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.

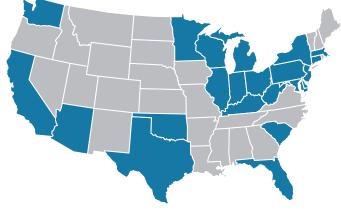
The next era
of high-performance,
energy-efficient locomotives
will enable Amtrak to provide
improved performance, reliability
and mobility for regional and intercity
routes along the country's heavily-traveled
Northeast and Keystone Corridors.

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.



States with Factories Contributing to ACS-64

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.