

WHITE PAPER

How Does Amtrak Calculate Route Financial Performance?



HOW DOES AMTRAK CALCULATE ROUTE FINANCIAL PERFORMANCE?

Amtrak operates an interconnected network of intercity trains and routes that share facilities, equipment and services provided by Amtrak employees. Amtrak also provides services and infrastructure to third parties, including other railroads that use Amtrak's tracks, facilities and stations such as the commuter railroads that operate over the portions of the Boston-to-Washington Northeast Corridor (NEC) that are owned by Amtrak. The revenues and costs associated with all of the things Amtrak does, many of which are attributable to multiple Amtrak routes and service lines, must be assigned or allocated to individual trains, routes and service lines to track their financial performance.

The Amtrak Performance Tracking System

Amtrak uses the Amtrak Performance Tracking System (APT) to allocate revenues and costs from these activities to its service lines. Three of these service lines – NEC, State Supported and Long Distance – provide Amtrak's National Train Services. Amtrak's Ancillary Services and Infrastructure Access Service Lines provide services to third parties, such as commuter railroads that operate over the NEC or whose trains Amtrak operates.

Cost allocation methodologies like APT are important for any company because they allow managers, stockholders and investors to monitor the financial performance of different lines of business. They are particularly important in network businesses such as railroads, utility companies and airlines where most expenditures benefit more than one business line or group of customers, and must therefore be allocated appropriately.

APT was developed by the John A. Volpe National Transportation Systems Center (Volpe Center) of the U.S. Department of Transportation (DOT), in conjunction with the Federal Railroad Administration (FRA) and Amtrak, in response to a Congressional mandate to update Amtrak's cost accounting. Following its development, APT was audited by DOT's Inspector General. APT was initially documented in a three-volume Volpe Center report to Congress in December 2009, and this documentation was updated in December 2016. The Volpe Center's September 2017 report, *Amtrak Performance Tracking (APT) System – Methodology Summary*,¹ provides a higher level, summary version of how APT allocates revenues and costs.

Since APT's implementation in FY 2009, Amtrak has continued to update and refine it in conjunction with FRA (which reviews APT's results on a monthly basis), Volpe and the State-Amtrak Intercity Passenger Rail Committee (SAIPRC) that includes states and authorities that fund state-supported trains.

How does APT assign costs?

Using Amtrak's audited financial data, APT follows a standard approach for attributing costs to different business activities used by other network businesses.

- Identifiable costs incurred for a particular train, such as the wages paid to the engineers and conductors who operate a specific train on a long-distance route, are directly assigned to that train and to the route and service line on which it operates.
- Costs incurred for the benefit of multiple routes are allocated by factors that reflect relative usage. Examples include the costs of maintaining tracks at Washington Union Station, which are allocated among the NEC, long-distance and state-supported routes that use the station and to the Infrastructure Access Service Line (since the tracks are also used by MARC and Virginia Railway Express commuter trains).

¹ DOT-VNSTC-FRA-17-06, <https://www.fra.dot.gov/Elib/Document/17485> (Volpe Methodology Summary).

- Overhead and General and Administration (G&A) costs, such as the cost of the Information Technology Department's Help Desk, are generally allocated in proportion to associated costs that are directly assigned. For example, a route that accounts for 5% of the labor hours incurred by Mechanical employees who maintain Amtrak equipment will be allocated 5% of Mechanical supervision and training costs. G&A costs accounted for \$429 million – about 16% -- of the operating costs assigned to Amtrak's National Train Services in FY 2018.

APT directly assigns costs rather than allocating them to the maximum extent feasible. Over half of Amtrak's costs are directly assigned to the train/route for which they are incurred.² Some types of shared costs cannot be directly assigned because the costs associated with individual trains and routes cannot be reliably identified. Locomotive fuel is one example. Diesel locomotives are shared by multiple routes, and the locomotives that Amtrak currently operates are not equipped to record and remotely transmit fuel usage after every trip, which would be necessary to accurately assign costs incurred for each trip. Therefore, APT uses a formula that takes total fuel costs and allocates them based upon train weight, train length, trip time, locomotive type, car types and the terrain characteristics of the route.

APT attempts to allocate costs as precisely as possible. It uses 52,000 different allocation formulas that specify how particular costs are allocated. Most allocation formulas are based upon directly assigned costs, in many cases at a single geographic location. For example, if a route accounts for 20% of the direct labor costs for the conductors and engineers who work out of a particular crew base, 20% of the costs for the crew's supervisors, uniforms and e-ticketing devices at that crew base will be allocated to that route.

Does APT take capital costs into account?

APT assigns capital costs to each service line using a similar approach as for operating costs (based upon rules developed in accord with the FAST Act). Capital costs incurred for a single service line, such as investments to meet Americans with Disabilities Act (ADA) requirements at a station served only by NEC trains, are allocated to that service line. Capital costs incurred for assets shared by multiple service lines, such as the cost of overhauling locomotives and cars, are allocated among those service lines based upon relative usage. For example, 87% of the overhaul costs for Amfleet II cars used predominantly on long-distance trains were allocated to the Long Distance Service Line in FY 2018. In FY 2018, Amtrak incurred \$260 million in capital expenditures for the Long Distance Service Line.

How does APT treat NEC infrastructure costs?

