In the United States House of Representatives

Committee on Transportation and Infrastructure

Subcommittee on Highways and Transit

June 24, 2015

Meeting the Transportation Needs of Rural America

Testimony of Steve Woelfel, President of Jefferson Lines on behalf of the American Bus Association

Good afternoon Chairman Graves, Ranking member Norton and members of the Subcommittee. The American Bus Association (ABA), represented here today by Jefferson Lines, appreciates the opportunity to testify on the transportation and connectivity needs of rural America. The ABA represents some 3,500 member organizations encompassing the entire motorcoach group travel industry, including bus operators like Jefferson Lines, tour companies, hoteliers, restaurants, sports teams and destinations. In total, motorcoach travel and tourism provided over 600 million passenger trips in 2013, supporting 1.4 million American jobs, and producing $175 billion in economic impact.

My company, Jefferson Lines, employs 225 people and serves 600,000 passengers annually in 13 states. For millions of Americans, motorcoaches represent the only publicly available transportation link to cities and the broader transportation network. Simply put, motorcoach transportation services more communities in America than any other mode of publicly available transportation.

Jefferson Lines is a pioneer in partnering with States, communities, and public transit operators to provide rural connectivity. We led the way in 1980 when we developed one of the first interline transit feeder programs from Creston to Chariton, Iowa; and we continue to build on that success by expanding service through cooperative agreements. Let me give you some examples of what our company is doing today to transform transportation in rural America.

Missouri

- Several years ago, at the request of Missouri Department of Transportation, we reestablished intercity bus service from Kansas City to Branson. When we took over the route it was operating at 30% of farebox revenue, and today we are achieving 75% farebox recovery.
- Today, Jefferson Lines provides service to 18 communities across the state including Cameron, Bethany, Maryville, and St. Joseph in northern Missouri.

Minnesota

- In 2004, when more than 80 rural communities in Minnesota lost their intercity bus connections our company implemented a replacement service plan in less than 3 weeks.
- Currently, Jefferson Lines connects with 18 different transit agencies in Minnesota.
- Jefferson Lines also provides revenue sources at many public transit locations via rental income and ticket commissions.

South Dakota

- In partnership with Pierre, Huron, and Aberdeen transit, Jefferson Lines connects residents to the broader transportation network.
- We also offer transit providers additional revenue through ticket sales commissions.
- Jefferson Lines operates connective routes from Fargo to Sioux Falls, while contributing the non-federal share of funding to support operations.

The challenge within our industry is that the examples above are unique rather than the norm. If our national goal is to ensure intermodal connectivity, reduce taxpayer burden and improve efficiency, then we need to expand public-private partnership initiatives beyond transportation finance concepts. To be clear, we are not proposing to replace transit systems. Our proposal is based on the idea that private carriers and public transit should connect rather than compete. This approach enables transportation planners to maximize the use of tax dollars through the integration of public and private systems. By ensuring private intercity bus networks are active participants in the planning process, including the development of transportation improvement plans, we can expand access, improve connectivity and enrich the national transportation system, all in a cost-effective and environmentally prudent manner.

Integration is also the key to breaking stovepipes in terms of transportation facilities. While there are some great examples of true intermodal facilities, more often than not, our mode is not included in the design and operation of supposedly multimodal transportation hubs. If we apply federal dollars to multimodal transportation facilities those facilities should be designed and operated in consultation with local private bus operators. This policy should also extend to airports. There are many instances where private carriers are prevented from connecting passengers to airports. In some cases, there is an outright ban on operations and in others it is accomplished through the application of excessive fees. Rural residents deserve the same access to airports and surface transportation facilities as other citizens. We should not disenfranchise travelers based on their choice of transportation mode, whether they are traveling to an airport, rail station or other publicly funded transportation facility offering an intermodal connection.

Modal stove-piping extends to how we design rural connectivity options, as well. In many cases, a multimode approach could transform how rural communities access large and medium hub airports. When compared to the Essential Air Service program, motorcoach transportation is generally less expensive, more environmentally efficient and in many instances time competitive. EAS reform should include a new pilot program which transforms a segment of the EAS program into an Essential Transportation (EST) program, providing motorcoach service connections to large and medium hub airports.

The goal of the pilot EST program would be to compare and contrast a mixed mode approach to the Essential Air Service program. Under the pilot program motorcoach, operators would be empowered to create connections between non-urbanized areas, large and medium hub airports along with other intermodal connections. The cost, and in many cases the times savings, from simply changing the mode of transportation could help stabilize the EAS program and ensure funding for communities truly in need of air connections.

Essential transportation funding could be used for activities such as:

- planning and joint marketing for bus transportation;
- capital grants for bus shelters, park and ride facilities, and joint-use facilities;

- operating grants through purchase-of-service agreements, user-side subsidies, and demonstration projects;
- developing and enhancing security procedures for bus passengers connecting to commercial air services;
- enhancing connections between bus service and commercial air services at the airport; and
- coordinating public and private travel information to make it easier to access and use the significant connecting and intercity resources provided through the public transit, rail and private motorcoach industry.

Program reforms should also extend beyond EAS to surface transportation programs like the Rural Intercity Bus Assistance program under section 5311(f). Section 5311(f) of the Federal Transit Act, the rural intercity bus program, is the primary federal tool to help states maintain and enhance connections between rural communities and the nation's intercity transportation network. With its 15% set-aside from the 5311 rural transit program, 5311(f) has also proven invaluable in the development of intermodal terminals that connect rural intercity services and rural transit services to larger transportation hubs and in the maintenance and expansion of intercity bus services to underserved rural communities.

A critical component of 5311(f)'s success in developing rural intercity bus services has been FTA's in-kind match program. FTA started this in 2007 as a pilot program pursuant to which states could use the capital costs of unsubsidized private sector intercity bus service as the local match for a section 5311(f) project which supports rural intercity bus service that connects with the unsubsidized service. The program has been very successful. There are now 22 states using this program to provide service on 74 rural routes to more than 400 communities. Another 7 states are planning to do so.

Because of its success, Congress permanently authorized the program in MAP-21 and expanded the eligible in-kind match to include the "costs" of the unsubsidized connecting intercity bus service, not just the "capital costs". This was an important change because it roughly doubled the source and availability of in-kind match. States that have developed extensive rural networks need the flexibility to use this additional local match if they choose to expand their networks to meet demand.

Despite a letter from this Committee's bipartisan leadership making clear that Congress intended that all costs of a connecting service, not just capital costs, would be available as in-kind match, FTA chose to continue to limit the in-kind match to capital costs. Thus, further congressional action is necessary. ABA requests that the Committee's reauthorization bill contain language explicitly stating that "all costs" of connecting unsubsidized intercity bus service can be used by states as in-kind match for section 5311(f) supported rural intercity bus service.

As demonstrated by the 5311(f) program public private partnerships can extend the transportation network to underserved communities while reducing taxpayer burden, energy consumption and emissions. As we look towards the next surface transportation reauthorization our goal should be to incorporate private motorcoach operators from the very beginning of the process rather than in ad hoc and one off projects. We should be looking to join the public and private networks together as way to add connectivity, expand service and maximize public investment in passenger transportation.

Thank you very much for the opportunity to testify before the Committee today.

American Bus Association Foundation
Economic Impact of the Motorcoach Tour and Travel Industry

The Motorcoach Tour and Travel Industry Creates Jobs in America

Companies that provide motorcoach services to intercity travelers and group tours are a critical part of the nation's economy. Motorcoach operators, along with the companies that supply services and materials to them, provide well paying jobs in America and pay significant amounts in tax to local, state and federal governments.

