

# Rail Escort Vehicle



Jointly Prepared and Presented by the U.S. Department of Energy and the U.S. Department of the Navy

The U.S. Navy's Naval Nuclear Propulsion Program (NNPP) transports classified, high-value U.S. Navy ship components by rail, which can include naval spent nuclear fuel. Meanwhile, the U.S. Department of Energy's (DOE) Office of Nuclear Energy is preparing for future large-scale transport of commercial spent nuclear fuel from nuclear power plants using the same rail infrastructure and similar railcars. The current fleet of NNPP escort vehicles will soon reach the end of their service life. To leverage resources and share best practices, NNPP and DOE jointly designed the new Rail Escort Vehicle (REV).

Because of the nature of these materials and their transport, both of these programs require 24/7 monitoring and surveillance of their shipments by specially trained security personnel on board the transport train. One REV will be included in every train along with the railcars that carry the spent nuclear fuel. The REV will transport the security personnel during these shipments, providing a comfortable living and working environment.

The REV was designed in accordance with Association of American Railroads (AAR) Standard S-2043 for trains used to transport spent nuclear fuel and high-level radioactive waste.



DOE Rail Escort Vehicle



NNPP Rail Escort Vehicle (under construction)

## Rail Escort Vehicle General Characteristics

<b>Manufacturer</b>	Vigor Works LLC.
<b>Truck Design</b>	Two Truck Sets (four axles per railcar) Amsted Rail 100 Ton Swing-Motion™ Custom Spring Package with Vertical Dampers 36" Wheel Diameter
<b>Overall Length</b>	68' 10-9/16" Over Pulling Faces
<b>Overall Width</b>	10' 4-25/32" Maximum
<b>Clearance Diagram</b>	Meets Plate E Equipment Diagram (AAR Standard S-2031)
<b>Maximum Weight</b>	185,000 Pounds

The REV successfully completed structural and single-car performance testing at the manufacturer's facility and at the U.S. Department of Transportation's Transportation Technology Center. DOE is conducting additional railcar testing through 2023 that will include the REV.

The first DOE REV will be delivered in January 2022 and the first NNPP REV will follow by early 2022. Four additional NNPP REV's will be delivered by the end of the 2023 calendar year.

REV's will provide enhanced security, communication, and surveillance capabilities compared to the existing NNPP escort vehicles, which are near the end of their service life. As required for operational security, further specifications for REV's are not publicly releasable.

## Additional Resources:

For more information about the Naval Nuclear Propulsion Program:  
[www.energy.gov/nnsa/missions/powering-navy](http://www.energy.gov/nnsa/missions/powering-navy)

For more information about the U.S. Department of Energy Office of Nuclear Energy and the DOE Railcar Project:  
[www.energy.gov/ne/spent-fuel-and-waste-disposition](http://www.energy.gov/ne/spent-fuel-and-waste-disposition)

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