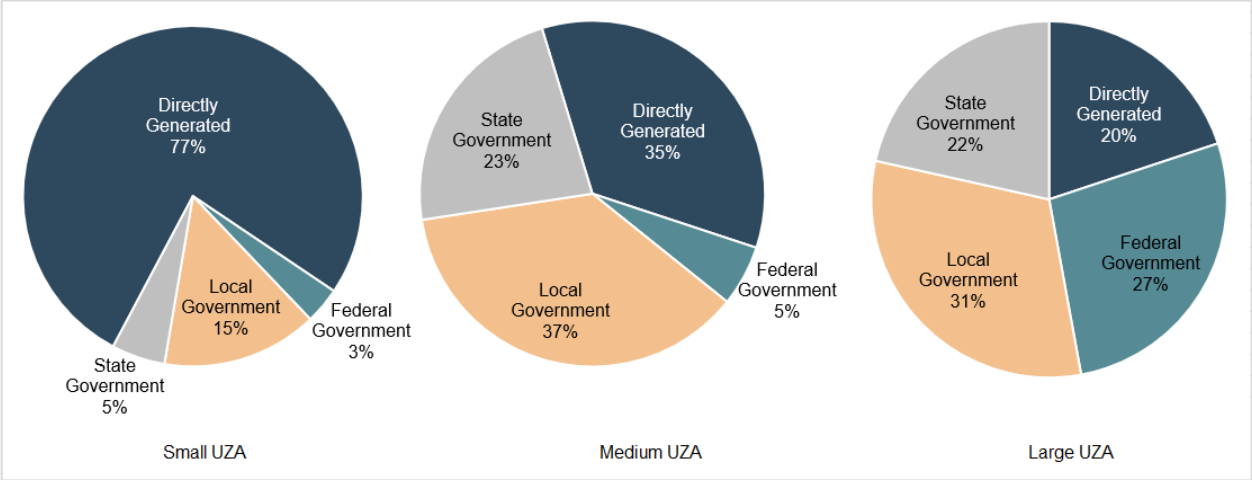


Exhibit A- 19: *2018 Capital Expenditures by Funding Sources and UZA Size*

Capital Investment in Transit

Capital funds are funds from federal, state, and local governments as well as directly generated sources that transit agencies apply to purchases such as equipment or other assets. Directly generated sources include any funds generated or donated directly to the transit agency including passenger fares, advertising revenues, donations, and grants from private entities. Funds from the federal government accounted for 24.2 percent of capital invested in transit in 2018.

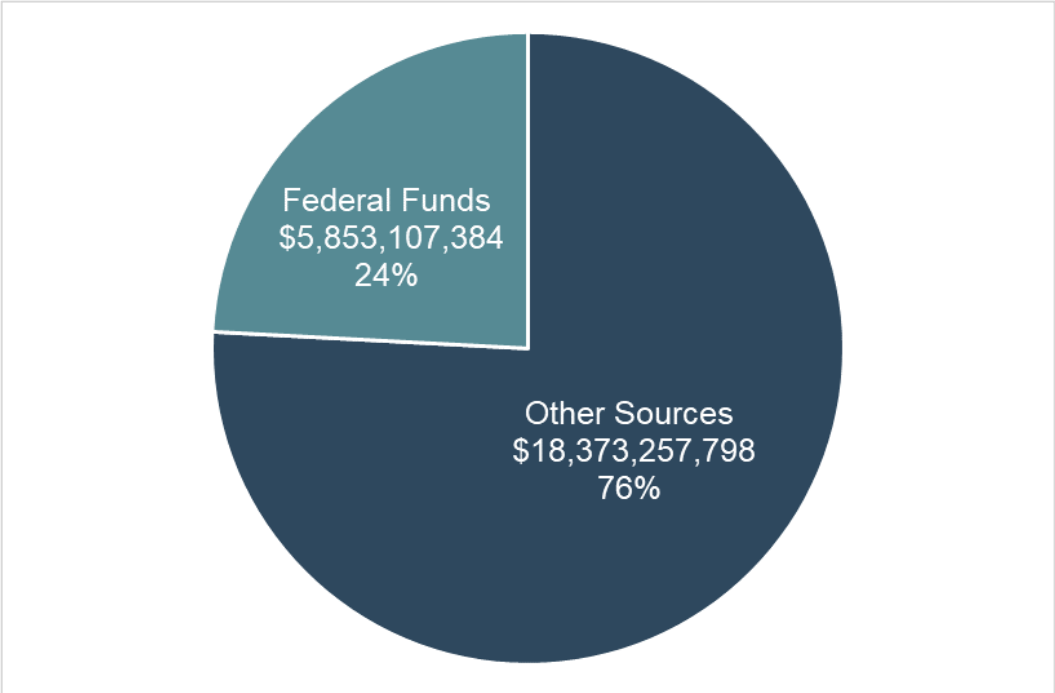


Exhibit A- 20: ***2018 Sources of Capital Funding***

Distribution of Capital by Mode

Generally, rail systems are in high-density corridors within the larger metropolitan areas of the United States. The high levels of service supplied in these areas require large investments in transit infrastructure (e.g., track, signals and communication systems, complex maintenance facilities, passenger stations, inter-modal terminals, real time data acquisition systems, and other cost intensive items). Bus systems do not require the same level of investment in infrastructure as rail. Therefore, revenue vehicles are the main use of capital for bus systems.

Year	Commuter Rail	Heavy Rail	Light Rail
2009	83.2%	72.9%	88.7%
2010	86.2%	84.0%	89.7%
2011	70.1%	91.6%	91.1%
2012	77.3%	95.3%	93.2%
2013	73.6%	92.8%	91.1%
2014	76.4%	88.1%	92.2%
2015	79.4%	94.0%	92.3%
2016	82.0%	92.1%	92.2%
2017	87.2%	88.6%	85.6%
2018	87.9%	88.8%	87.6%

Exhibit A- 21: ***Percent of Capital Expended on Non-Vehicle Capital by Rail Mode***

Rural Operating and Capital Funding

The sources of funds for rural areas (operating and capital) include local, state, and federal government as well as funds generated by service providers (fares and contract revenues).

FTA funding categories available for Rural Transit include:

- Section 5309 – FTA Capital Program
- Section 5310 – FTA Enhanced Mobility for Seniors & People with Disabilities
- Section 5311 – FTA Formula Grants for Rural Areas Program
- Section 5316 – FTA Job Access and Reverse Commute Program
- Section 5317 – FTA New Freedom Program
- Section 5320 – FTA Alternative Transportation in Parks and Public Lands Program

The federal government provided 35.86 percent of the rural transit-operating budget. Fares, state and local funds made up another 55.35 percent of the budget, while the remaining 8.79 percent of funds came from contract revenue and other directly generated funds.

Source of Funding	Funds Expended on Operations	Percentage of Total
§5311 Rural Area Formula Program	$436,936,278	29.20%
Local Funds	$413,357,139	27.62%
State Funds	$290,831,648	19.43%
Fares	$124,207,213	8.30%
Other Funds	$114,114,927	7.63%
Other Federal Funds	$51,885,311	3.47%
§5311 Tribal Transit Funds	$27,674,110	1.85%
Contract Revenue	$17,356,601	1.16%
§5310 EMSID Formula Program	$14,998,297	1.00%
Other USDOT Funds	$1,399,330	0.09%
§5316 JARC Formula Program	$1,257,975	0.08%
§5317 New Freedom Program	$1,035,846	0.07%
Other FTA Funds	$906,297	0.06%
§5307 Urbanized Area Formula Program	$289,437	0.02%
§5337 State of Good Repair Program	$196,633	0.01%
§5339 Bus and Bus Facilities	$83,317	0.01%
§5309 Capital Investment Grants	$12,037	0.00%
Total	**$1,496,542,396**	

Exhibit A- 22: ***2018 Source of Funding Expended on Operations***

Source of Funding	Funds Expended on Capital	Percentage of Total
§5311 Rural Area Formula Program	$70,779,391	30.00%
§5339 Bus and Bus Facilities	$47,512,054	20.14%
State Funds	$38,145,048	16.17%
Local Funds	$37,331,816	15.83%
Other USDOT Funds	$13,257,105	5.62%
§5310 EMSID Formula Program	$12,695,453	5.38%
§5309 Capital Investment Grants	$4,768,393	2.02%
§5311 Tribal Transit Funds	$4,350,030	1.84%
Other	$3,262,059	1.38%
Other Federal Funds	$1,147,864	0.49%
§5316 JARC Formula Program	$951,564	0.40%
§5317 New Freedom Program	$876,295	0.37%
Fares	$500,028	0.21%
§5337 State of Good Repair Program	$127,762	0.05%
Other FTA Funds	$111,887	0.05%
Contract Revenue	$84,179	0.04%
Total	**$235,900,928**	

Exhibit A- 23: ***2018 Source of Funding Expended on Capital***

Rural transit capital budgets relied mostly on federal assistance, accounting for 66.4 percent of all funds expended on capital.

