# News Release





FOR IMMEDIATE RELEASE: May 13, 2013, 5 AM ET

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# AMTRAK UNVEILS ADVANCED TECHNOLOGY LOCOMOTIVES FOR NORTHEAST SERVICE

Siemens-built equipment to improve reliability, efficiency and mobility

WASHINGTON – A new era of more reliable and energy efficient Amtrak service for Northeast intercity rail passengers is coming down the tracks as the first of 70 advanced technology electric locomotives being built by Siemens begin rolling off the assembly line today. The first units of the \$466 million order will be field tested this summer for entry into revenue service in the fall.

"The new Amtrak locomotives will help power the economic future of the Northeast region, provide more reliable and efficient service for passengers and support the rebirth of rail manufacturing in America," said Amtrak President and CEO Joseph Boardman. "Built on the West Coast for service in the Northeast with suppliers from many states, businesses and workers from across the country are helping to modernize the locomotive fleet of America's Railroad."

Using Siemens' innovative and proven rail technology, the Amtrak Cities Sprinter (ACS-64) locomotives are being assembled in Siemens' Sacramento, Calif., rail manufacturing plant powered by renewable energy, with parts built from its plants in Norwood, Ohio, Alpharetta, Ga., and Richland, Miss., and nearly 70 suppliers, representing more than 60 cities and 23 states.

The new locomotives will operate on *Northeast Regional* trains at speeds up to 125 mph on the Northeast Corridor (NEC) along the Washington – New York – Boston route and on *Keystone Service* trains at speeds up to 110 mph on the Keystone Corridor from Philadelphia to Harrisburg, Pa. In addition, all long-distance trains operating on the NEC will be powered by the new locomotives.

"More and more Americans are parking their cars and choosing the comfort and convenience of trains, metros and streetcars as their preferred way of traveling. We're proud of the innovations we've brought to passengers and commuters to expand their transportation options" said Michael Cahill, president of Siemens Rail Systems division in the U.S. "From

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downtown streetcar systems to regional, passenger rail lines, Siemens' transportation solutions like the next-generation Amtrak locomotives enhance safety, boost efficiency and performance, and are built in America leveraging Siemens' U.S. manufacturing hubs and supply chain."

The new locomotives are designed for easier maintenance, will improve energy efficiency by using a regenerative braking system that will feed energy back into the power grid and will enhance mobility for the people, businesses and economy of the entire Northeast region. They also meet the latest federal rail safety regulations.

"We are committed to connecting people, communities and jobs. This project does all three," said Karen Hedlund, Deputy Federal Railroad Administrator. "Investing in manufacturing these 70 new locomotives are creating and preserving jobs in 60 cities across the country while meeting the growing demand for improved reliability and service along the Northeast and Keystone Corridors."

The first three locomotives will undergo a comprehensive testing program this summer, including two at a U.S. Department of Transportation facility in Pueblo, Colo., and one on the NEC. Once they are commissioned, production of the remaining units will ramp up for monthly delivery through 2016.

The new locomotives are part of a comprehensive Amtrak Fleet Strategy Plan to modernize and expand its equipment. The new units will replace electric locomotives that have between 25 and 35 years of service and average mileage of more than 3.5 million miles traveled with some approaching 4.5 million miles.

#### About Amtrak®

Amtrak is America's Railroad®, the nation's intercity passenger rail service and its high-speed rail operator. A record 31.2 million passengers traveled on Amtrak in FY 2012 on more than 300 daily trains – at speeds up to 150 mph (241 kph) – that connect 46 states, the District of Columbia and three Canadian Provinces. Amtrak operates intercity trains in partnership with 15 states and contracts with 13 commuter rail agencies to provide a variety of services. Enjoy the journey® at Amtrak.com or call 800-USA-RAIL for schedules, fares and more information. Join us on facebook.com/Amtrak and follow us at twitter.com/Amtrak.

#### **About Siemens Rail Systems**

Siemens designs and manufactures the entire spectrum of rolling stock including commuter and regional passenger trains, light rail and streetcars, metros, locomotives and high-speed train sets. Siemens is a top rail supplier in the U.S. providing rail vehicles, locomotives, components and systems for cities such as Denver, Salt Lake, Minneapolis, Houston, Portland, Boston, Sacramento, San Diego, St. Louis, Atlanta and Charlotte.

#### # attachment #

Note: Photos and video available at http://inr.synapticdigital.com/siemens/NewAmtrakCars

# **AMTRAK CITIES SPRINTER:**

## **Built across America by Siemens**



Siemens and 69 local manufacturers in 23 states are part of a national community building state-of-the-art ACS-64 locomotives.

The next era
of high-performance,
energy-efficient locomotives
will enable Amtrak to provide
improved performance, reliability
and mobility for regional and intercity
routes along the country's heavily-traveled
Northeast and Keystone Corridors.

A true "Made in America" manufacturing and technology transfer story, Siemens—a global leader in rail innovation—is producing the locomotives at its solar-powered rail manufacturing plant in Sacramento, California, with major components sourced from suppliers in 61 cities from 23 states.

