



The Chicago-Iowa City passenger rail service *project summary*

Iowa's investment in the Chicago to Iowa City passenger rail service will produce more ongoing benefits than costs for Iowa residents and taxpayers over the next 30 years.

An Iowa investment of \$20.6 million will match a federal investment of \$86.8 million for the capital costs of the Iowa segment of the Chicago to Iowa City service. Iowa's share of the expected gap between revenues and operating and maintenance expense is estimated at \$3 million annually.

The economic analysis included in this document demonstrates the cost-effectiveness of the Iowa investments in the Chicago to Iowa City service and details the benefits that Iowa can expect from Iowa's expenditures.

Financial Outcomes

Economic Outcomes for the State of Iowa

By leveraging Federal and Illinois state funding, the Chicago to Iowa City passenger rail project generates the following financial outcomes over the next 30 years.

- Iowa will receive **\$2.77 in transportation economic benefits for every \$1.00 invested**, according to economic estimates prepared by the State of Iowa in accordance with methodology and standardized values issued by the U.S. Department of Transportation.
- Federal funds will pay 80% of the capital costs, and Illinois will pay 20% of the portion of the capital costs of the system within its state. Iowa's investment of \$20.6 million will design, build, and equip a fully functioning \$310 million new transportation service.
- Illinois will pay the majority of the operational costs for a route that will benefit Iowans with an annual Illinois contribution for operation and maintenance costs of \$7.0 million.

Job Creation

The project will generate new Iowa jobs during construction, and permanent jobs required for operation and maintenance of the passenger-rail service.

- **Creates 209 jobs each lasting four years** during the design and construction period.
 - Includes 117 high-skill, high-wage construction and engineering jobs.
 - The typical construction workforce consists of heavy equipment operators, journeymen electricians, carpenters, machinists, and ironworkers, and laborers, and truck drivers.
 - Some of the construction jobs, such as railroad signaling, will endure through the winter, a time when construction is traditionally slow.
- **Creates 31 new operations and maintenance jobs.**
 - One-third would be high-skill, high-wage jobs, such as locomotive engineers, conductors, and maintenance workers.
 - One-third would be indirect jobs related to the production and distribution chain of goods & materials.
 - One-third would be jobs created by the expenditures of these wages.
 - Other jobs, not quantified, could include jobs in the hospitality and tourism industry or jobs related to new economic activity or development.

Business Activity Created by the Project

Construction activity and subsequent operation and maintenance will generate business revenues within Iowa. These include the supply of materials such as steel, communication equipment, and fuel to the project, and services such as housing, food, and utilities to construction employees and subsequent operations and maintenance employees.

- **\$125 million (2010 dollars) of new business revenues** in Iowa during the first 4 years of construction.
- **\$6.76 million (2010 dollars) of ongoing new business revenues** in Iowa per year for the next 30 years as a result of operation and maintenance of the service.
- Iowa's businesses will have a proximity advantage for major construction and supply contracts.
- Other business activity, not quantified, would include an increase in land values around rail stations, spending on goods and services by rail passengers during their train trip and at their Iowa destination, and other business activity that occurs as a result of the new service.

Travel Cost Savings

The Chicago to Iowa City passenger rail service will reduce the cost of travel for Iowa residents and visitors that use it, as well as costs that would otherwise be spread among all Iowa transportation users and taxpayers.

- Individual travelers will **save \$142.7 million in out-of-pocket transportation costs** during the first 30 years of the service, compared to the cost of using other transportation modes.
- Iowa, its residents, and visitors, will **save \$6 million over 30 years** on avoided lost time in roadway congestion and on highway accident costs.

Passenger Travel Time, Cost, and Convenience Comparison

Transportation Options: Comparison of Time & Cost - Chicago to Iowa City and Iowa City to Chicago

Mode	Travel Time (One-Way)	Walk-Up Out-Of-Pocket User Cost (Round Trip)	Same Day Business Roundtrip Possible?	Ability to Work En Route (use laptop, cell phone)	All Weather Reliability	On-Time Performance
Automobile	3 hours 46 minutes	\$193	Yes	Low	Low	Unknown
Bus	4 hours 55 minutes	\$46	No	Moderate	Low	Unknown
Rail	4 hours 20 minutes	\$62*	Yes	High	High	90%+
Air	3 hours 42 minutes	\$925**	Yes	Low	Low	79%

*Estimated fare

**Fare based on weekday, 15-day advance ticketing as of January 9, 2011.

Transportation Options: Comparison of Convenience - Chicago to Iowa City

Mode	Restroom Facilities	Hot Water	Beverage Service	Food Service	Uninterrupted Wi-Fi
Automobile					
Bus	x				
Rail	x	x	x	x	x
Air	x	x	x		

Freight Railroad Outcomes

The project brings specific benefits to Iowa's freight rail system and its shippers:

- Enables the Iowa Interstate Railroad to increase its reliability, efficiency, and safety of service through construction of signaling and communications systems that are necessary for passenger service, but also of substantial utility to the freight services on the same tracks.
- Increases Iowa shippers' guarantee of long-term access to lower-cost railroad freight transportation services.
- Increases the ability of the Iowa Interstate Railroad to attract new manufacturers, agricultural processors, and consumer goods distributors to Iowa.
- Enables the Iowa Interstate to increase traffic volumes at a lower cost, benefitting both existing and potential new Iowa shippers and receivers.