Economic Impact of Motorcoach Travel and Tourism in The United States

	Direct	Supplier	Induced	Total
Jobs (FTE)	914,845	263,393	301,930	1,480,168
Wages	$31,993,199,400	$15,295,072,600	$15,543,083,800	$62,831,355,800
Economic Impact	$87,560,240,500	$43,513,330,200	$47,831,997,200	$178,905,567,900

The Motorcoach Industry is a Crucial Economic Driver in America's Economy

- Motorcoach companies provide good jobs, paying an average of $61,932, with drivers averaging $50,375 in wages and benefits.[1] Today, every job is important. In fact, the United States unemployment rate has reached 5.5 percent. This means that there are already 8,597,000 people trying to find jobs and collecting unemployment benefits.[2]
- In addition to providing good paying jobs for thousands of workers, motorcoaches are the most fuel- and carbon-efficient mode of passenger transportation. Motorcoach travel averages 208 passenger miles per gallon compared to commuter rail at 90, transit bus at 70, automobiles at 27 and hybrid cars at 46 passenger miles per gallon.
- Motorcoach operations save travelers $1.2 billion annually by alleviating congestion on local roads, city streets and major arteries and adding productivity back to the workforce.[3]
- Motorcoaches are an important element driving local and regional tourism economies; providing flexible and cost effective transportation for millions of rural residents, commuters and intercity passengers; while linking airports and rail stations to the surface transportation network.
- Motorcoaches provided 605 million passenger trips in 2013 with little to no public subsidy.[4]

Motorcoach Travel and Tourism Contributes to America's Tax Base

- Not only does the motorcoach travel and tourism industry create jobs, it also generates substantial revenues for state and local governments. In the United States, the industry and its employees pay over $10.2 billion in taxes including property, income, and sales based levies.[5]

Taxes Generated in The United States	
Federal Taxes	$13,017,170,000
State Taxes	$10,211,123,900
Total Taxes	$23,228,293,900

1 Motorcoach industry jobs and wages based on an economic impact model developed by John Dunham & Associates for the American Bus Association Foundation, June 2014. Driver wages based on the reported wage rate for bus drivers from the US Department of Labor, Bureau of Labor Statistics, *May 2013 National Occupational Employment and Wage Estimates United States*, at www.bls.gov/oes/current/oes_nat.htm#53-0000, multiplied by 1.3 to reflect estimated benefits.

2 The Bureau of Labor Statistics. Available on-line at: www.bls.gov/lau/home.htm. Data for March-15.

3 Schrank, David and Tim Lomax, *Mobility Benefits from Motorcoach Service*, Texas Transportation Institute, December 2009.

4 *Motorcoach Census*, prepared by John Dunham & Associates for the American Bus Association Foundation, March 12, 2015.

5 op cit, Economic Impact Analysis, John Dunham & Associates.

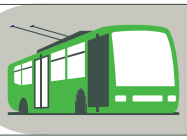
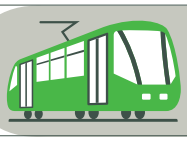
Get to Know The Real Green Transportation

Think about your daily commute your next vacation and which transportation option is green, affordable and flexible.

Your best choice may be a surprise.

To learn more about motorcoach transportation visit www.buses.org.

Energy use is measured in British thermal units, CO2 is measured in grams per passenger mile

		Passenger Miles per Gallon	Energy Used per Passenger Mile	CO_2 Released per Passenger Mile
Motorcoach		AVG 239.8	AVG 575	AVG 43
Heavy Rail		AVG 190.6	AVG 724	AVG 127
Trolley Bus		AVG 106.6	AVG 1294	AVG 228
Van Pool		AVG 106.1	AVG 1300	AVG 97
Light Rail		AVG 92.0	AVG 1500	AVG 264
Commuter Rail		AVG 90.3	AVG 1528	AVG 183
Intercity Rail (AMTRAK)		AVG 85.2	AVG 1619	AVG 147
Transit Bus		AVG 70.5	AVG 1957	AVG 136
Car Pool (2-person)		AVG 55.9	AVG 2470	AVG 184
Domestic Air Travel		AVG 54.8	AVG 2519	AVG 188
Car-Avg Trip		AVG 38.8	AVG 3555	AVG 265
Car-1 person		AVG 27.9	AVG 4939	AVG 368

aba foundation
AMERICAN BUS ASSOCIATION

Full report available at www.buses.org/research

The Study

This study compares the costs and environmental effects of supporting rural mobility using scheduled inter-city coach bus service to current costs to maintain air links under the Essential Air Service (EAS) program. The study includes 38 EAS communities in the lower 48 states that are within 150 miles of a medium or large hub airport. For the current EAS program, total costs include government subsidies and passenger fares. For the coach bus alternative, total costs include bus operating costs, and the value of passenger time for alternative bus trips that take longer than current EAS-subsidized flights.

The Results

For the 38 communities included in the study, current EAS-subsidized flights carry 615,528 one-way passengers annually at a total cost of $131.5 million - an average cost of $427 per passenger round trip. For these routes annual EAS subsidies total $60.8 million - 46% of the cost - and passenger fares total $70.7 million. While some routes require a relatively low subsidy, for others the current subsidy amounts to as much as $1,600 per passenger round trip.

This analysis indicates that the same number of scheduled weekly trips between these 38 rural airports and nearby regional hub airports could be provided by coach buses at a total annual operating cost of $33.9 million. Most of the bus trips would take longer than current air flights – if the "cost" to passengers of longer travel time is included it adds an additional $8.0 million to the total cost of the bus alternative. For the 38 communities studied, total costs for coach bus service average $136 per passenger round trip – this is on average 68% less than the cost of current EAS-subsidized flights.

The use of scheduled coach bus service to link these 38 communities to the national air transport system – instead of current EAS-subsidized air service - could save society over $89 million annually. Average savings could be as high as $291 per passenger round trip. Some level of subsidy would likely be required to incentivize coach operators to start new service on most routes, and continuing subsidies might be required on some routes, but projected per passenger bus operating costs on more than half of the routes are lower than current airfares. This indicates that these routes could probably support bus service with no long-term government subsidy; in the long run savings to taxpayers could amount to $50 million or more annually because the cost to operate coach bus service is so much lower than the cost to operate aircraft.

The analysis also shows that using buses instead of aircraft to link these 38 communities to regional hub airports could reduce annual petroleum use by 5.7 million gallons, could reduce annual CO_2 emissions by 63,500 tons, and could reduce other harmful air emissions of nitrogen oxides, hydrocarbons, carbon monoxide, and sulfur dioxide.

EAS Program

Begun in 1978 when U.S. airlines were deregulated, the Essential Air Service program provides subsidies to air carriers to maintain scheduled flights between rural communities and regional hub airports – the program currently subsidizes air links to 153 communities in 35 states and Puerto Rico. As of May 2010, annual subsidies under the program total more than $163 million. EAS-subsidized air service typically includes two or three round trips per day, using small regional aircraft, typically with 19 or fewer seats.