The 70 new locomotives could save over

#### 3 billion

kilowatt hours of energy.



# 70 new locomotives

new locomotives are replacing ones that have been in service more than 25 years



Building the ACS-64 is providing work for:

69 suppliers

23 states

**61** cities



Increased energy efficiency could result in more than

\$300 million

in savings over 20 years.



Regenerative braking can feed up to



of the energy generated during braking back to the power grid



# AMTRAK CITIES SPRINTER:

### **Delivering New Benefits and Features**

This fall Amtrak will begin using new ACS-64 locomotives in the northeast region.

#### DIVERSE BENEFITS

#### **Reliability**

The new equipment will be replacing locomotives that have *been in service between 25 and 35 years* with average mileage of more than 3.5 million miles traveled. In total, the current fleet has traveled more than 200 million miles.

#### **Efficiency**

The 70 new locomotives will be easier to maintain and more energy efficient using regenerative braking to feed energy back into the power grid. Operated as designed, the 70 locomotives could collectively *save over 3 billion kilowatt hours of energy*. This translates to more than \$300 million in savings over 20 years.

#### **Mobility**

The new Amtrak Cities Sprinter (ACS-64) locomotives will operate on *Northeast Regional trains at speeds up to 125 mph* on the Northeast Corridor (NEC) along the Washington—New York—Boston route and on *Keystone Service trains at speeds up to 110 mph* on the Keystone Corridor from Philadelphia to Harrisburg, Pa. In addition, all long-distance trains operating on the NEC will be powered by the new locomotives.

#### **Economic Growth**

Amtrak is modernizing its equipment fleet to meet growing demand and help America compete in the global marketplace. The new locomotives will power the economic future of the Northeast region beginning this fall when they enter revenue service on one of the busiest rail segments in the world.

#### STATE-OF-THE-ART FEATURES

#### **Power**

The ACS-64 locomotive will have a peak of 8,600 horsepower (6.4 MW) with excellent acceleration capabilities to attain revenue service *speeds of 125 mph pulling up to 18 Amfleet coach cars*, while at the same time providing up to 1,000 kVA (1 MVA) of headend power for auxiliary train equipment such as interior lights, electrical outlets and air conditioning and heating for passengers.

#### **Regenerative Braking**

The electro-dynamic brake system of the ACS-64 has the ability to put a maximum of 5 MW of electricity back into the catenary during regenerative braking. The regenerative braking can feed up to 100 percent of the energy generated during braking **back to the power grid.** 

#### Safety

The Amtrak-specific design meets the latest Federal Railroad Administration (FRA) safety requirements including *crash energy management components* like front-end strength and a crumple zone for collision with large objects, in addition to an enhanced safety cage, push back couplers and anti-climber functionality.

#### **Maintenance**

The ACS-64 locomotive has been designed for *improved safety* and reliability. Its enhanced design also allows for more efficient maintenance to ensure locomotives are returned to service as quickly as possible.

#### **Smart Technology**

The state-of-the-art microprocessor system installed in the locomotive allows for *self-diagnosis of technical issues*. The on-board computer system can notify the engineer and operator of any maintenance issues and can take self-corrective action to maintain operation of the locomotive and ensure safety. For example, the computer may identify a technical issue and can automatically notify the engineer, switch to a back-up or redundant system or decrease speed and operational performance if necessary.

#### Redundancy

The ACS-64 is based on Siemens' newest platform, the Vectron. For example, dual, auxiliary inverters provide redundancy to ensure that *heating and cooling systems*, *lighting and door systems* remain in service should one inverter fail.

"nearly 70 suppliers, representing more than 60 cities and 23 states."

#### **SUPPLIERS**

The Amtrak locomotives are being assembled at the *Siemens Sacramento, Calif., rail manufacturing plant* powered by renewable energy, with parts built from its plants in Norwood, Ohio, Alpharetta, Ga., and Richland, Miss., and nearly 70 suppliers, representing more than 60 cities and 23 states. The locomotives are being built in excess of Amtrak's Buy American standards which require 51% of components come from "local" or U.S. suppliers.

#### FLEET PLAN

The new locomotives are part of Amtrak's comprehensive Fleet Strategy Plan to *modernize* and add equipment while providing improved performance and reliability for intercity passenger rail services throughout the Northeast.

#### **TESTING PROGRAM**

The first three locomotives will undergo comprehensive testing this summer. Two will be tested at the U.S. Department of Transportation facility in Pueblo, Colo., and one on the Northeast Corridor. *The locomotives will go through a variety of tests* including ride quality, maximum speed and diagnostics.

#### **PRODUCTION SCHEDULE**

Once commissioned, it is expected that the first locomotive will enter revenue service in *Fall 2013*. Production of the remaining units will subsequently ramp up for scheduled delivery of approximately two locomotives per month through 2016.

#### **CONTRACT DETAILS**

In October, 2010, *Amtrak awarded a contract to Siemens Mobility* for production of 70 electric locomotives to support high-speed, commuter (push-pull) and long-distance service on the Northeast and Keystone Corridors. This \$466 million contract was financed with a FRA RRIF loan that will be repaid with NEC revenue.