Other Benefits

The Chicago to Iowa City passenger rail route has a number of positive economic impacts that cannot be directly quantified in an economic analysis and are not included in the cost-benefit ratios described above. These effects may benefit Iowa's ability to retain existing economic activity or attract new activity, retain or improve the attractiveness of its universities and medical centers, and maintain or improve Iowa property values.

Transportation Connectivity and Access

- Connections to the Chicago hub provide Iowans access to multiple national and global transportation options – air, regional and national passenger rail, and intercity transit options within Chicago.
- The service helps ensure that decisions to attend college in Iowa, reside in Iowa, or do business in Iowa, are not influenced by travel time lost in freeway congestion in Chicago.
- The service helps ensure that Iowa residents and visitors are able to travel regardless of winter weather.
- The service helps ensure that Iowa's elderly residents have access to comfortable and accessible transportation.

Business

- Provides convenient, stress-free transportation for business day trips to the Chicago area.
- Business travelers can make full productive use of the travel time, including the full, uninterrupted use of laptop computers and cell phones from departure to arrival.
- Passenger rail access may assist employee recruitment and client attractiveness.
- Provides opportunities to increase tourism.

Education

- Convenient transportation for the many students attending Iowa colleges and universities that have Illinois ties, particularly those who do not own automobiles.
- Increases competitiveness and enhances recruitment for Iowa's educational institutions.

Quality of Life

- Access to travel for those who do not or cannot drive.
- A comfortable, safe and convenient travel option for all segments of the population – students, elderly, families, disabled, economically disadvantaged, as well as business travelers.
- Provides another transportation option for patients to receive treatment at some of Iowa's largest medical facilities.
- Provides a safe transportation service with on-board personnel directly responsible for passenger safety and convenience and arrives and departs from secured stations with safe indoor waiting areas.

Energy & Environment

- Fuel efficient transportation option reduces Iowa's vulnerability to fuel cost escalation.
- Energy efficiency promotes U.S. energy independence.
- Fewer greenhouse gas emissions reduce Iowa's exposure to potential federal limits on transportation emissions and carbon taxes.

Public Safety Outcomes

Iowa was among the top 10 states with the highest highway-railroad at-grade crossing crashes at public and private crossings during 2006, 2007, and 2008. Passenger rail will be accompanied by extensive upgrades for the at-grade highway-railroad crossings on Iowa Interstate Railroad. The improvements will result in a substantial reduction in the potential for vehicle and train collisions in the Bettendorf-Iowa City corridor.

- Improvements include upgrades to 71 at-grade crossings, including adding gates and flashing lights at 48 crossings. In total, over \$14M is being invested for at-grade crossing improvements, nearly 4 times the current annual federal expenditure for at-grade crossing improvements statewide.
- New railroad safety systems will be implemented on Iowa Interstate with passenger rail service increasing safety:
 - Centralized Traffic Control (a train signaling system) detects broken rails, vandalized switches, and many other common causes of derailments.
 - Positive Train Control system enforces train spacing and speed limits, virtually eliminating the potential for train to train accidents.

Public Costs of Transportation

In one form or another, all modes of transportation require public support not paid with user fees. Below is a summary by mode of how it has been supported with public funds not paid with user fees.