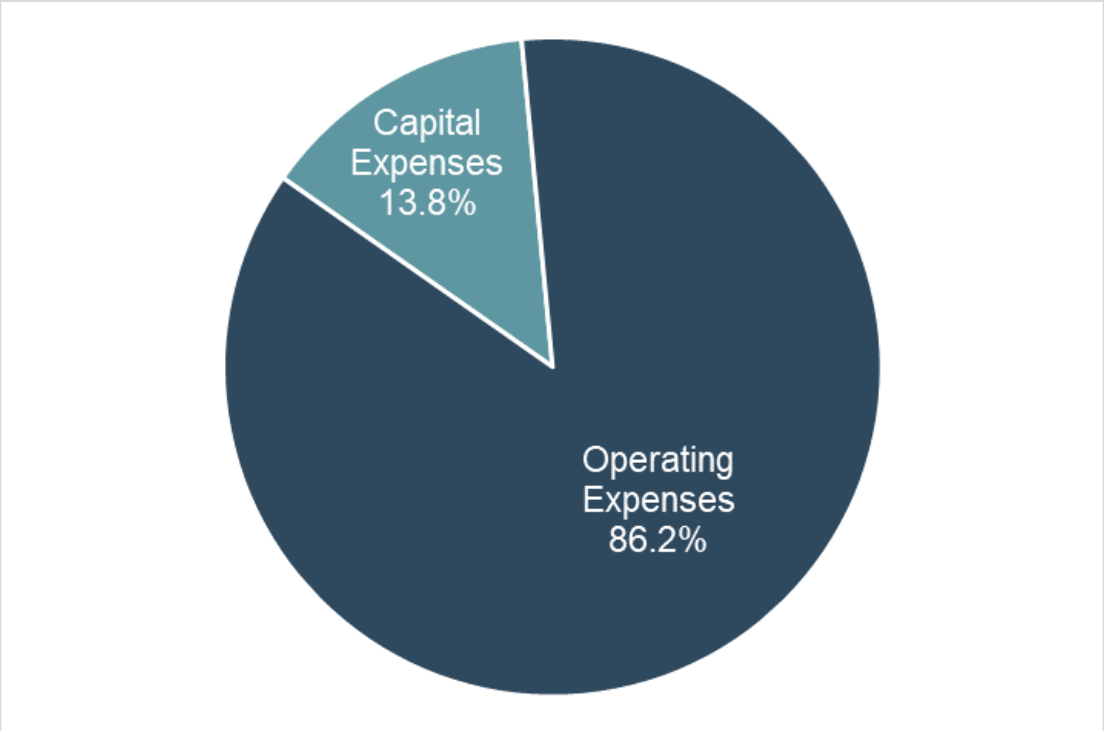


Exhibit A- 24: ***Expenses by Type – Rural Transit***

Unlinked Passenger Trips

The National Transit Database (NTD) defines Unlinked Passenger Trips (UPT) as the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles, no matter how many vehicles they use to travel from their origin to their destination. Unlinked passenger trips increased 20 percent over the past twenty years as showing in Exhibit A 25.

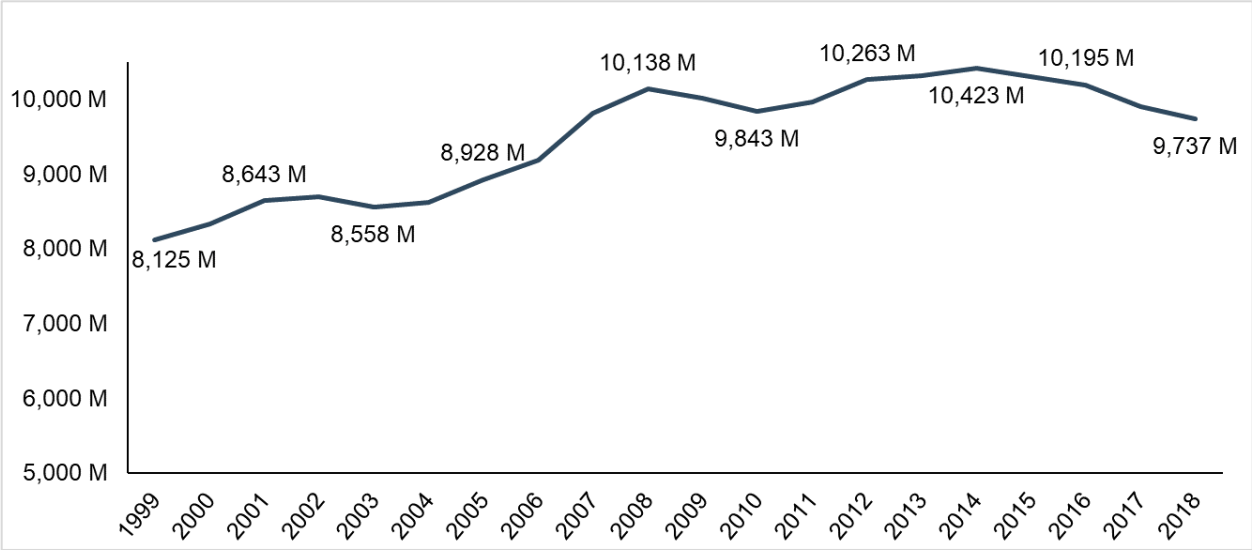


Exhibit A- 25: *Unlinked Passenger Trips*

Ridership decreased 2.8 percent from 2009 to 2018. Unlinked passenger trips increased for the following modes over the ten-year period:

- Vanpool – 35.5 percent
- Demand Response – 9.1 percent
- Heavy Rail – 6.7 percent
- Light Rail – 5.0 percent
- Commuter Rail – 7.9 percent
- Ferryboat – 41.8 percent

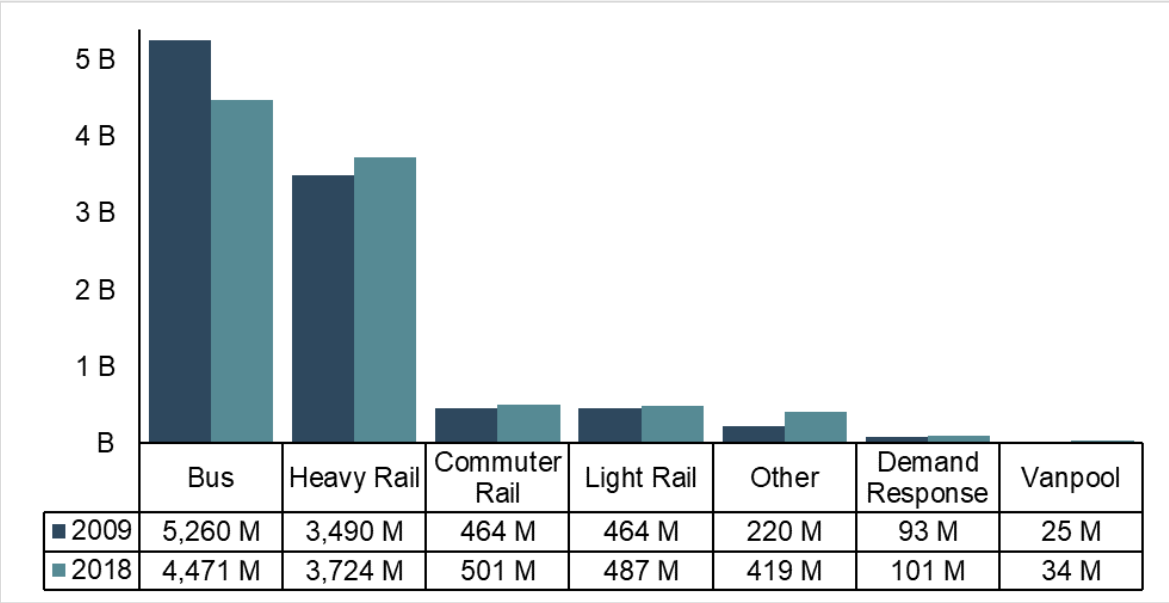


Exhibit A- 26: ***Unlinked Passenger Trips by Mode***

Mode	2009	2018	% Change
Bus	5,260 M	4,622 M	-13.81%
Heavy Rail	3,490 M	3,724 M	6.31%
Commuter Rail	464 M	501 M	7.34%
Light Rail	464 M	487 M	4.76%
Other	220 M	268 M	17.85%
Demand Response	93 M	111 M	16.22%
Vanpool	25 M	34 M	26.22%

Exhibit A- 27: ***Unlinked Passenger Trips (Millions) by Mode — Ten-Year Snapshot***

Vehicle Revenue Miles

Vehicle revenue miles are the miles a transit vehicle travels while in revenue service. A transit vehicle is in revenue service when the vehicle is available to the public with the expectation of carrying passengers. Revenue service includes both times when passengers pay a fare and when the service is operating fare-free. Agencies must exclude non-public transportation services (charter services, school bus services, etc.) and deadhead travel from revenue service tracking. Deadhead travel consists of the miles a transit vehicle travels while not in revenue service, such as leaving or returning to the garage or yard or changing routes.

Vehicle revenue miles increased by 11.2 percent between 2009 and 2018 across all transit modes. Vehicle revenue miles increased for the following modes over the ten-year period:

- Vanpool: 65.2 percent
- Demand Response: 24.1 percent
- Light Rail: 33.2 percent
- Commuter Rail: 11.6 percent
- Ferryboat: 57.5 percent
- Heavy Rail: 2.9 percent

Year	Vehicle Revenue Miles (Millions)
2009	3,861 M
2010	3,808 M
2011	3,794 M
2012	3,842 M
2013	3,902 M
2014	3,970 M
2015	4,050 M
2016	4,129 M
2017	4,176 M
2018	4,295 M

Exhibit A- 28: *Vehicle Revenue Miles*

Mode	2009	2018	% Change
Bus	1,920,318,470	2,032,171,566	5.8%
Demand Response	681,424,517	845,901,291	24.1%
Heavy Rail	666,756,659	686,159,698	2.9%
Commuter Rail	312,210,901	348,279,361	11.6%
Vanpool	135,053,453	223,160,105	65.2%
Light Rail	88,793,706	118,273,342	33.2%
Other	56,886,472	40,562,657	-28.7%

Exhibit A- 29: *Distribution of Vehicle Revenue Miles by Mode*

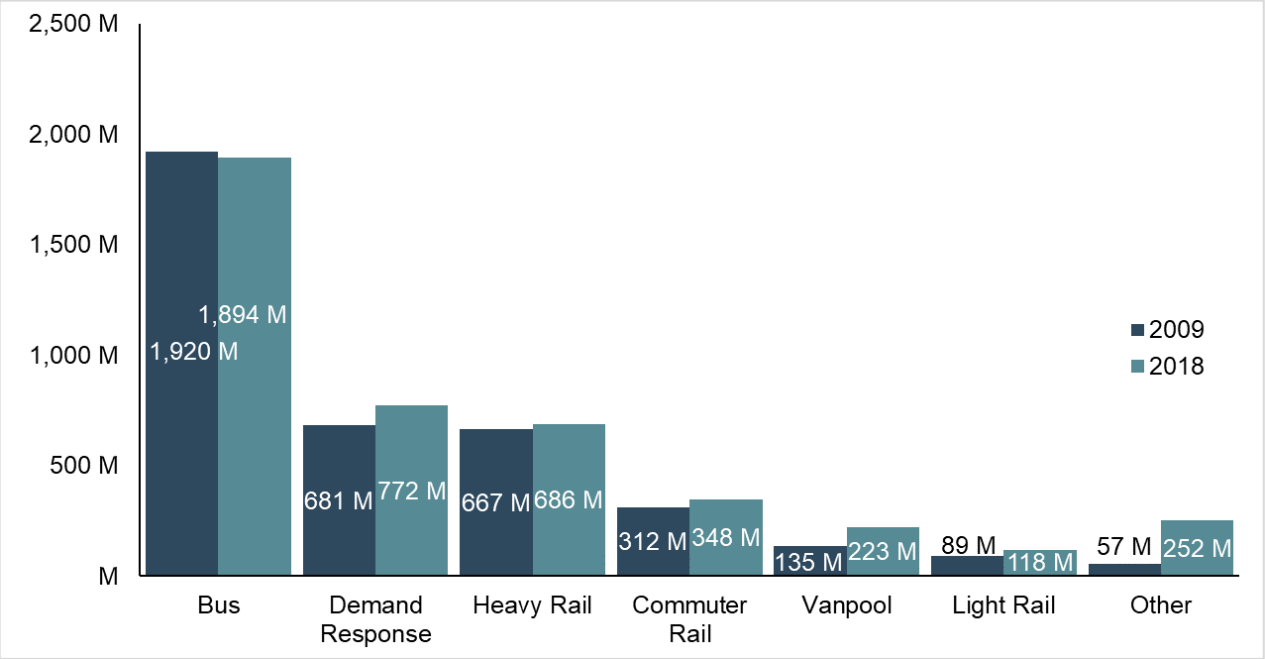


Exhibit A- 30: ***Vehicle Revenue Miles (Millions) by Mode***

Cost and Service

Cost Effectiveness

Cost effectiveness is the relationship between operating costs and service consumption. Service consumption is the amount of service used by the public, expressed in non-monetary terms as unlinked passenger trips. Using 2018 constant dollars, operating expense per unlinked passenger trip increased 21.0 percent over the past ten years.