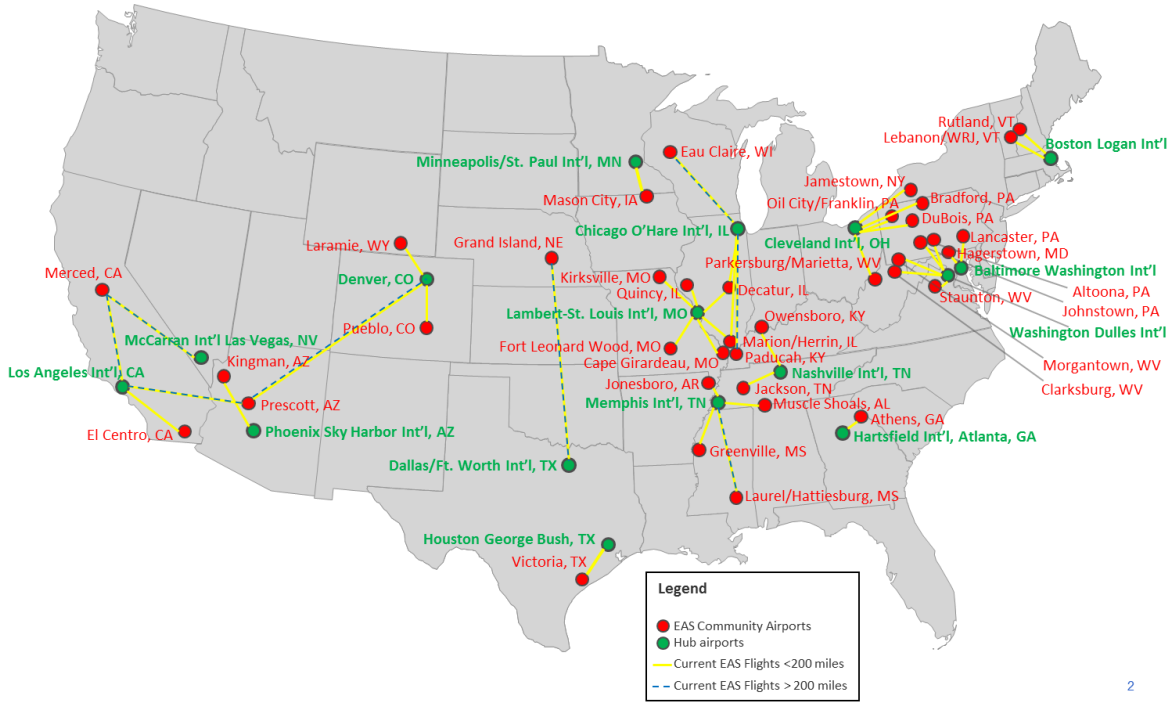


Figure 1 EAS Communities within 150 Air Miles of a Large or Medium Hub Airport

Table 1 Costs and Environmental Effects of EAS Program Compared to Coach Bus Service

			unit	EAS-Subsidized Flights	Alternative Coach Bus Service	*Difference*
SERVICE	Annual Trips		#	79,040	79,040	0
	Annual Seats		#	1,539,720	4,347,200	2,807,480
	Annual Passengers		#	615,528	615,528	0
COSTS	Current Annual EAS Subsidy		$	$60,838,832		
	Current Annual Passenger Fares		$	$70,652,143		
	Annual Bus Operating Cost		$		$33,860,696	
	Annual Incremental Travel Time		$		$8,098,098	
	TOTAL			**$131,490,975**	**$41,958,794**	**($89,532,180)**
ENVIRONMENT	Annual Miles		mi	12,310,688	11,953,411	(357,277)
	Annual Fuel Use		gal	7,930,259	2,213,595	(5,716,665)
	Annual Emissions	CO_2	ton	88,149	24,605	(63,544)
		NOx	ton	28.1	14.9	(13.2)
		HC	ton	1,188.2	2.0	(1,186.3)
		CO	ton	2,067.7	1.2	(2,066.6)
		SO_2	ton	28.1	0.2	(27.8)

Totals for 38 EAS communities that are within 150 miles of a medium or large air hub. For 32 communities alternative bus service is to the the same destination as current EAS flights (large air hub); for two communities bus service is to the closest large air hub, and for 4 communities bus service is to the closest medium air hub.

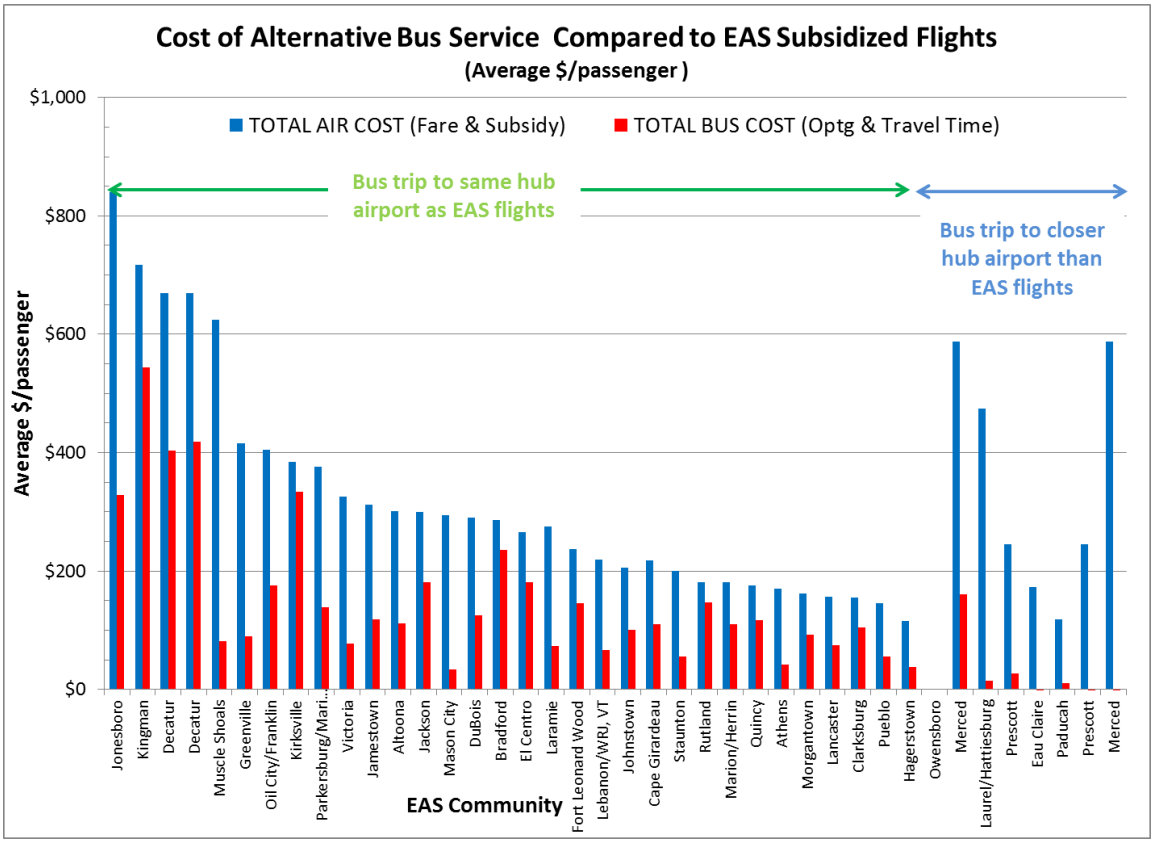


Figure 2 Total EAS Costs Compared to Total Costs for Alternative Bus Service ($/passenger)