Maintenance of Way (MOW) and Electrification operating costs on the NEC and other Amtrak-owned/maintained rail lines – the costs incurred for activities such as inspecting tracks and bridges, maintaining the signal system that guides trains and repairing the electrification system that provides electricity to trains that operate with electric power – are included in APT. NEC MOW costs are allocated proportionately, based upon formulas that take into account factors such as train weight, length and speed, to all trains that operate on NEC tracks.

The trains operating over the NEC to which APT allocates NEC costs include Amtrak's NEC routes; commuter trains; the five long-distance routes that operate between New York City and Washington; and the two other long-distance routes and the state-supported routes that use NEC stations and yards. The use of the NEC by seven of Amtrak's 15 long distance routes increases the operating and capital costs that are borne by Amtrak for Amtrak-owned shared-use NEC infrastructure that is jointly used by various commuter railroads under the proportionate costing methodology for allocating NEC costs that was developed pursuant to Section 212 of the Passenger Rail Investment & Improvement Act of 2008 (PRIIA).

² Volpe Methodology Summary, p. 19.

In accordance with Generally Accepted Accounting Principles (GAAP) requiring capitalization of expenditures for long-lived assets, Amtrak treats amounts incurred for track renewals and other infrastructure replacements on rail lines it owns, including the NEC, as capital expenditures. The cost accounting regulations of the Surface Transportation Board that apply to freight railroads also require that such expenditures be capitalized. See 49 C.F.R. part 1201.

How is APT's accuracy ensured?

APT's stakeholders - Amtrak, FRA, Volpe and Amtrak's state partners – all benefit from ensuring that APT assigns revenues and costs as accurately as possible, and devote significant resources to that objective.

- Because the payments states make to Amtrak for operation of state-supported trains are based upon APT, states have a strong interest in ensuring that APT's cost allocations are accurate. Maintaining APT's credibility is important to Amtrak because it facilitates prompt reimbursement of Amtrak's costs and avoids disputes with state partners that could damage relationships.
- Amtrak funds the operating losses, and nearly all of the capital costs, of the long-distance service line. Overstatement of long-distance costs in APT would require Amtrak to bear costs attributable to state-supported trains that are the responsibility of states.

Amtrak has been working with SAIPRC and other APT stakeholders to improve APT's accuracy and its ability to allocate costs, and to further increase the percentage of costs that are directly assigned.

Why does APT show cost variations among similar routes using the same services?

APT uses about 45 different statistics to properly allocate expenses to routes. Some allocations are very simple. At stations shared by multiple routes, the statistic used to apportion the costs of station management is the number of passengers on each route.³ Other allocations are more nuanced to ensure that expenses that cannot be assigned to a particular route – such as the costs of maintaining tracks and staffing stations used by multiple routes – are allocated as accurately as possible. As a result, the cost APT shows for use of the same facility or service may be significantly different even for seemingly similar routes.

Two examples:⁴

- All long-distance routes use yard crews that move trains between Amtrak stations and yards where they are serviced and maintained. Yard crews also switch cars in and out of trains and move cars and locomotives to/from mechanical facilities for preventive maintenance and repairs. Yard crews perform work for trains of multiple routes, so their costs must be allocated. More switching is required for trains that have more cars and locomotives and/or whose equipment is maintained at the yard in question rather than simply being serviced at the yard between trips. Apportioning Yard Operations costs equally to all trains using a yard would penalize trains that require less switching, so APT uses multiple allocation rules that reflect these differences.
- Passengers traveling longer distances tend to have more luggage and more frequently require redcap assistance. Therefore, rather than allocating a station's redcap costs among routes based simply upon the number of passengers, APT uses Weighted Boards and Deboards: the number of passengers getting on or off at each station with redcap service weighted by the distance traveled.

³ Volpe Methodology Summary, p. 30.

⁴ The examples in this section are based upon cost allocations characterized as “questionable” in Johnston, Bob, “Amtrak's Money Mystery,” *Trains Magazine*, January 2019, pp. 50-55.

How does Amtrak categorize costs?

Operating costs for each Amtrak route are divided into three categories:

- *Frequency Variable Costs* are costs that generally change due to adding or removing an individual train frequency, or the cars and locomotives operated on a train frequency. Major frequency variable costs include train and engine crew labor (wages and benefits paid to conductors and engineers), OBS labor (wages and benefits paid to on-board service employees), host railroad payments, and fuel and power.
- *Route Variable Costs* are costs that generally vary with changes in routes. Major route variable costs include equipment maintenance and servicing, the portion of reservations/call center costs that varies with usage, and commissary operations for on-board food service.
- *System/Fixed Costs* are costs that do not vary significantly with changes in routes. They include overhead costs, such as indirect supervision and training costs for Transportation and Mechanical employees who work on and maintain trains, and General & Administrative (G&A) costs, which are the costs of corporate functions such as Information Technology.

Does Amtrak take connecting revenue into account?

Connecting revenue is revenue produced by passengers who travel on multiple routes on a single trip. APT allocates revenues from such trips between the routes on which the passenger travels. Amtrak's Train Earnings System provides data on the number of passengers on each route who are connecting to every other route with which that route connects, and the revenues on all routes that are attributable to connecting passengers. In FY 2018, passengers connecting to/from long-distance trains accounted for \$12 million in connecting revenues on NEC and state-supported routes. Impacts on connecting ridership and revenues are among the factors that Amtrak takes into account when evaluating service changes that will add or eliminate connections.