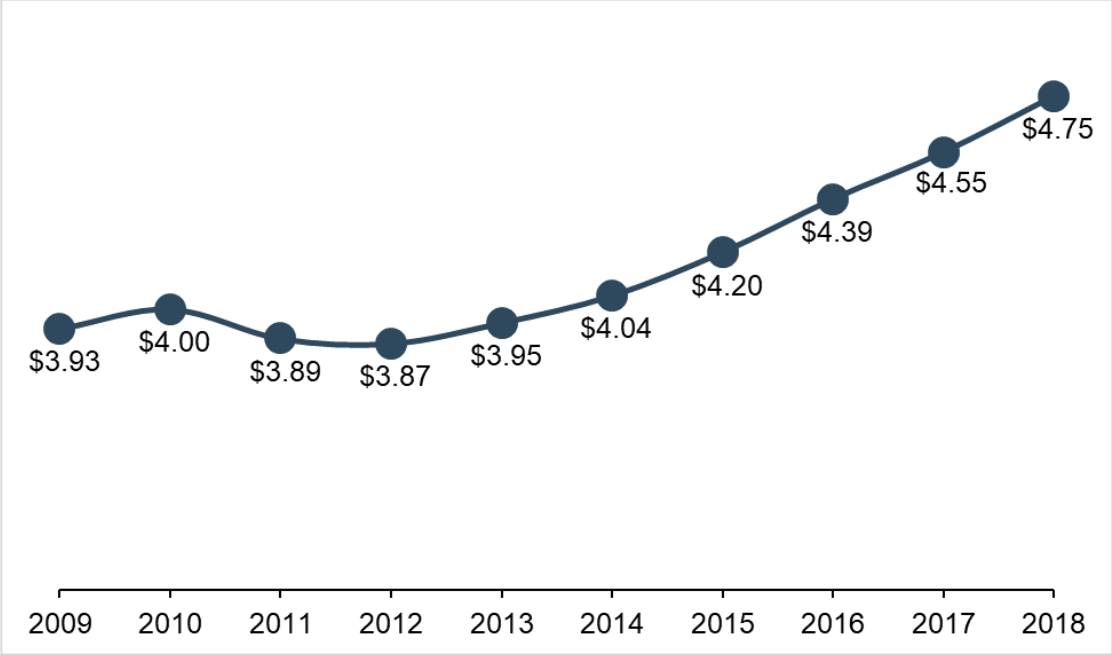


Exhibit A- 31: *Operating Expenses per Unlinked Passenger Trip*
(Operating expenses for prior years adjusted to 2018 Constant Dollars)

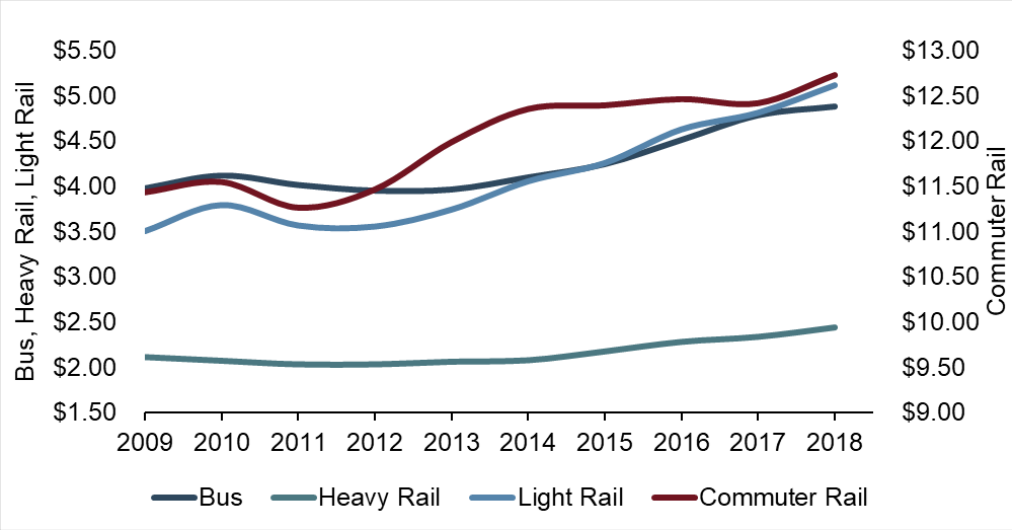


Exhibit A- 32: *Operating Expense per UPT for Bus and Rail Modes*
(Operating expenses for prior years adjusted to 2018 Constant Dollars)

Cost Efficiency

Cost efficiency is the relationship between service inputs and service outputs. Service output is the quantity of service produced by a transit operator, expressed in non-monetary terms as vehicle revenue hours. Overall, operating expenses per vehicle revenue hour increased 6.7 percent over the last ten years.

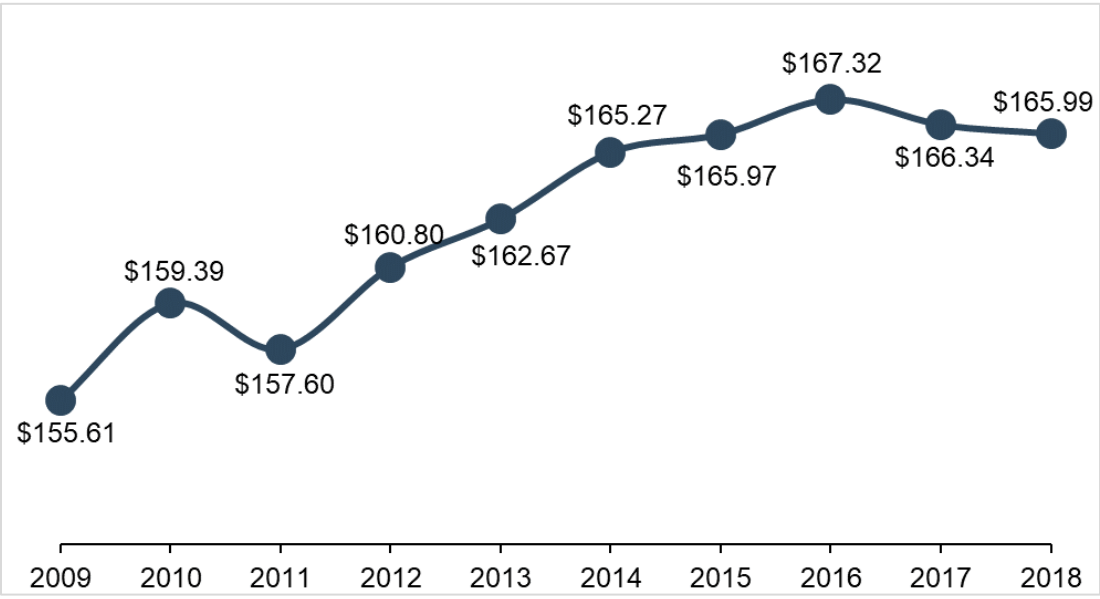


Exhibit A- 33: *Total Operating Expenses per Vehicle Revenue Hour*
(Operating expenses for prior years adjusted to 2018 Constant Dollars)

Service Effectiveness

Service effectiveness is the relationship between service consumption and service output. With overall ridership decreasing across the industry in recent years, unlinked passenger trips per vehicle revenue hour, a measure of service effectiveness, has decreased 13.0 percent in aggregate over the past ten years. Heavy Rail experienced a slight increase in unlinked passengers per trip across that ten-year period, going from 106.24 in 2009 to 107.70 in 2018.