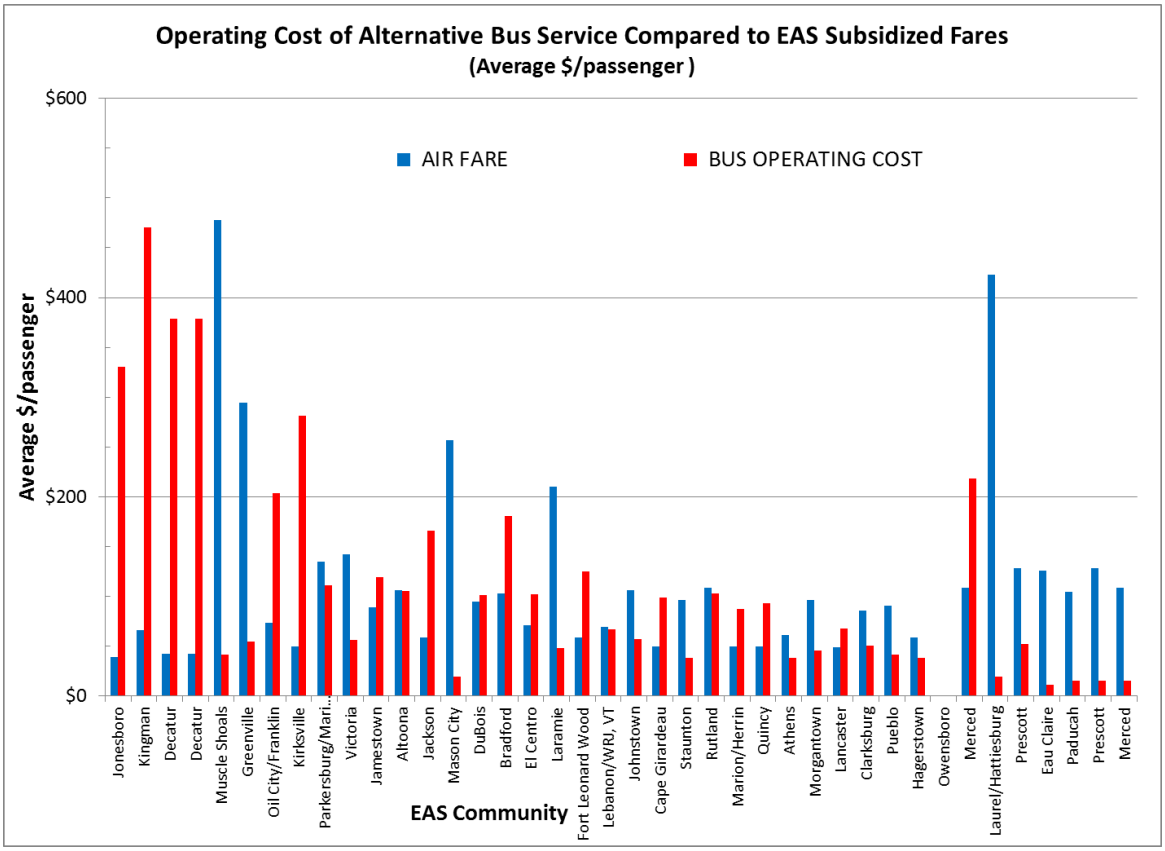


Figure 3 Coach Bus Operating Costs Compared to Current Fares on EAS Flights ($/passenger)

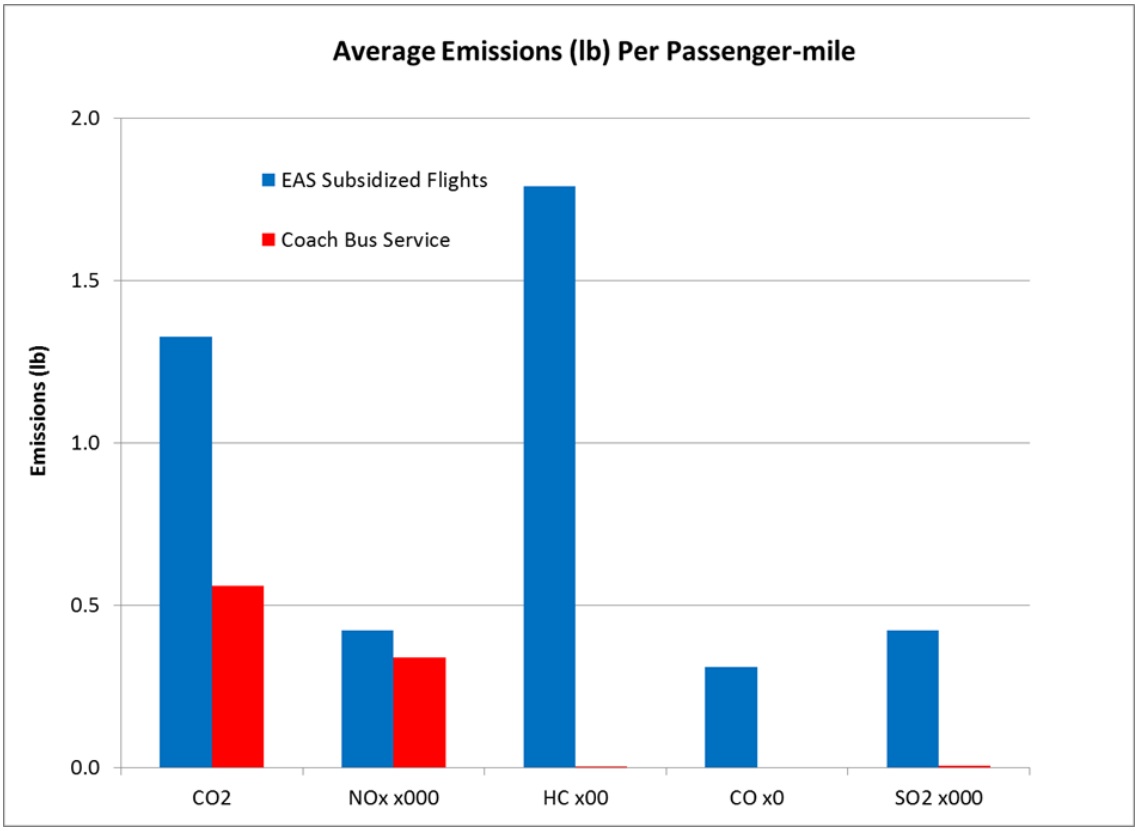


Figure 4 Average Emission per Passenger-mile, EAS Flights Compared to Coach Bus Service

