

The Siemens logo is displayed in a white rectangular box in the top left corner of the page. It consists of the word "SIEMENS" in a bold, teal, sans-serif font.

# Amtrak Cities Sprinter

Electric locomotives from Siemens help power Amtrak and the Northeast's economy.

The Northeast Corridor (NEC) mainline is not only Amtrak's most profitable service line, it's an engine that powers business in the region. The NEC mainline carries three passengers for every one airline passenger between Washington D.C. and New York, and more passengers between New York and Boston than all airlines combined. When Amtrak and commuter operations throughout the eight states served by the NEC mainline are counted, the route is estimated to contribute \$50 billion annually to the national economy.

## Client Objectives

By 2010, the locomotives used on the NEC mainline were reaching the end of their useful life. Each had been in service for 25 to 35 years and had logged an average of 3.5 million miles traveled. As a result, more locomotives were spending time in the rail yards for maintenance and less time in revenue service.

The aging equipment hindered Amtrak's profitability and future. The cost of maintaining the older locomotives was becoming greater each year. The risk of not having enough

locomotives available threatened Amtrak's ability to offer reliable service in the Northeast.

Amtrak decided it was time to replace its fleet with a new generation of technology. New locomotives would improve reliability of service and support passenger growth in the years ahead.

## Siemens Solutions

The new ACS-64 locomotive from Siemens will power Amtrak and the economic future of the Northeast Corridor for the next quarter century. Dubbed the Amtrak Cities Sprinter, the advanced technology electric locomotives are designed for improved reliability, energy efficiency and easier maintenance. Seventy new locomotives will fully replace Amtrak's fleet by the end of 2015.

The ACS-64 is based on Siemens Vectron platform, which has been proven during extensive use throughout Europe. The locomotive design was modified to meet Amtrak's high-speed and commuter needs for the NEC mainline, such as being able to handle three different power systems.

[www.usa.siemens.com](http://www.usa.siemens.com)

*“Beyond improved reliability of service, the new locomotives represent a prudent business decision.”*

– Tony Coscia  
Amtrak Chairman



Key features of the ACS-64 locomotive include:

- Peak of 8,600 horsepower with excellent acceleration allowing it to match existing trip times and attain speeds of 125 mph while pulling 18 Amfleet coach cars
- A crash energy management system with crumple zone, that meets the latest Federal Railroad Administration (FRA) safety requirements for crew and passenger protection
- A state-of-the-art microprocessor system to self-diagnose technical issues, notify the engineer or operator of any maintenance issues and take self-corrective action
- Dual auxiliary inverters that provide redundancy for heating, cooling, lighting and door systems should one inverter fail

To improve fleet efficiency — and profitability — the ACS-64 features the latest in regenerative braking technology. The electro-dynamic brake can feed up to 100 percent of energy generated during braking back to the power grid. With regenerative braking, the 70 locomotives could save over 3 billion-kilowatt hours of energy and could result in more than \$300 million in savings for Amtrak over 20 years.

All 70 locomotives are assembled at Siemens solar-powered rail manufacturing plant in Sacramento, California and feature equipment built at Siemens plants in Ohio, Georgia

and Mississippi. Parts are provided by nearly 70 other suppliers, representing 61 cities and 23 states, exceeding Amtrak's Buy American standards.

#### Client Results

The first two ACS-64 locomotives came off the assembly line in May 2013. From there they were sent to the FRA's Transportation Technology Center in Pueblo, Colorado to undergo extensive testing. New locomotives are being produced at a rate of up to 4 per month.

On February 7, 2014 the Amtrak Cities Sprinter completed its inaugural run on Northeast Regional #171 from Boston's South Station to Union Station in Washington D.C. By the end of 2015, all 70 of the new locomotives will be in service. They will power Amtrak's Northeast Regional and long-distance trains on the NEC mainline and will also operate on the Keystone Corridor branch line between Philadelphia and Harrisburg, Pennsylvania.

"Amtrak is integral to the daily life of the Northeast and the new locomotives will keep the people and businesses of the region connected and on the move," said Amtrak President and CEO Joe Boardman at the inaugural run. "New equipment ensures Amtrak can deliver the reliable service the region depends on and support the growth of the region as America's economic powerhouse."

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11/14, Part# XXX-XXX-XXX