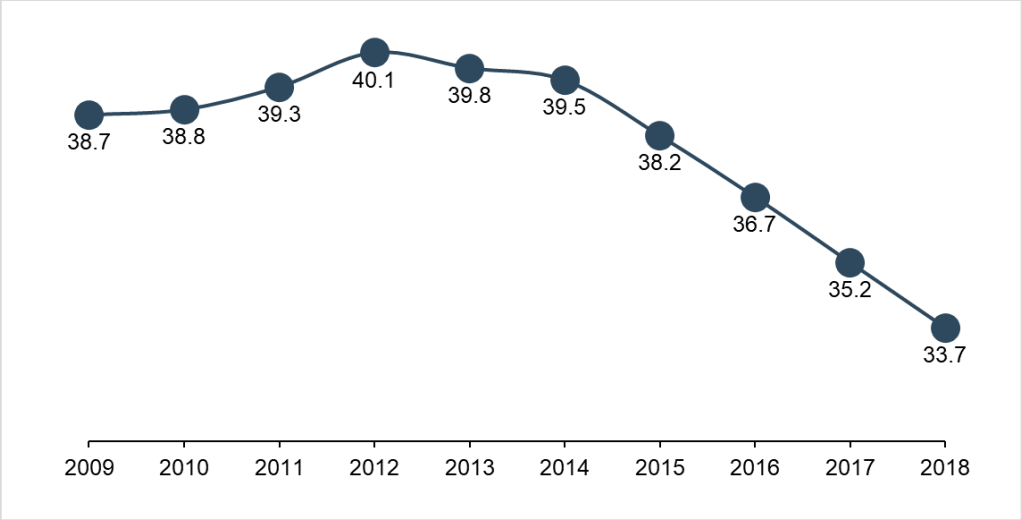


Exhibit A- 34: ***Unlinked Passenger Trips per Vehicle Revenue Hour***

Year	Bus	CR	HR	LR
2009	34.07	46.41	106.24	78.98
2010	33.47	48.04	110.81	74.58
2011	34.09	48.47	114.88	77.47
2012	34.82	48.31	117.61	77.12
2013	34.30	47.08	117.07	72.17
2014	33.47	46.10	119.87	74.99
2015	32.38	45.93	115.33	71.40
2016	30.67	45.78	114.24	70.05
2017	28.60	45.21	112.19	66.52
2018	28.28	44.22	107.70	65.24

Exhibit A- 35: ***Unlinked Passenger Trips per Vehicle Revenue Hour by Mode***

Load Factor

Average load factor is the average number of passengers on board each vehicle, calculated as the ratio of passenger miles traveled per vehicle revenue mile. For rail modes, it is the passengers on board each passenger car (not train). Beginning in 2011, reporting agencies operating 30 vehicles or fewer were not required to report passenger miles traveled. For this reason, the NTST excludes data from agencies reporting a Small Systems Waiver or Reporting Waiver during the years 2011 to 2018 in the following load factor exhibits.

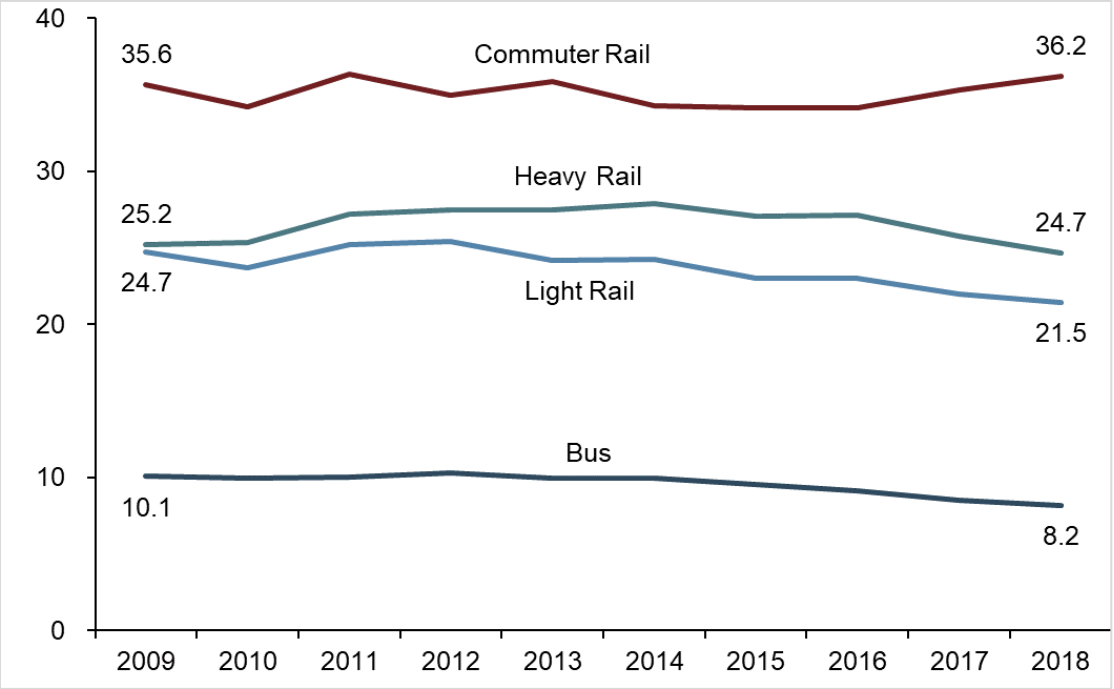


Exhibit A- 36: *Load Factor by Mode*

The load factor exhibits provide the following information:

- Commuter Rail average load factor increased 1.6 percent over the past ten years, and 6.0 percent over the past three years.
- Heavy Rail average load factor decreased 2.2 percent over the past ten years, and 9.2 percent over the past three years.
- Light Rail average load factor decreased 13.2 percent in the past ten years, and 6.8 percent over the past three years.
- Bus average load factor decreased 18.5 percent in the past ten years, and 10.4 percent over the past three years.

Year	Bus	Commuter Rail	Heavy Rail	Light Rail
2008	10.2	35.7	25.7	24.1
2009	10.1	35.6	25.2	24.7
2010	10.0	34.2	25.3	23.7
2011	10.0	36.4	27.2	25.2
2012	10.3	35.0	27.5	25.4
2013	9.9	35.9	27.5	24.2
2014	9.9	34.3	27.9	24.3
2015	9.5	34.2	27.1	23.0
2016	9.1	34.2	27.2	23.0
2017	8.5	35.3	25.7	22.0
2018	8.2	36.2	24.7	21.5

Exhibit A- 37: ***Load Factor by Mode (Details)***

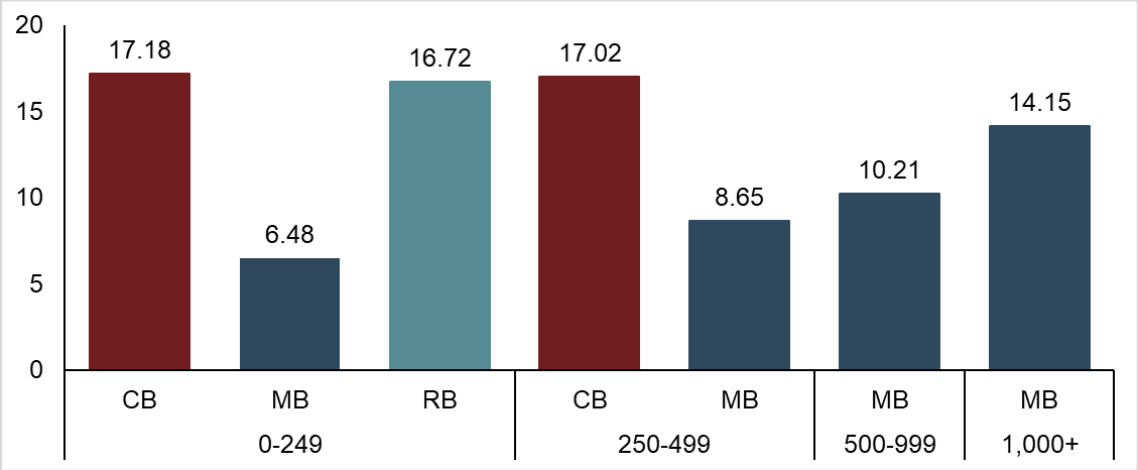


Exhibit A- 38: ***Load Factor by VOMS for Bus Mode***

Subsidy per Trip

A subsidy is financial assistance received from federal, state, and local governments. Subsidies also include directly generated funds, including grants from private foundations, directly levied taxes, and other funds dedicated to transit. Subsidies do not include the fare revenue collected by the agency. Subsidy per trip has increased 23.2 percent over the past ten years, adjusting to 2018 dollars.

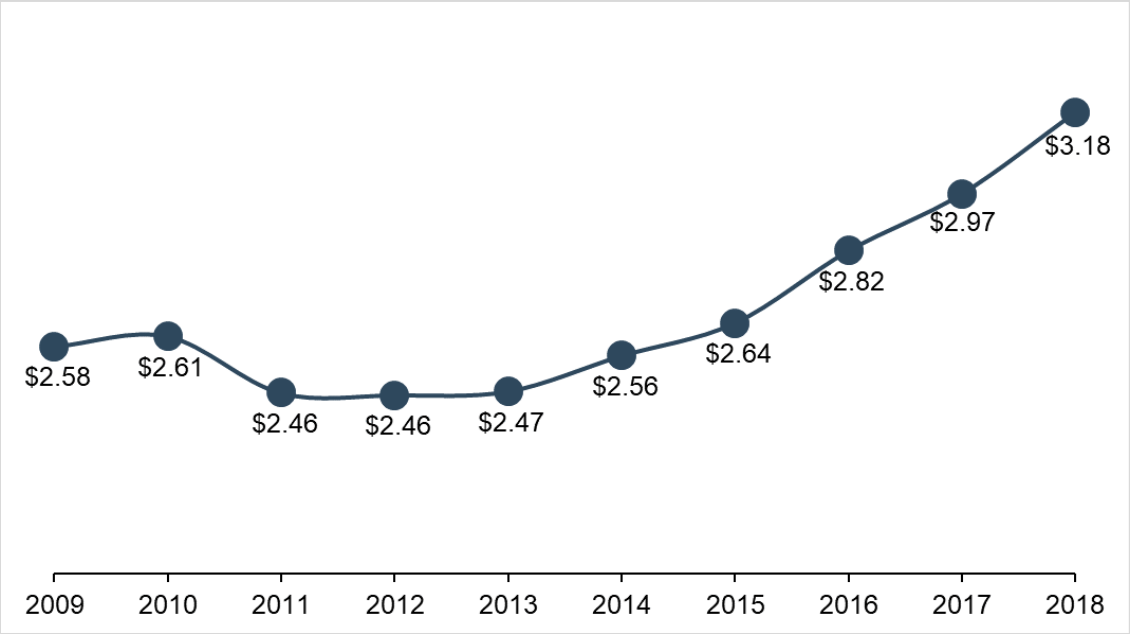


Exhibit A- 39: *Total Operating Subsidy per Trip*
(Subsidies for prior years adjusted to 2018 Constant Dollars)

Fixed Guideway Mileage

Fixed guideway directional route miles are the miles in each direction that transit vehicles travel while in revenue service on fixed guideways (transit malls, busways, or rail track).

Fixed guideway mileage is a measure of the route path over a facility or roadway; it does not measure the service carried on the facility. This mileage is computed with regard to direction of service and is recorded without regard to the number of traffic lanes or rail tracks existing on the right-of-way.