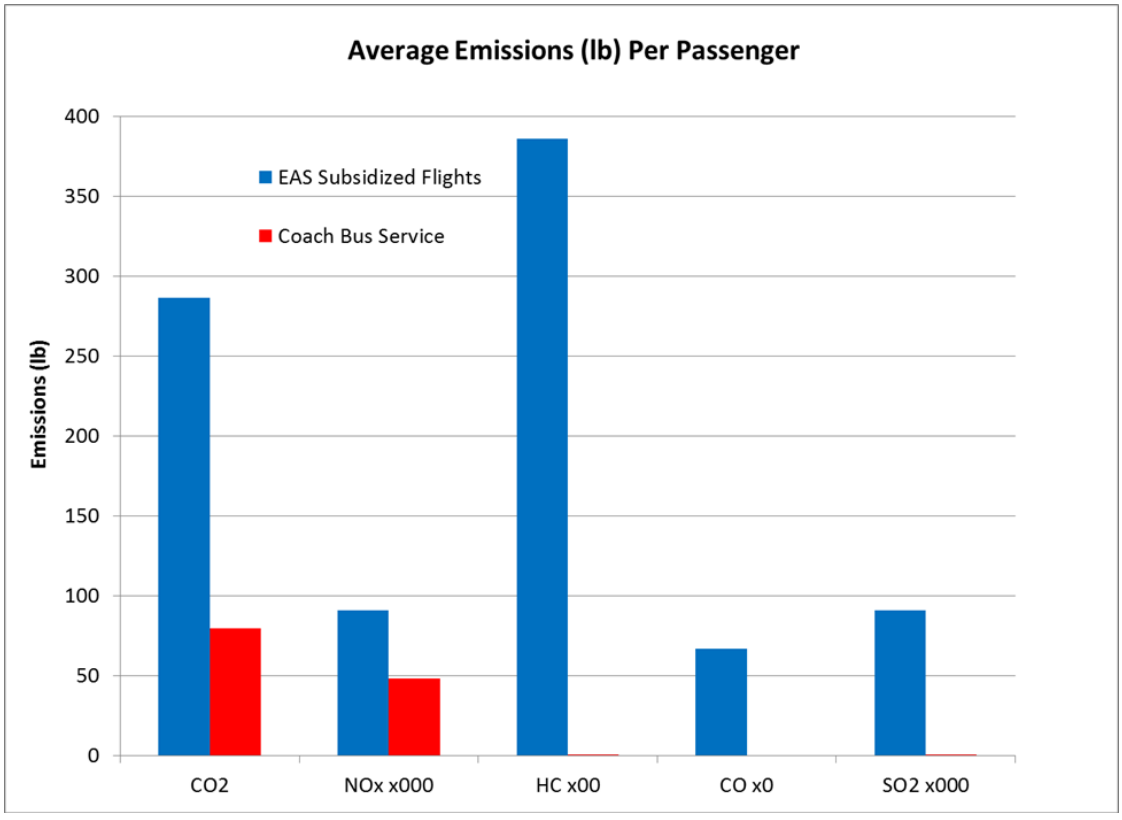


Figure 4 Average Emission per Passenger, EAS Flights Compared to Coach Bus Service

Supporting Passenger Mobility and Choice by Breaking Modal Stovepipes

Comparing Amtrak and Motorcoach Service

July 2013

MJB & A

M.J. Bradley & Associates LLC

(603) 647 5746 / www.mjbradley.com

Key Findings

This analysis compares customer costs (fare, travel time) and societal costs (government subsidies, air emissions) associated with twenty specific trips that can currently be taken between select U.S. city pairs on both an Amtrak train and on a scheduled intercity motorcoach bus. These specific trips were chosen to provide a representative comparison between these travel modes over a range of geographies, both urban and rural, and to include trips taken on the three major types of service operated by Amtrak (Northeast Corridor, including Acela; other short-corridor trains; and long-distance trains). The majority of these trips are between 100 and 200 miles one-way, while one is shorter and several are longer.

The key findings of this analysis are as follows:

Time and Schedule

- In general there are more schedule options by bus than by train. For all but one of the trips there are more scheduled buses each week than trains; for half of the trips there are more than twice as many scheduled buses per week.
- Total travel time is comparable for these modes; for ten of the twenty trips total travel time is shorter by train than by bus; for the other ten trips total travel time is shorter by bus. For half of the trips the difference in travel time between modes is less than one hour.

Passenger Cost and Government Subsidies

- For thirteen of the twenty trips the minimum one-week advanced purchase fare is lower for the bus than the train.
- Considering fully allocated costs (capital and operating expenses) motorcoaches average ($/passenger) less than 25% of the cost to provide comparable Amtrak service. The average savings to passengers and taxpayers to provide bus service over train service ranges from $17.03 to $422.39 per passenger.
- For two of the twenty analyzed trips Amtrak on average generates enough passenger revenue to cover both operating and capital costs (i.e. they are "profitable"). For the remaining eighteen trips average passenger revenue does not cover Amtrak's fully allocated expenses. For the remaining eighteen trips the average government (state and federal) subsidies to Amtrak range from $21.93/passenger to $289.56/passenger. By comparison, for the twenty trips analyzed the total indirect capital subsidies (Highway Trust Fund outlays) provided to support surface transportation range from $0.09/passenger to $0.74/passenger.

Environmental Efficiency

- Excluding the Northeast Corridor, where Amtrak operates electric locomotives, the average impact of scheduled intercity motorcoach service on air quality is lower than the impact of Amtrak service. Average per-passenger emissions of particulate matter and nitrogen oxides are approximately 80% lower for motorcoach trips than for Amtrak trips, and average emissions of volatile organic hydrocarbons are approximately 90% lower.
- For all trips, including those on the Northeast Corridor, the average impact of scheduled intercity motorcoach service on climate change is lower than the impact of Amtrak service. Average per-passenger emissions of carbon dioxide are 45% - 65% lower for motorcoach trips than for Amtrak trips.

Executive Summary

This report compares the cost and environmental impact of passenger trips taken on scheduled Amtrak trains to trips taken to the same destinations on existing scheduled intercity motorcoaches.

Amtrak currently operates over 300 trains per day on 43 different routes. These routes connect more than 500 cities and towns in 46 of the 48 lower continental United States. Approximately 36% of all Amtrak passengers are carried on the Northeast Corridor, between Boston, New York, and Washington DC, both on the Acela and on Northeast Corridor regional trains. In addition to Northeast Corridor trains, Amtrak operates both short-corridor trains that generally operate within a single state or within only a few adjoining states (27 routes), and long-distance trains than span the country, primarily from east to west (14 routes).

By comparison there are currently an estimated 4,088 companies that operate motorcoaches in the U.S. Almost 20% of these companies operate daily, scheduled intercity service between various city pairs in all 48 of the lower 48 states[1]. This scheduled intercity service is operated primarily by the large national carriers – Greyhound and Coach USA – but also by smaller local and regional companies. More than 16,000 motorcoaches operate regularly in fixed-route service[2] in the U.S. and almost half of all annual motorcoach miles are operated on scheduled, fixed routes.

There are currently bus stations with some scheduled intercity service in 2,766 U.S. cities and towns. There are less than 150 counties, parishes, or independent cities in the U.S. that are not currently served by some type of scheduled intercity service[3]. See Figure 1 for a map of this scheduled intercity Amtrak and bus service[4].

For this analysis the authors analyzed twenty specific trips between select city pairs in the continental United States. The specific trips that were analyzed are shown in Figure 2. Most of the analyzed trips are approximately 200 miles in length, but several are shorter and several are as long as 600 miles. The specific trips included in the analysis were chosen to provide representative geographic coverage of the lower 48 states, urban and rural trips, Amtrak trips on the Northeast Corridor, as well as short-corridor and long-distance Amtrak trains[5].

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[1] John Dunham & Associates, *Motorcoach Census 2011*

[2] Fixed-route service includes inter-city service, airport service, and commuter service. Data from *Motorcoach Census 2011*

[3] According to the American Intercity bus Riders Association (www.aibra.org). Counties, parishes, and independent cities of 25,000+ population that are more than 25 miles from a bus or train station.

[4] A larger, printable version of this map can be found at: http://www.aibra.org/pdf/usmap.pdf

[5] Amtrak's designation of long-distance and short-corridor refers to the entire route over which a specific train operates. In general the specific trips chosen for this analysis cover only a portion of each corridor, and the analyzed trips on Amtrak long-distance trains may be as short as or shorter than the analyzed trips on short-corridor trains.

In addition, trips were specifically chosen on those Amtrak corridors that are the most and least profitable on an operating basis, according to Amtrak financial data. All of the trips can be taken on a single Amtrak train or a single scheduled bus, with no transfers required for either mode.

