



# Northeast Corridor Commission

## State-of-Good-Repair Backlog

Infrastructure assets have a useful life after which they should be replaced. Depending on the type of asset, a useful life span can vary from a few years to many decades. In many cases, infrastructure assets can continue to be operated safely beyond their useful life, though they become more expensive to maintain and more vulnerable to failures that cause service disruptions. The same principle applies to a home hot water heater or car transmission system. The NEC will be in a state of good repair when all assets are within their useful lives.



**Basic Infrastructure Backlog**  
\$11 Billion



**Major Backlog Projects**  
\$17 Billion



**State-of-Good-Repair Backlog  
Elimination Needs Over 20+ Years**

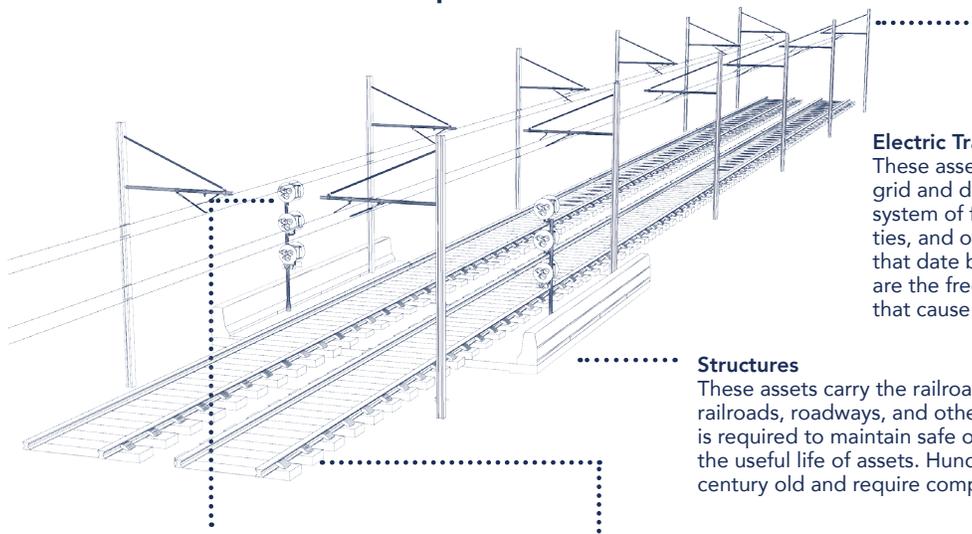
**\$28 Billion**

**On Top of \$500 Million Annual  
Capital Costs Covered by Cost  
Allocation Policy\***

## Basic Infrastructure Backlog

Scheduled replacement of basic infrastructure assets is needed to provide reliable and safe service on the NEC. Work ranges from the smoothing of tracks and ballast to remove imperfections to the replacement of power distribution systems with new assets that are able to withstand inclement weather. Components that are not replaced within their useful lives require more maintenance and are significantly more prone to failure, causing delays for passengers. Replacement components often utilize newer technology that improves cost efficiency, resiliency, and/or service quality.

### Four Basic Infrastructure Disciplines



#### Electric Traction

These assets draw power from the regional electric grid and distribute it to trains through a complex system of frequency converters, substation facilities, and overhead catenary lines. Many such assets that date back to the 1930s limit train speeds and are the frequent source of infrastructure failures that cause service disruptions.

#### Structures

These assets carry the railroad over rivers, streams, other railroads, roadways, and other obstacles. Regular maintenance is required to maintain safe operating conditions and extend the useful life of assets. Hundreds of such assets are now over a century old and require complete replacement.

#### Communications and Signals

These assets control the movement of trains along tracks and between tracks at interlockings. The signal network on the NEC is among the most outdated of all assets as communications technology has rapidly developed in the last decades. Many replacement parts for the current system are not available.

#### Track

These assets physically support the movement of trains, including rail, concrete or wood ties, a trackbed of crushed stone, and sublayers designed to ensure proper drainage to prevent shifting of the railroad. Regular maintenance of such infrastructure is required to maintain safe operating conditions, extend the useful life of assets, and promote comfortable ride quality.

# Major Backlog Projects

As major bridges and tunnels on the NEC age beyond their useful life, replacement or rehabilitation projects become part of the state-of-good-repair backlog. These investments are required to sustain current service levels because failure of the existing assets would sever service on the NEC. Construction funding for some projects is especially critical since previous preliminary engineering and environmental review work must be redone if construction does not commence in a prescribed timeframe.