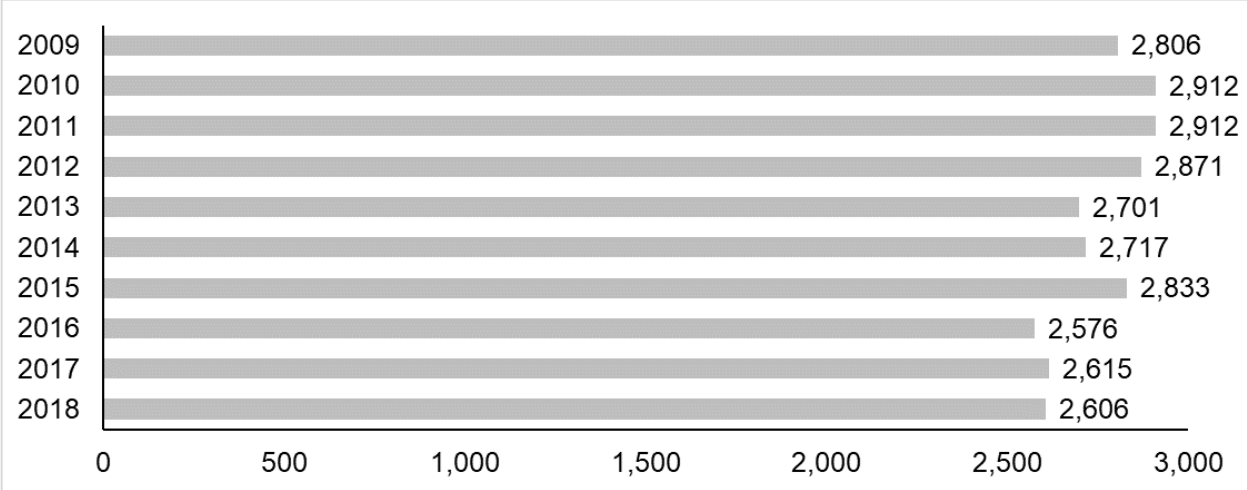


Exhibit A- 40: ***Fixed Guideway Mileage — Bus***

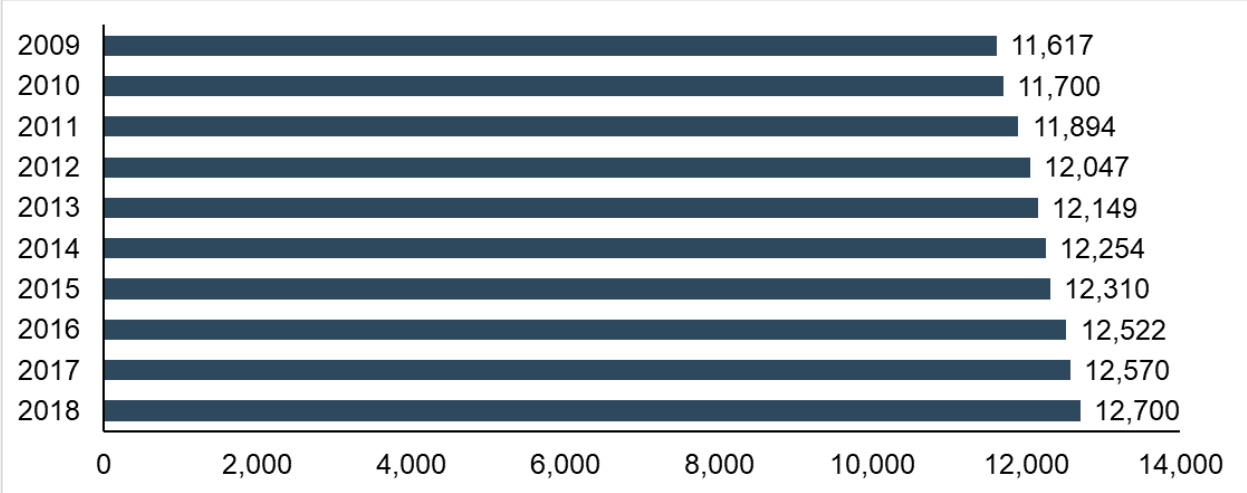


Exhibit A- 41: ***Fixed Guideway Mileage — Rail***

Beginning in 2013, FTA classified bus segments previously reported as fixed guideway into two subcategories:

- **Fixed Guideway (FG).** Roadways that agencies reserve at all times (24 hours / 7 days per week) for public transportation vehicles. This type of ROW must meet safe operation guidelines and have strict enforcement.
- **High Intensity Bus (HIB).** Roadways that agencies reserve at certain times for transit use, for high occupancy vehicle (HOV), or high occupancy / toll (HO/T) operations.

Service Utilization

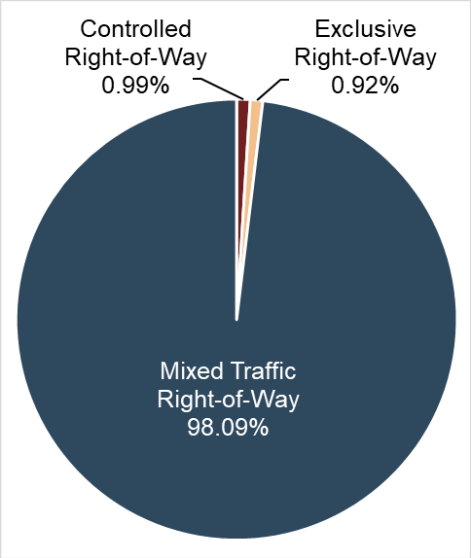


Exhibit A- 42: *Bus Guideway Classes*

The NTST defines the average service utilization as the ratio of vehicle revenue miles per directional route mile.

Average service utilization reflects the frequency of service, meaning the higher the average service utilization, the smaller the average headway, and vice versa.

The geographical expansion of transit service contributes to reductions in average service utilization if the average headway of expanded areas is greater than the average headway before the expansion.

For this section, *Bus* includes motor bus (MB), commuter bus (CB), and bus rapid transit (RB).

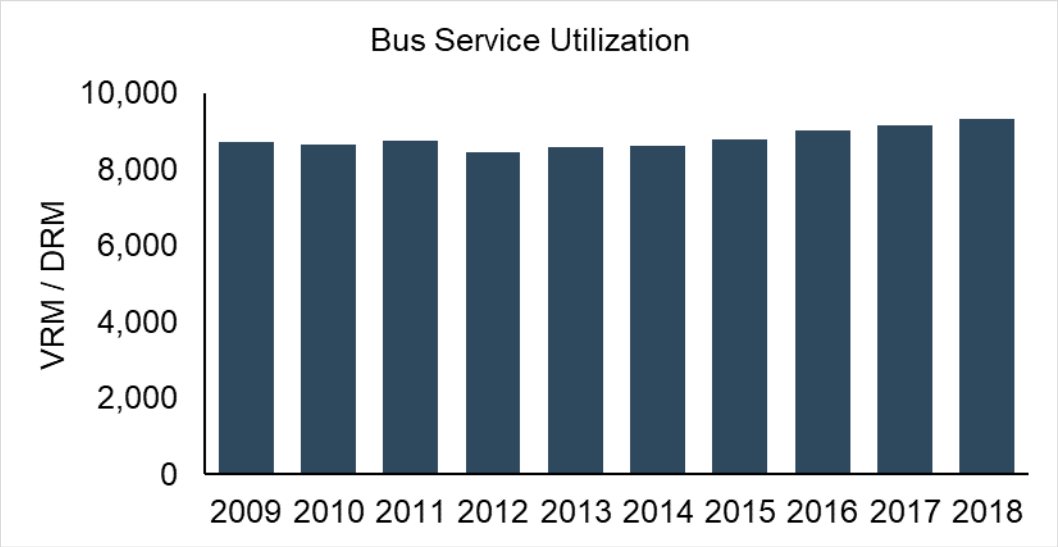


Exhibit A- 43: *Bus Service Utilization*

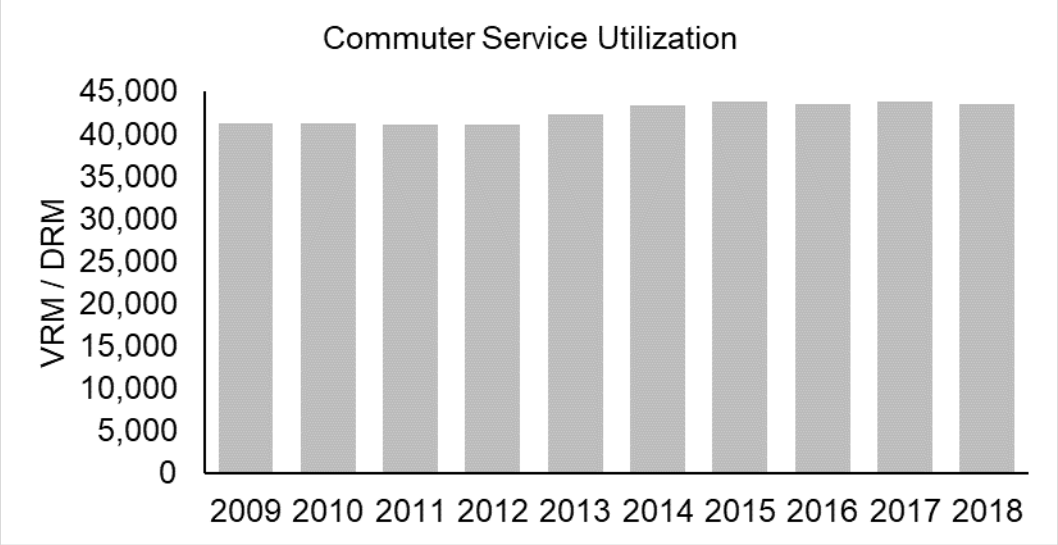


Exhibit A- 44: *Commuter Rail Service Utilization*

- The average Bus use increased 7.0 percent over the past ten years and increased 6.2 percent over the past three years.
- Average Commuter Rail use average increased 5.4 percent over the past ten years and decreased 0.8 percent over the past three years.