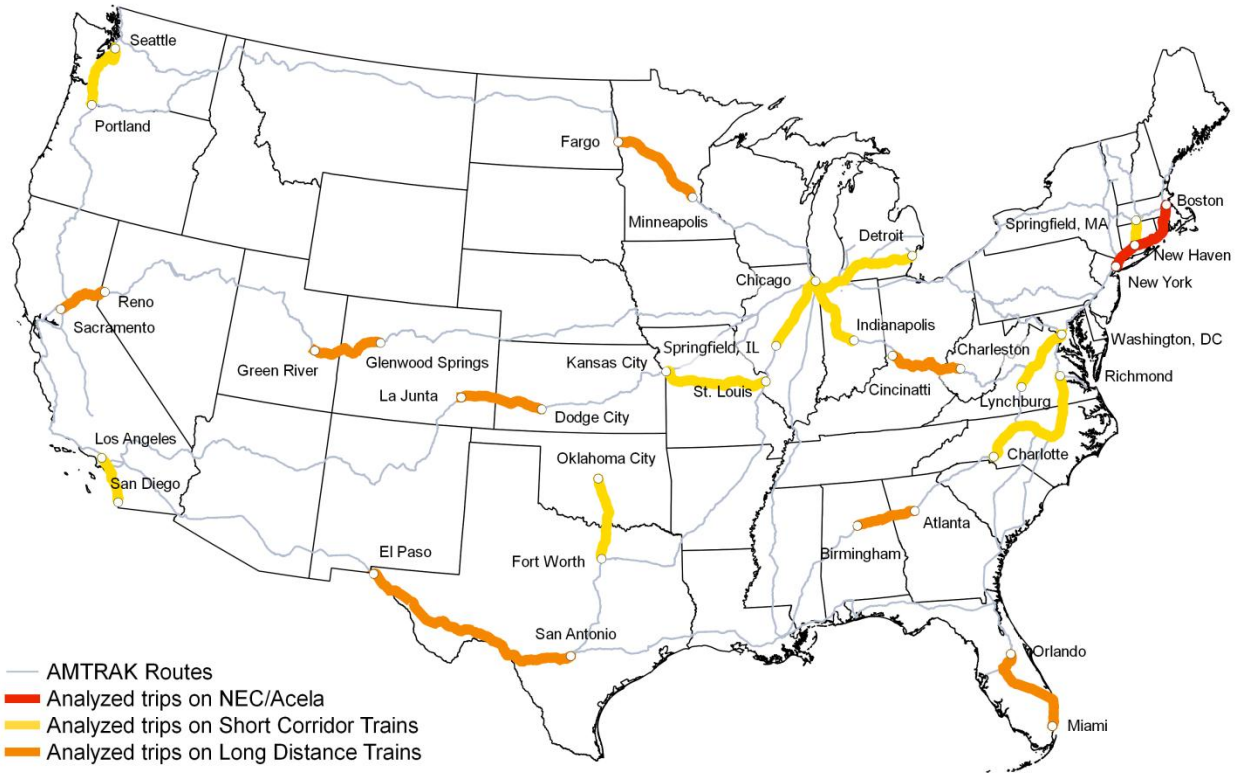

Figure 2 Amtrak and Motorcoach Trips Analyzed

The amount of service available for each of these twenty trips varies widely – from only one scheduled train or bus per day each way - between Dodge City Kansas and La Junta Colorado - to more than 35 trains or buses per day each way between Boston and New York City. In general the bus provides more schedule options than the train; for only one of the twenty trips are there more scheduled trains per week than buses (Chicago, IL – Springfield, IL). For half of the trips there are more than twice as many scheduled buses per week as trains.

The average speed on the route also varies significantly for both the train and the bus; for ten of the twenty trips total average travel time is less when taking the train, while for the other ten trips total average travel time is less when taking the bus. The difference in total travel time between modes is often small; for half of the trips the difference is less than one hour. The greatest differences are for the trips from Sacramento, CA to Reno, NV (bus travel time is 2.9 hours less) and from Cincinnati, OH to Charleston, WV (bus travel time is 3.7 hours longer).

See Figure 3 for a comparison of "typical" fares for each trip, based on data from the relevant carrier's website. All fares shown are for travel with at least one week advanced purchase; for both the train and bus fares are higher on most routes if tickets are purchased with less advanced notice. For some routes there are a range of fares shown – in many cases discounts are available for on-line purchase and/or fares vary by time of day departure.

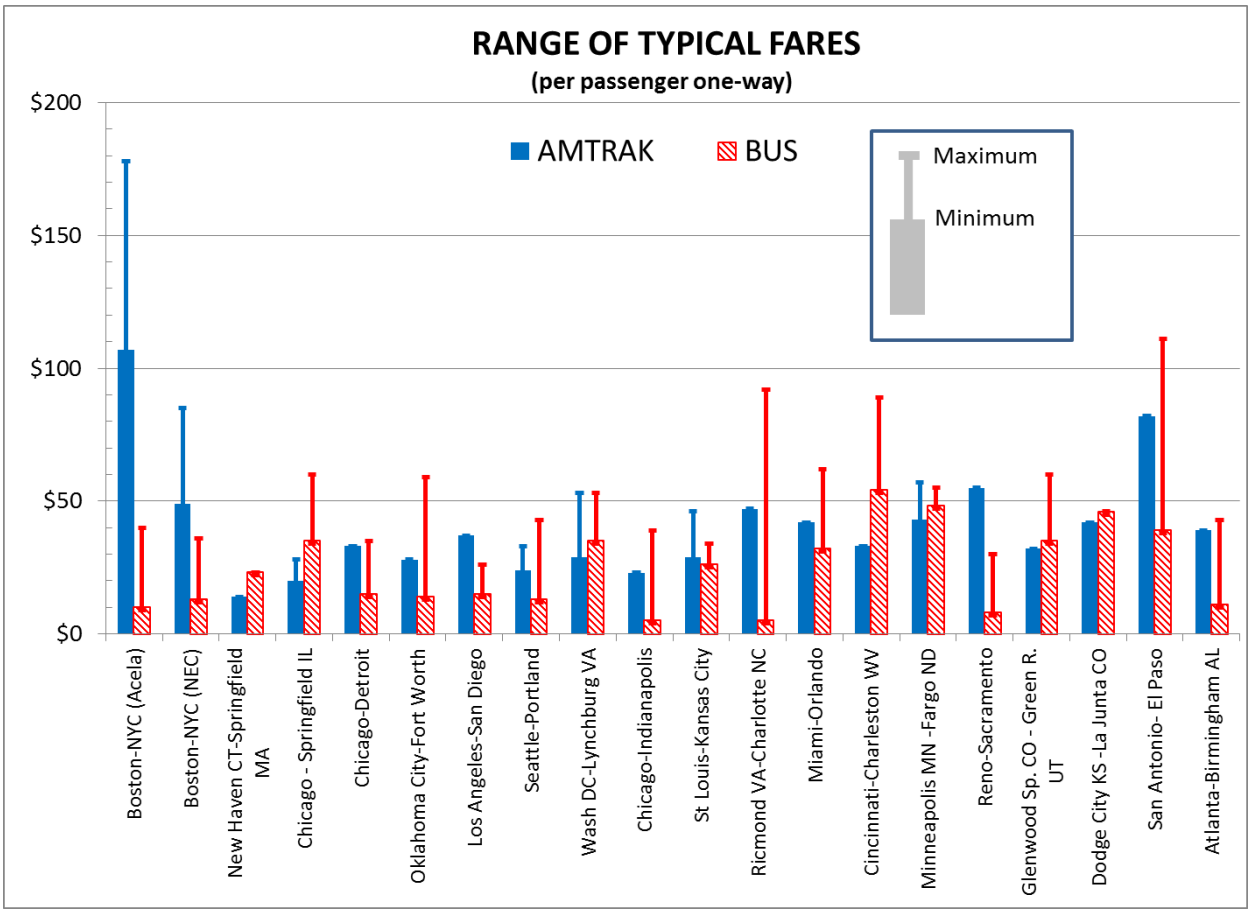

Figure 3 Comparison of Fares for Amtrak and Motorcoach Trips

As shown, fares are generally comparable between modes. For thirteen of the trips the minimum bus fare is lower than the minimum train fare. The biggest difference is for trips between Boston and New York City – the minimum fare for this trip on Amtrak's Acela train is $107 and the minimum fare on Amtrak's Northeast Corridor Regional trains is $49, compared to $10 for a motorcoach trip on Bolt Bus or MegaBus. Of the seven trips that are more expensive by bus the biggest difference is on the trip from Cincinnati, OH to Charleston, WV, which costs $33 on Amtrak's long-distance Cardinal train, but $54 on Greyhound. When comparing maximum fares there are only six trips which are cheaper by bus, and again the biggest difference is on the Northeast Corridor between Boston and New York City.