- **Highways**
 - Nationally, highway user revenue collected at all levels of government in 2007 (\$98 billion) only accounted for 57% of total highway disbursement.
 - Since 2008, approximately \$34.5 billion has been transferred from the General Fund to the Highway Trust Fund in order to keep the fund solvent.
 - City and county governments in Iowa utilize property tax and, in many cases, local option sales tax to support road improvements and maintenance.
- **Aviation**
 - General Fund revenue supports the aviation system by funding the nation's air traffic control system and other Federal Aviation Administration operations.
 - The federal Essential Air Service program provides federal operation subsidies directly to private airlines in exchange for providing commercial service to airports that would not otherwise have service. This program is utilized to support service to Mason City, Fort Dodge and Burlington.
- **Public Transit**
 - Iowa's public transit systems require approximately \$100 million per year to operate. Approximately \$13 million comes from fare box revenue but the remainder comes from the federal government (approximately \$25 million), local government (approximately \$31 million), state of Iowa (approximately \$11 million), contract revenue (approximately \$16 million from federal, state and private sources), and other sources (approximately \$4 million).
 - Transit funding from the federal government is primarily funded through the federal fuel tax; however, the transit account within the Highway Trust Fund recently required a \$4.8 billion transfer of General Fund revenue in order to remain solvent.
- **Passenger Rail – Chicago to Iowa City corridor**
 - In the first year of operation (2015), the Chicago to Iowa City corridor is expected to generate \$6.4 million in revenues from fares and food service (which is a 40.3% recovery of operating and maintenance costs). Amtrak's revenue projections are based on Amtrak's experience with similar routes in Illinois and the Midwest. Revenue estimates do not assume the route will initially fill to capacity and assume growth rate in ridership of 1.5%.
 - Annual operating and maintenance cost is \$15.9 million.
 - Operation and maintenance costs are allocated 27% Iowa, 73% Illinois.
 - The estimated annual operating and maintenance cost to the state of Iowa is estimated to be on average, approximately \$3 million. Options to fund this cost are under consideration and include:
 - Utilizing existing federal transportation funding programs to cover up to 80 percent of the cost for the first three years of the new service.
 - Working with other states to encourage the creation of a federal program to provide on-going operating cost assistance similar to existing federal programs for public transit.
 - Identifying existing state funding programs that could provide funding support.

Ridership and Revenue Projections

- Ridership includes the number of riders that get on and get off the train on *any segment* of the corridor. A rider could get on and off at any of the nine stations on the route (e.g., someone who gets on at Iowa City and off in Chicago would be considered a rider; someone who gets on at Geneseo, Illinois, and off in the Quad Cities would also be considered a rider.)
- The ridership estimate and the revenue projections were provided by Amtrak using the Amtrak Corridor Passenger Rail Demand Forecasting Model developed by AECOM.¹
- The ridership is forecast to be 246,800 (when service is initiated in 2015).
- The expected revenue of \$6.4 million includes projected revenue from ticket sales and food service sales at the forecast ridership level. Revenue estimates assume that coaches on average are filled to 70% capacity daily, which will accommodate peak demand periods and growth.
- The estimated annual ridership growth for the Chicago to Iowa City corridor is conservatively estimated at 1.5%. Ridership growth on Amtrak's state-sponsored routes in 2010 was 6.5%.
- Fare is based on the level that would optimize revenue collections, taking into consideration the variables in the model.¹

Similar Midwestern Route Comparison

Comparison with Comparable State Sponsored Routes

Route	Chicago to Carbondale (Illini/Saluki)		Chicago to Quincy (Illinois Zephyr/Carl Sandberg)		Chicago to Iowa City	
Status	Existing		Existing		Planned	
Ridership (Annual)	264,934 (FY 2010)		209,466 (FY 2010)		246,800 (Projected Opening Day)	
Average Annual Ridership Growth	3.7% (actual last 4 years)		5.5% (actual last 4 years)		1.5% (projected)	
Roundtrips per Day	2		2		2	
Universities and Colleges Served	University of Illinois at Urbana-Champaign, Southern Illinois		Western Illinois		University of Iowa, Augustana College, St. Ambrose University, Palmer College of Chiropractic	
Major Station Stops	<i>Champaign/Urbana</i>	<i>Carbondale</i>	<i>Galesburg</i>	<i>Quincy</i>	<i>Quad Cities</i>	<i>Iowa City</i>
Distance from Chicago (miles)	129	309	162	258	174	221
Destination Cities Population Estimate (2009)	226,000	58,000	69,000	77,000	379,000	152,000

¹ The Amtrak Corridor Passenger Rail Demand Forecasting Model uses a number of variables which, over time, have proven to be important determinants of ridership demand. Those variables include total market size, station locations, mode share, service characteristics of competing modes, passenger rail timetable (taking into consideration travel time, frequency, schedule and schedule attractiveness) and average fares (based on observed average yields per mile in existing Amtrak markets within the Midwest.)

Notes:

This updated economic analysis compares the expenditures made solely by the state of Iowa to the economic outcomes that would accrue to State of Iowa. This differs from the economic analysis that accompanied the grant application which compared the total expenditure to the outcomes that would accrue to the States of Iowa and Illinois.

The economic effects are based on the estimated expenditures to implement the Chicago-Iowa City passenger-rail service (as determined by the Federal Railroad Administration), the estimated expenditures to operate and maintain the service (as determined by the Federal Railroad Administration and Amtrak), and the anticipated passenger ridership and revenue (as estimated by Amtrak.) Some of these quantities are estimates, while others are based on the most recent actual performance of similar passenger-rail services and other transportation services.



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