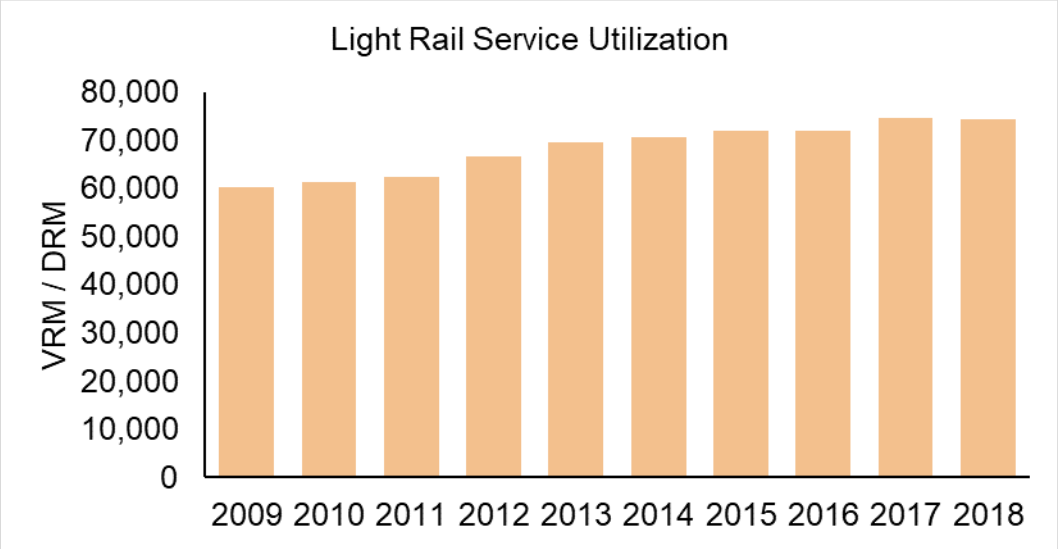


Exhibit A- 45: ***Light Rail Service Utilization***

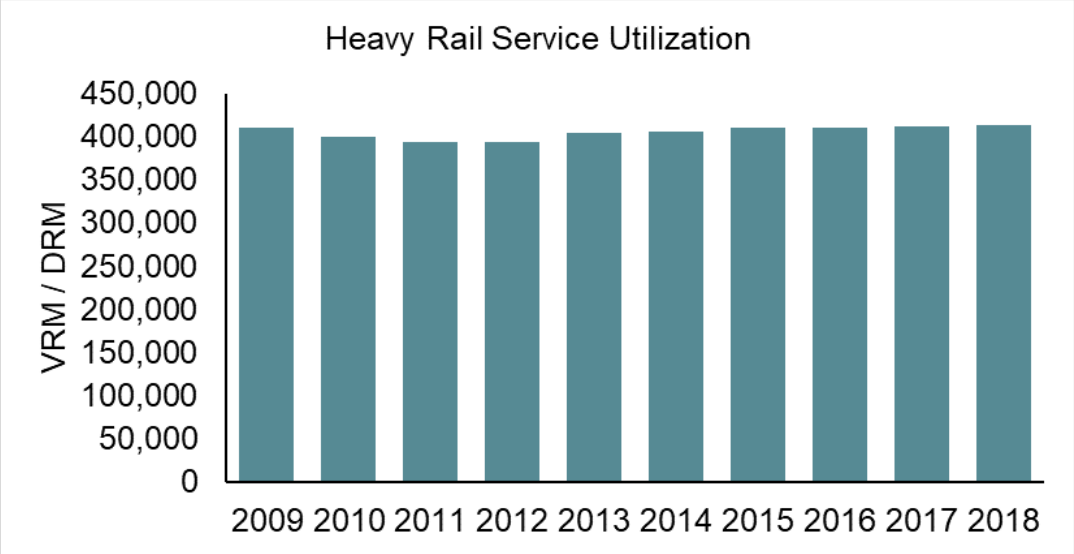


Exhibit A- 46: ***Heavy Rail Service Utilization***

- Light rail average service utilization increased 23.3 percent over the past ten years and increased 3.4 percent over the past three years.
- Heavy rail average service utilization increased 0.6 percent over the past ten years and 0.6 percent over the past three years.

Quality of Transit Service

Safety

The NTD defines a fatality as a death confirmed within 30 days following a transit-related incident. Deaths in or on transit property resulting from illness or other natural causes are not reportable to the NTD and are excluded from this dataset. Suicides are included in these totals. NTD defines an injury as any person who was transported from the scene of the event for medical attention.

Additional notes on safety data:

- All safety data presented on the following pages are sourced from Calendar Year 2018 NTD major event reports. At the time of this document's publication, NTD reporters can still add, modify, and delete major event data for Calendar Year 2018. As such, these data are considered "preliminary" and numbers may change based on ongoing validation activity.
- The analyses on the following page uses Fiscal Year service data sourced from the NTD's Annual Report data collection and Calendar Year Safety and Security data to estimate Fatalities per 100 million Passenger Miles Traveled.
- The Federal Railroad Administration oversees safety for Commuter Rail (CR) systems and a select set of Hybrid Rail (YR) and Heavy Rail (HR) systems. These agencies do not report safety data to the NTD and are therefore excluded from any safety analyses in this document.

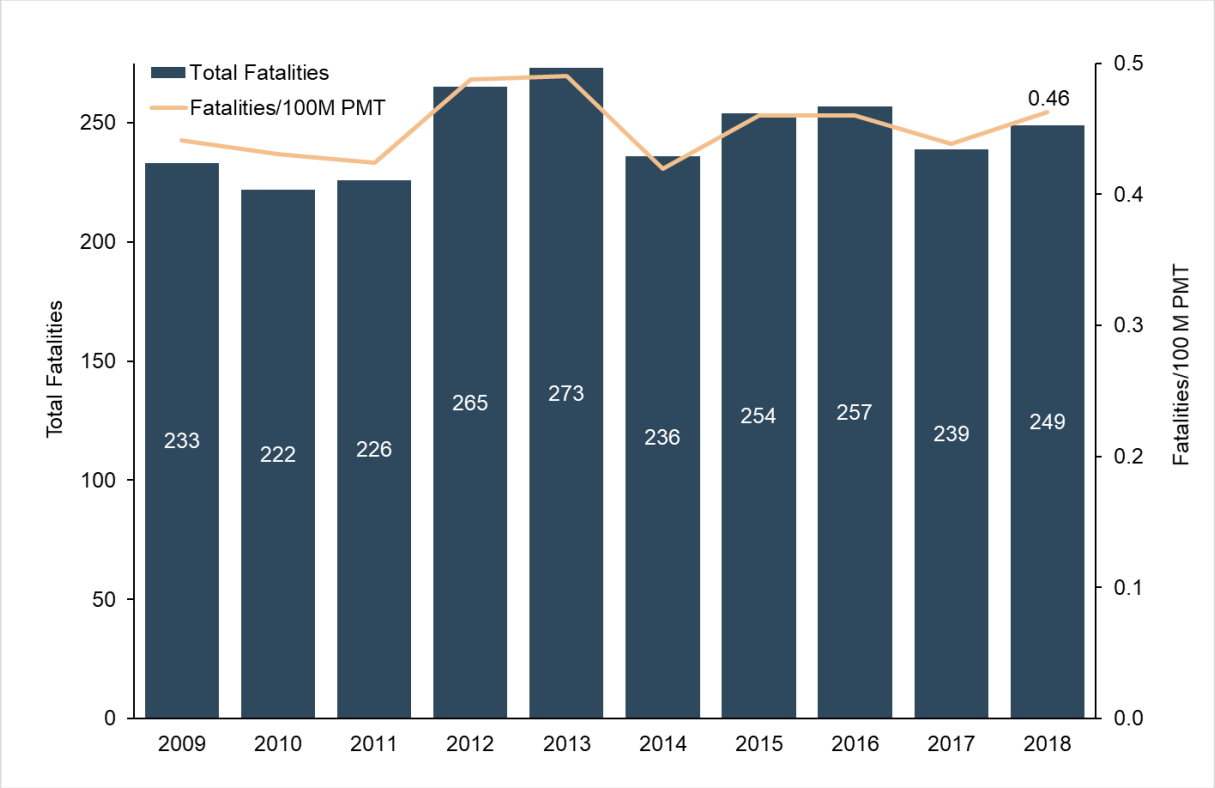


Exhibit A- 47: ***Fatalities per 100 Million Passenger Miles (Full Reporting Agencies)***

The NTD groups injuries and fatalities according to seven categories of individuals:

- **Passenger:** An individual who is onboard a transit vehicle or who is boarding or alighting, including those using ramps and lifts.
- **Revenue facility occupant:** An individual who is inside the public passenger area of transit revenue facility. Employees, other workers, and trespassers are not considered revenue facility occupants.
- **Employee:** An employee of the transit agency.
- **Other worker:** A non-employee who is contracted to provide specific services to the transit agency.
- **Pedestrian:** An individual walking in a crosswalk, out of a crosswalk, crossing tracks, or walking along tracks, and bicyclists.
- **Other Vehicle Occupant:** A driver or passenger in a privately owned vehicle.
- **Others:** An individual who is not included in the above categories – many trespassing-related fatalities are reported under this category.

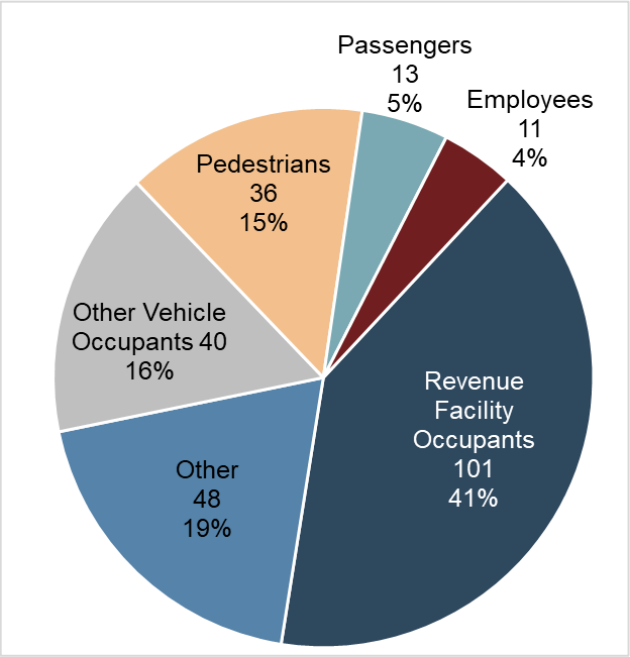


Exhibit A- 48: ***2018 Total Fatalities by Person Type***

Passengers on board the revenue vehicles make up only 5 percent of the total fatalities in transit-related accidents. Revenue facility occupants, however, make up 41 percent of the total fatalities in 2018.