When you add in the "cost" to passengers of longer travel time on one mode versus the other the results are similar to the differences in fares. For thirteen of the twenty trips the total cost to customers for the fare plus the travel time difference is lower for the bus than for the train; on the other seven trips the total customer cost of the train is lower.

There are much more significant differences between modes in the average cost to provide service, as well as the amount of subsidy provided by local, state, and federal governments. See figure 4, which compares the average per-passenger cost to provide service for each of the analyzed trips.

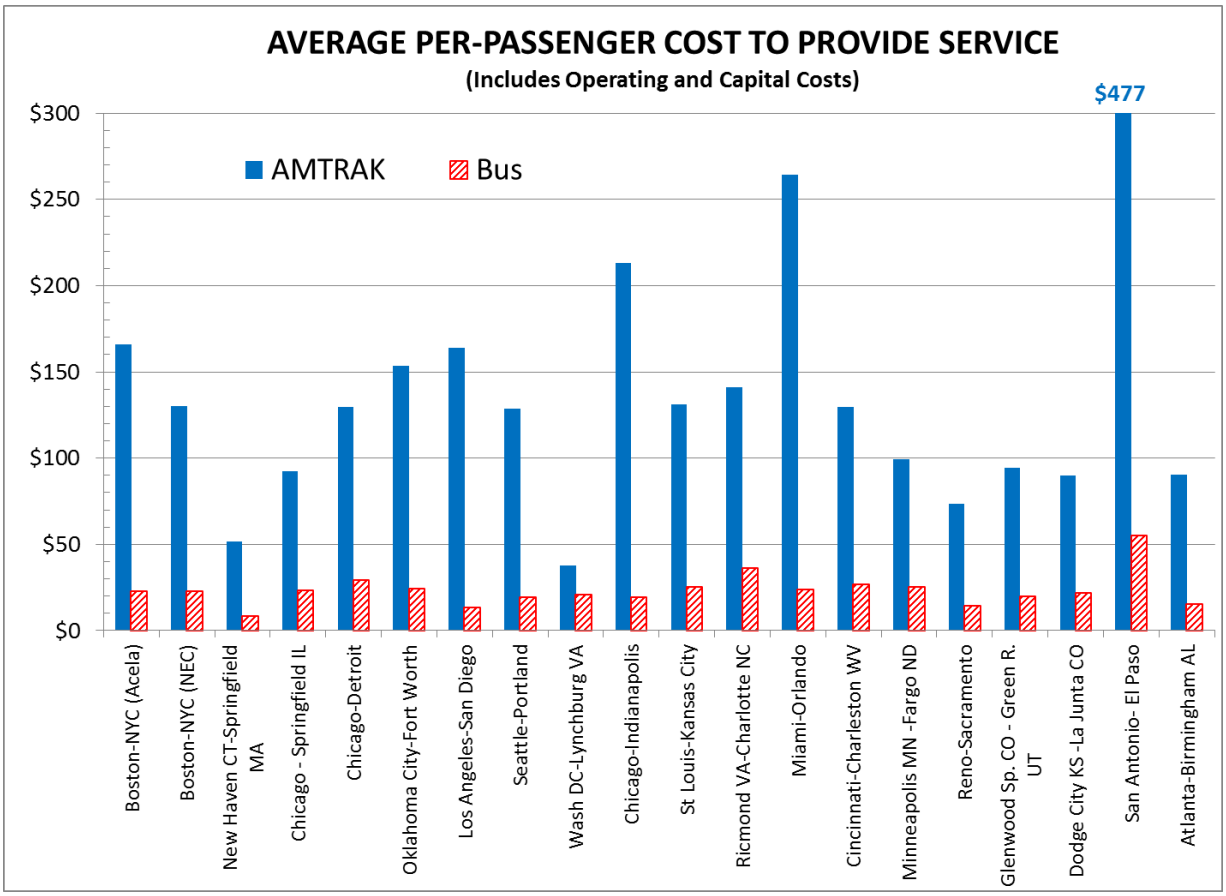

Figure 4 Comparison of Amtrak and Motorcoach Costs to Provide Service

For Amtrak trips the costs included in Figure 4 are based on fiscal year 2012 data reported by Amtrak for each route they operate, and they include both capital and operating costs. For motorcoach trips the costs shown are modeled costs based on industry-average cost data collected from American Bus Association member companies. These modeled motorcoach costs include the annualized cost of bus purchase, bus maintenance, fuel costs, driver labor costs, overhead and profit, and

indirect government subsidies related to road building and maintenance of the highways on which motorcoaches operate.

As shown, for all of the analyzed trips the cost of providing scheduled motorcoach service is significantly lower than the cost of providing Amtrak train service. The cost difference ranges from a low of $17 per passenger (Washington, DC to Lynchburg, VA) to a high of more than $400 per passenger (San Antonio, TX to El Paso, TX).

Comparison of Figure 3 and Figure 4 shows that for intercity bus trips the fare charged is generally in line with average costs to provide service – which is not surprising since all of these buses are operated by private, for-profit companies. On the other hand, Amtrak's average cost to provide service on most of the analyzed trips is significantly higher than the fares that they charge. The difference is made up by state and federal subsidies.

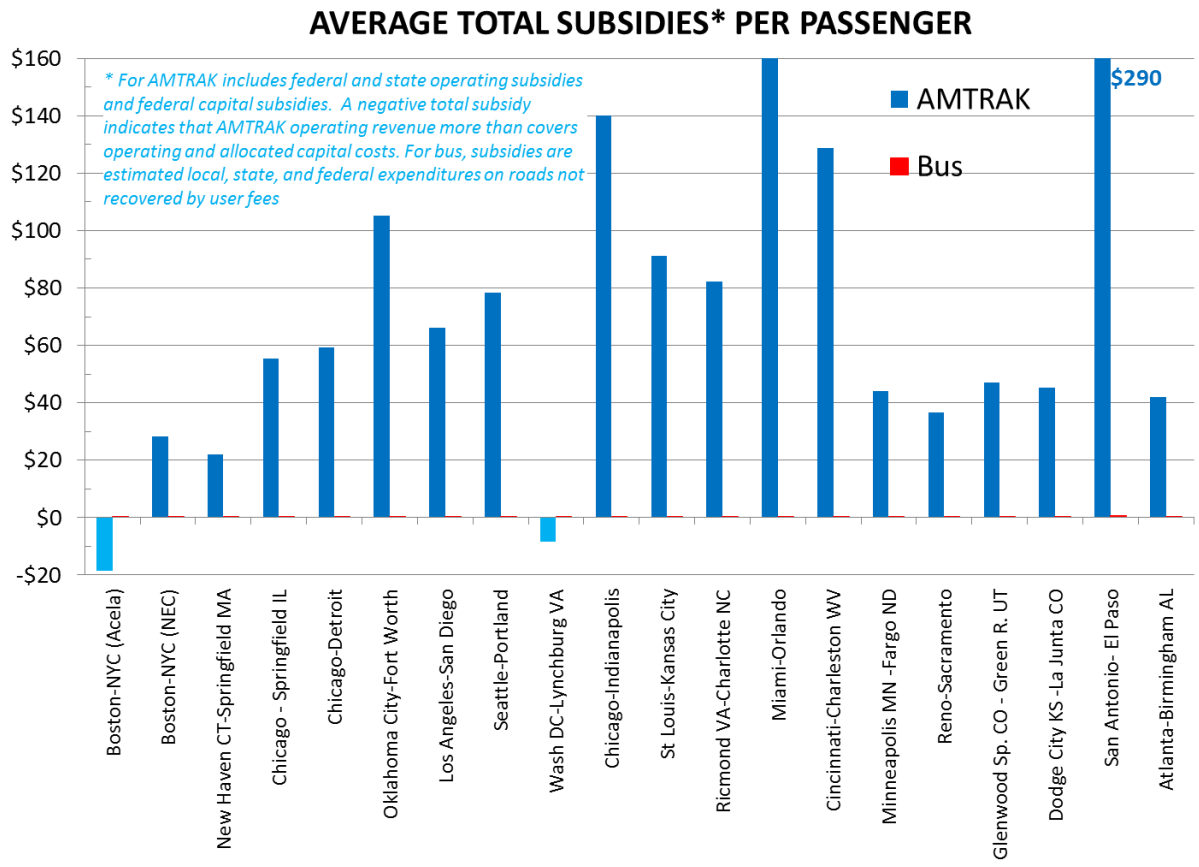

Figure 5 Comparison of Amtrak and Motorcoach Total Subsidies

See Figure 5 for a comparison of average total federal and state subsidies ($ per passenger) provided to Amtrak and to scheduled motorcoach buses for each of the trips analyzed. The Amtrak subsidies shown include state and federal operating subsidies and federal capital subsidies provided in fiscal year 2012. For motorcoaches the

subsidies shown are indirect subsidies from local, state, and federal spending on highways which is not covered by road "user fees"[6]. None of the companies that operate scheduled intercity bus service for the trips analyzed here receive any direct capital or operating subsidies for these services.

As shown in figure 5, average total Amtrak capital and operating subsidies for the trips analyzed range from a low of $21.93 per passenger for trips from Springfield, MA to New Haven, CT to a high of $289.56 for trips from San Antonio, TX to El Paso, TX. Average total indirect capital subsidies provided to intercity motorcoaches for the analyzed trips range from $0.09 to $0.74 per passenger.

Two of the analyzed Amtrak trips are shown in Figure 5 to have negative average subsidies – trips taken on ACELA trains between Boston and New York City, as well as trips taken between Washington, DC and Lynchburg, VA. This means that Amtrak gets enough passenger revenue from these trips to pay the average capital and operating costs on these routes – i.e. these trips are profitable for Amtrak. These are the only two routes in the Amtrak system which are profitable. There are two other Amtrak routes that generate enough passenger revenue to cover their operating costs, but not enough to also cover their capital costs; these are the Northeast Corridor regional trains and the Carolinian short-corridor train that operates between New York City and Charlotte, NC.

This analysis also evaluated the environmental impact of taking a motorcoach compared to taking an Amtrak train, by determining for each mode and trip exhaust emissions (grams per passenger) of carbon dioxide (CO_2), nitrogen oxides (NO_x), volatile hydrocarbons (HC), and particulate matter (PM). See figure 6 for a comparison of average CO_2 emissions (grams per passenger) for all of the analyzed trips. As shown, for the trips analyzed per-passenger CO_2 emissions from motorcoaches were 45% to 66% lower than from Amtrak locomotives.

For trips on Amtrak routes other than the Northeast Corridor, per-passenger NOx, PM, and VOC emissions are also lower for motorcoach trips than for train trips. NOx and PM emissions are on average about 80% lower, while VOC emissions are about 90% lower. For trips on the Northeast Corridor, where Amtrak runs electric locomotives, trips by train generate per-passenger NOx, PM, and VOC emissions that are about 70% lower than those generated by motorcoach trips.

[6] User fees dedicated to cover a portion of government spending on roads include taxes on vehicles, tires, and fuel, as well as highway and bridge tolls.

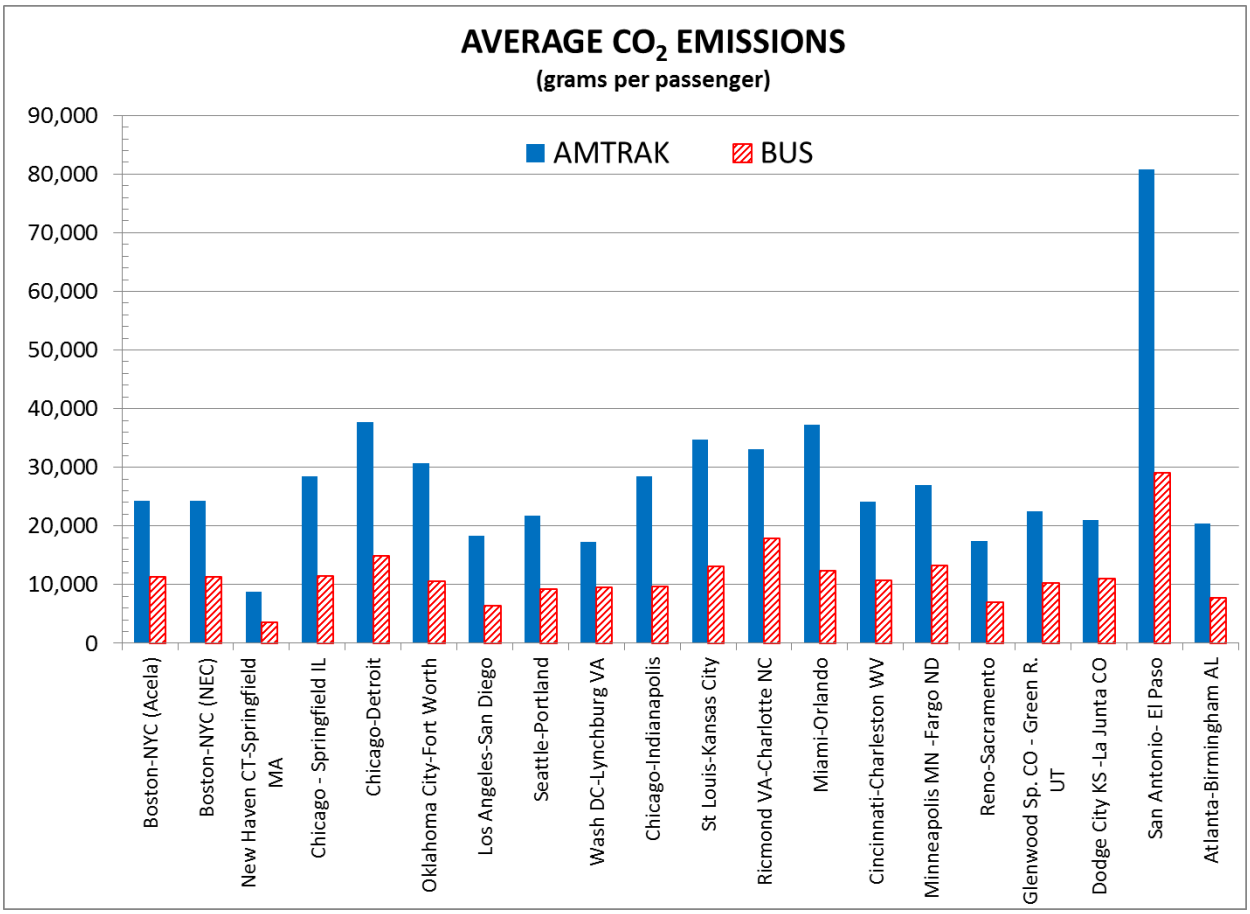

Figure 6 Comparison of Amtrak and Motorcoach CO_2 Emissions