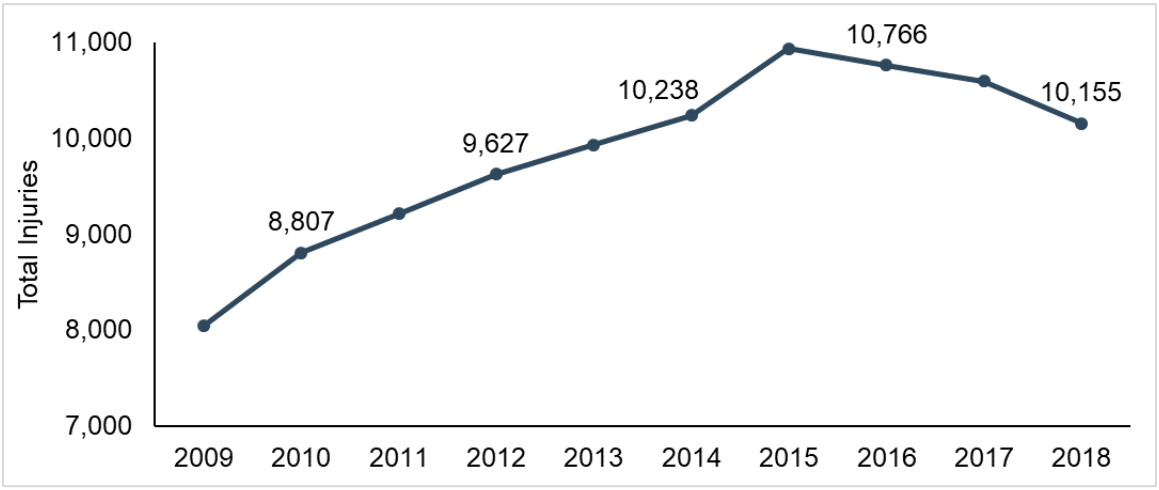


Exhibit A- 49: ***Total Injuries (Major Events)***

In 2015, Safety and Security thresholds changed, which resulted in an increase in events and, consequently, an increase in injuries.

Year	Total Injuries	Total Fatalities
2009	8,041	233
2010	8,807	222
2011	9,211	226
2012	9,627	265
2013	9,933	273
2014	10,238	236
2015	10,936	254
2016	10,766	257
2017	10,594	239
2018	10,155	249

Exhibit A- 50: ***Injuries and Fatalities (Major Events - Full Reporters Only)***

Reduced Reporter Safety Data

Agencies filing a Reduced/Rural Report submit safety data differently from Full Reporter agencies. These reporters report only the total number of events which meet a major event threshold and fatalities and injuries resulting from such events for the entire Fiscal Year of that agency, rather than submitting a separate report for each event. Most Reduced/Rural Reporters (81.4 percent) reported zero major safety and security events in 2018. Of the agencies that did report events, 1.6 percent experienced fatalities.

Data Points	Fatalities	Injuries	Reportable Incidents
Total Safety Incidents	2	217	328
Number of Agencies	2	84	124
Number per Agency	0.003	0.326	0.492
Number per 10M UPT	0.241	26.184	39.578

Exhibit A- 51: ***2018 Safety Events, Reduced Reporting Transit***

Fleet Characteristics

Average Fleet Age by Vehicle Type

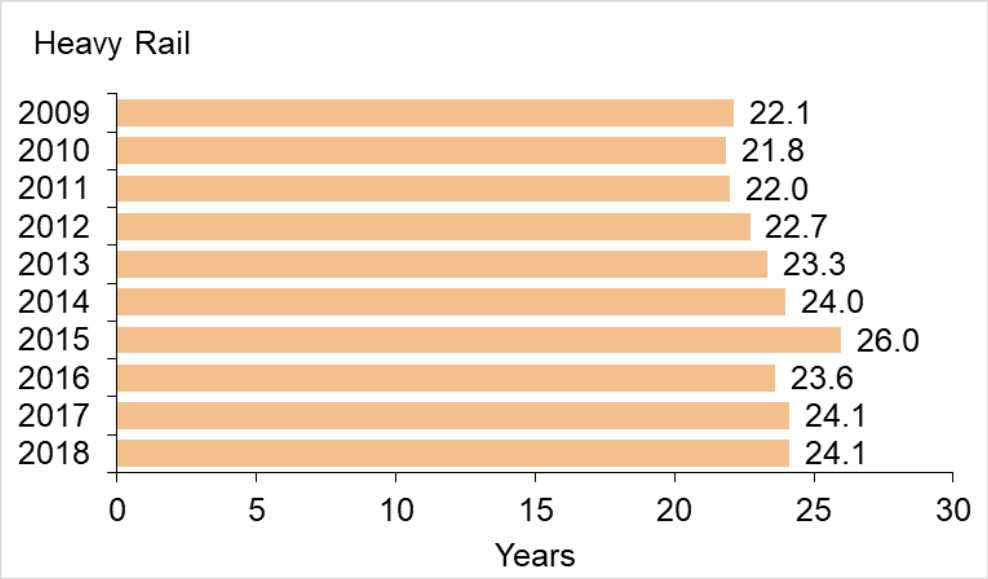


Exhibit A- 52: ***Average Heavy Rail Mode Fleet Age***

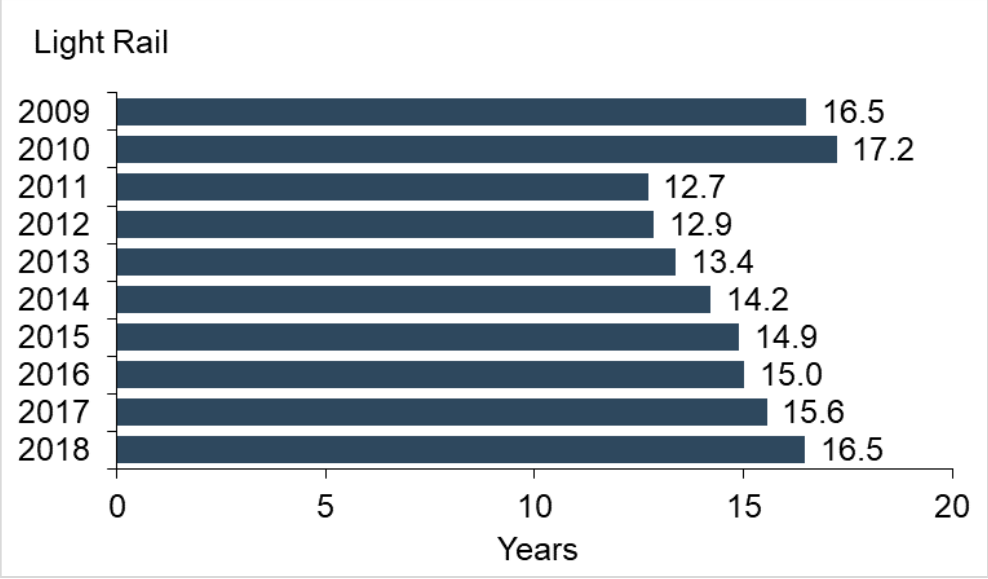


Exhibit A- 53: ***Average Light Rail Mode Fleet Age***

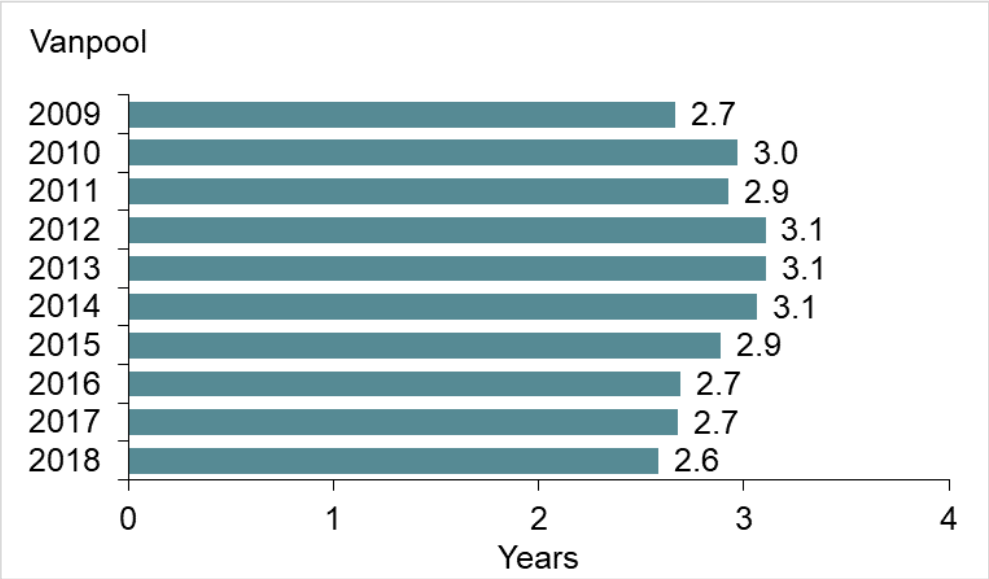


Exhibit A- 54: ***Average Vanpool Mode Fleet Age***

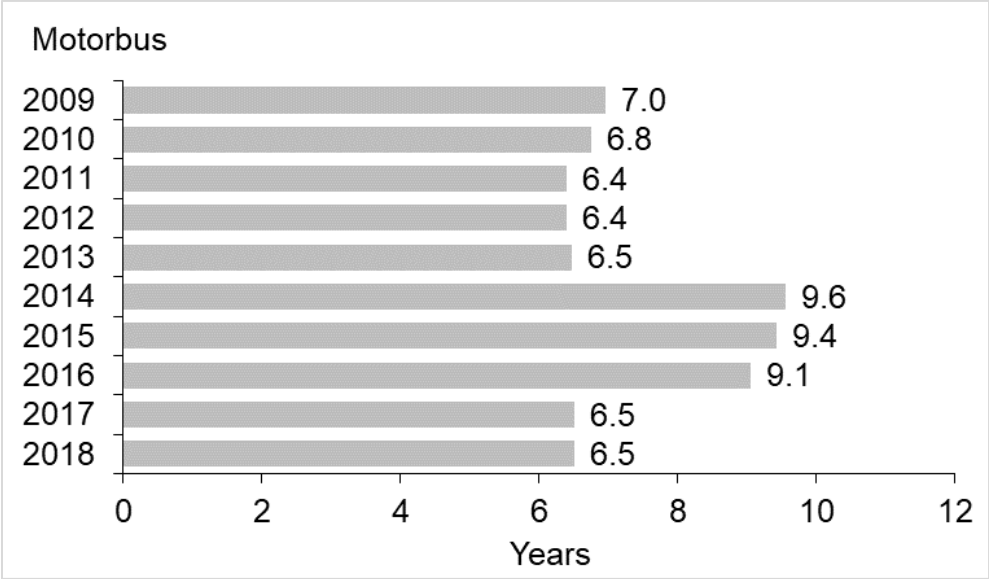


Exhibit A- 55: ***Average Bus Mode Fleet Age***

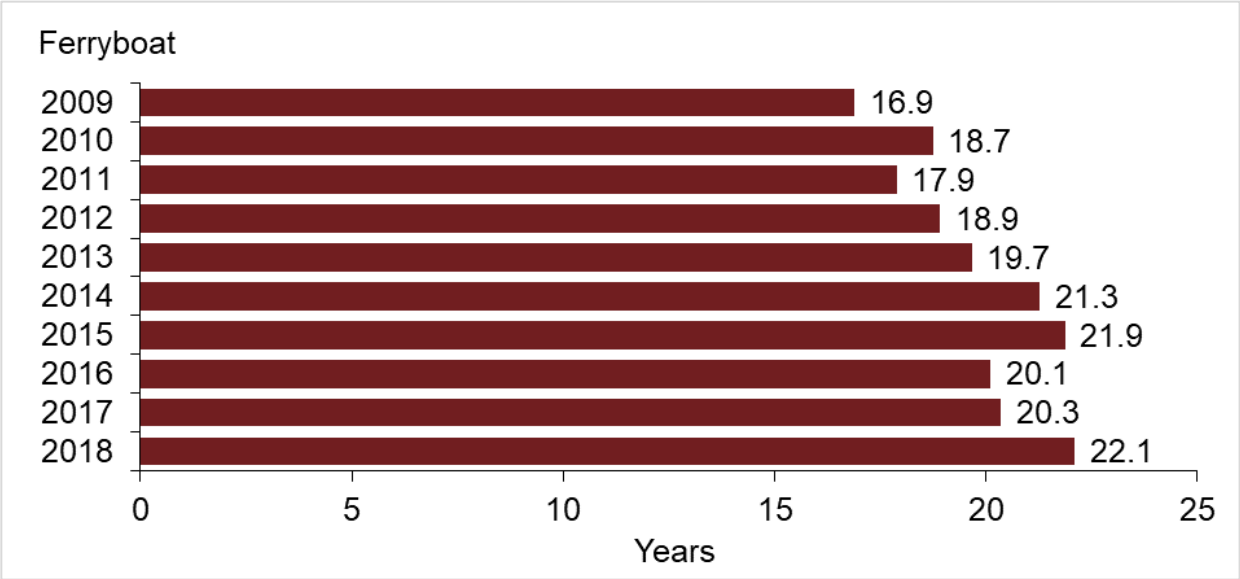


Exhibit A- 56: ***Average Ferryboat Mode Fleet Age***

Vanpool has a lower average fleet age, consistently staying below 2.6 and 3.1 years. Heavy rail typically has a larger average fleet age, over 20 years for the past decade.

Alternative Fuel Usage

Alternative fuels are not diesel or gasoline. They include compressed natural gas (CNG), electric, battery, ethanol, methanol, liquefied petroleum gas, liquefied natural gas (LNG), kerosene, biodiesel, grain substitute and other fuels. These charts include only buses fully dedicated to transit service.

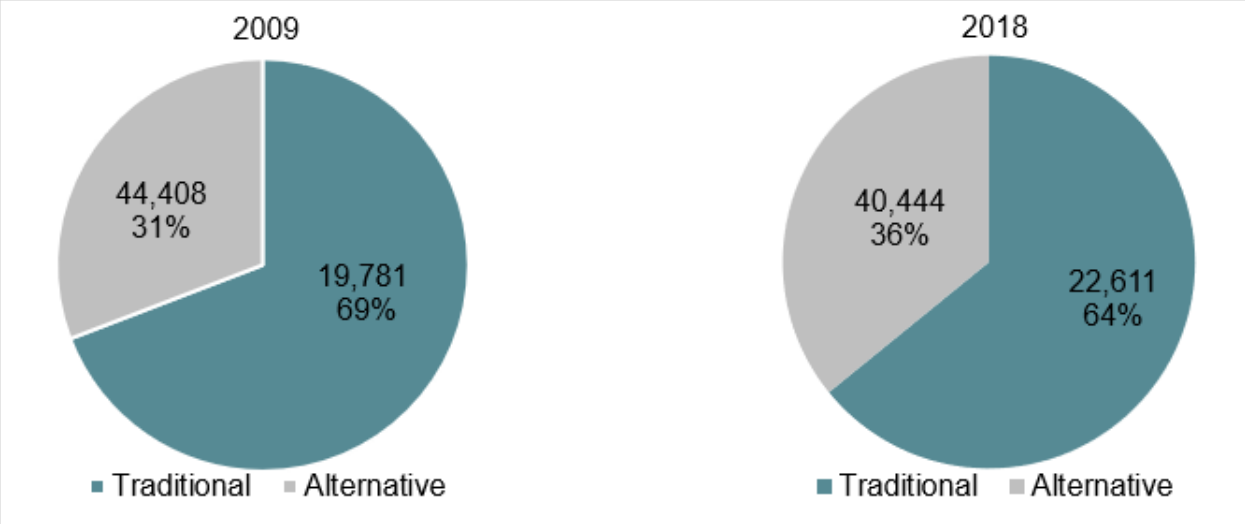


Exhibit A- 57: ***Percent of National Bus Fleet Using Alternative Fuels***

The share of the national bus fleet using alternative fuels rose from 31 percent in 2009 to 36 percent in 2018. Exhibit 58 below shows the consumption of alternative fuels increased as well.

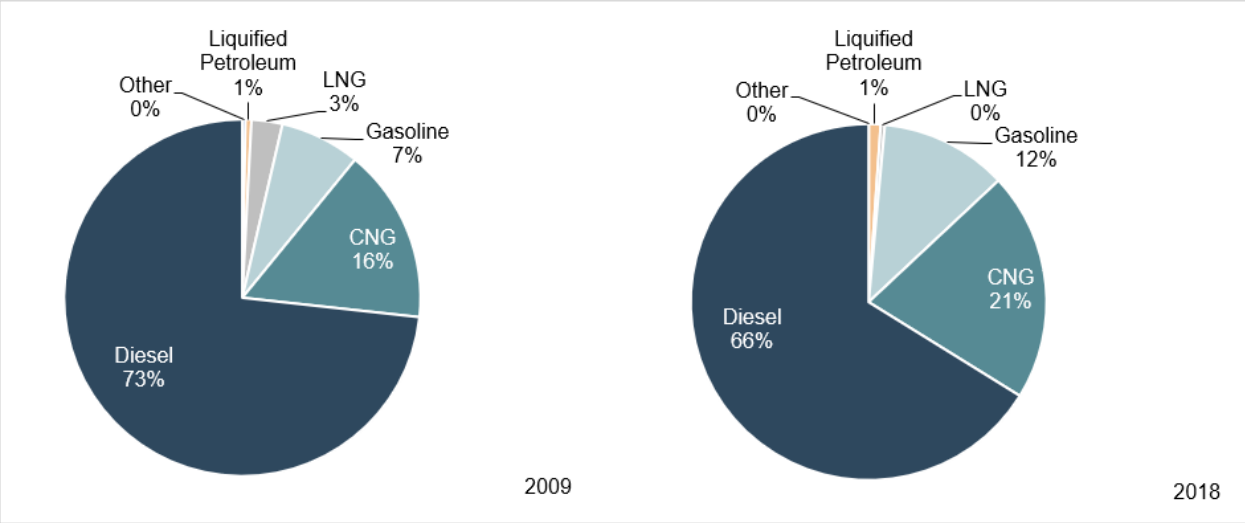


Exhibit A- 58: ***Percentage of Fuel Consumption for Non-Electric Modes***

ADA Compliance

ADA Lift or Ramp-Equipped Vehicles

The Americans with Disabilities Act of 1990 requires that transit agencies are accessible to persons with disabilities.

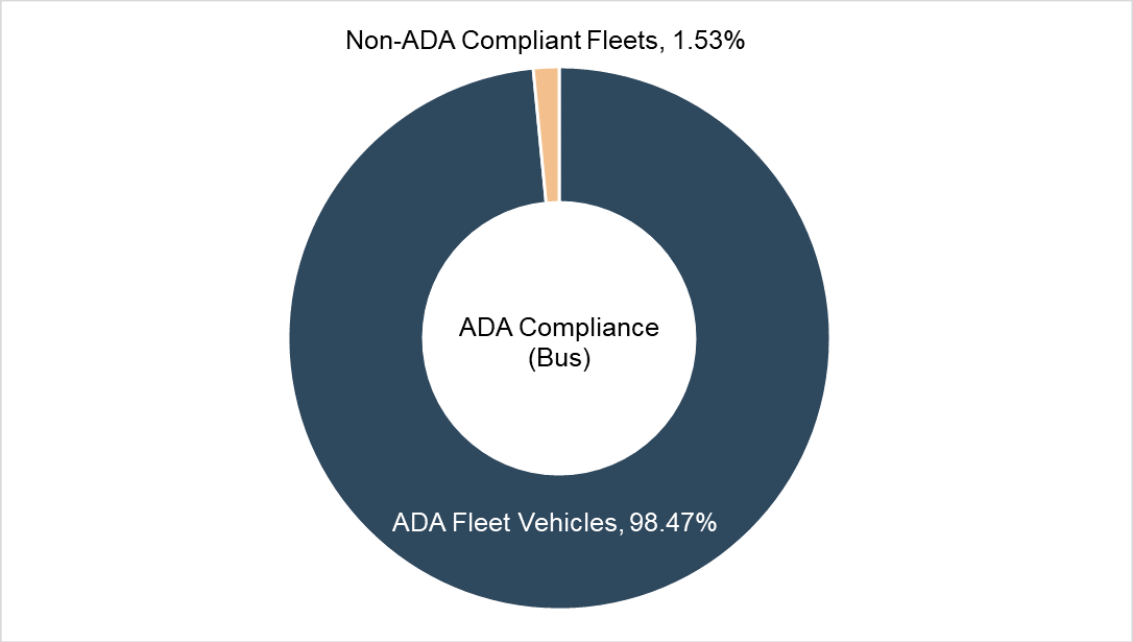


Exhibit A- 59: ***2018 ADA Compliance (Bus)***