

2021 Vermont Rail Plan

Rail Reduces Greenhouse Gas (GHG) Emissions

The Vermont Rail Plan is also a plan to improve the environment. Acting on the initiatives in it would result in

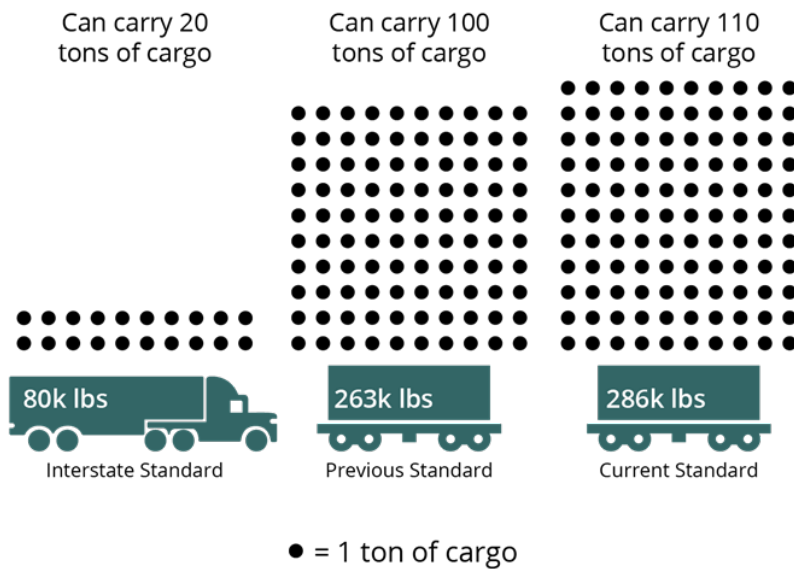
- more choices for travel and for delivery of freight;
- cleaner air and less use of carbon-based fuels; and
- better preparedness for larger, more frequent storms.

THE VERMONT RAIL PLAN
DESCRIBES HOW TO
SUBSTANTIALLY REDUCE GHG
EMISSIONS AND USE OF CARBON-
BASED FUELS.

Freight Rail is Important in Vermont

The rail system in Vermont carried 6.9 million tons of freight in 2018, approximately 15 percent of the total tons shipped to, from, within, or through the state. Trucks moved most of the remainder, particularly time-sensitive items. This represents a four percent increase in tons moved by rail since 2011. **Freight rail is efficient for moving large quantities of heavy material that are not highly time-sensitive, and then coordinating with trucking for deliveries.** The amount of packed, loaded goods one truck and one freight car can convey are illustrated below.

Vermont Benefits from Using and Connecting Modes of Transportation



Source: 2021 Vermont Rail Plan

FREIGHT VOLUME IS ANTICIPATED TO CONTINUE TO RISE, INCLUDING FREIGHT MOVED BY RAIL. RAIL IS ON AVERAGE FOUR TIMES MORE FUEL-EFFICIENT THAN TRUCKS FOR APPROPRIATE GOODS, MOVING A TON OF FREIGHT MORE THAN 470 MILES ON A GALLON OF FUEL. SOURCE: RAIL PLAN, P. 18

Passenger Movement by Rail in Vermont

Two intercity passenger rail services provide energy-efficient travel options in-state and within the Northeast. The Rail Plan fulfills Federal Rail Administration (FRA) requirements that focus on intercity passenger service. Commuter rail that serves as regional transit is considered in the [Vermont Public Transit Policy Plan](#). Updates of these two plans are coordinated with each other and with energy plans.

Residents and visitors normally board trains at 11 stations throughout Vermont. **Amtrak service was suspended due to the COVID-19 pandemic in March 2020 but is anticipated to restart in July 2021.** Over the last five years Amtrak carried approximately 95,000 passengers annually in Vermont.

Amtrak services connect Vermont with other places and other transportation services.

- The Vermonter operates daily between Washington, D.C., New York City, southern New England, and St. Albans.
- The Ethan Allen Express runs daily from New York City by way of Albany to Rutland. **The extension to Burlington with new stops in Middlebury and Vergennes is expected to start service in 2022.**

Long-Distance Travel by Rail Reduces Emissions & Fuel Use

It is more fuel efficient to travel by Amtrak than by personal vehicle or plane per passenger mile for intercity trips. For more information, see the Sustainability section of Amtrak's web page referenced below.

AMTRAK IS 46 PERCENT MORE ENERGY EFFICIENT THAN TRAVELING BY CAR AND 34 PERCENT MORE ENERGY EFFICIENT THAN DOMESTIC AIR TRAVEL ON A PER-PASSENGER-MILE BASIS.

SOURCE: *TRANSPORTATION ENERGY DATA BOOK* (US DEPARTMENT OF ENERGY, 2021) CITED ON [HTTPS://WWW.AMTRAK.COM/SUSTAINABILITY](https://www.amtrak.com/sustainability)

Bringing this closer to home and more specific to rail in the Northeast, the figure below shows greenhouse gas (GHG) emissions produced for a trip to a common Amtrak destination from Vermont. Making this trip by rail instead of private vehicle reduces GHG emission by approximately 66%.

Approximate Pounds of CO₂ per Passenger from a Trip Between Vermont and NYC



Source: *Vermont Rail Plan* using *Transportation Energy Data Book* (US Department of Energy, 2021) referenced on Amtrak Sustainability web page, <https://www.amtrak.com/sustainability>

Recommendations That Particularly Reduce GHG Emissions

The Vermont Rail Plan supports 40 potential initiatives. These initiatives were identified through ongoing planning efforts by VTrans and in consultation with a variety of stakeholders. VTrans will take on 23 of these items as recommendations for focused action. The following table presents a sample of the recommendations that may particularly reduce use of carbon-based fuel and production of GHG emissions. See Chapter 8 of the Rail Plan for more information.

Sample of Recommendations Particularly Supportive of Reducing GHG Emissions and Fuel Use

Initiative Description	Notes
Upgrade all rail lines to 286K weight-bearing capability	286,000 pound is the national standard for freight rail cars. Upgrading all routes to efficiently accommodate this standard will improve regional and national connections and enhance freight business opportunities.
Passenger Rail Station Improvements Statewide	See list of ADA improvements in Rail Plan Table 4.1 and broader evaluation of all stations underway in Section 8.7 Future Studies and Plans
Vermont Extension to Montreal	See the potential ridership in Section 7.2 Future Service Modeling
Further enhance marketing of Vermont Amtrak passenger rail	Work more closely with the Agency of Commerce and Community Development (ACCD), economic development, tourism groups, chambers of commerce, and others to promote Amtrak and connections to tourist attractions.
Maintain State-owned freight trackage at FRA Track Class 2 or better and State-owned passenger rail trackage at Class 4 or better where viable based on geography	Long-term goal for the State to upgrade where necessary and then maintain track at levels suitable for competitive and cost-effective use. For definitions, see Table 4.5 FRA Track Class Maximum Speeds.
Improve multi-modal connections including bicycle, pedestrian, and transit to Amtrak stations. Improve wayfinding	Work with transit and tourist services to match scheduling, increase comfort and reliability of transfers. Work with municipalities to develop station area plans, improve wayfinding, and enhance bicycle and pedestrian accommodations (crosswalks, grade crossings, paths/trails, bicycle lanes, bicycle parking). Consider equity so everyone can access to train services. Improve publicity that Amtrak allows and has guidance for bringing bicycles on trains.
Increase resilience of rail system to make critical infrastructure more resilient now and to prepare for increasing storm severity	180 miles of rail (109 State-owned) in flood risk areas. For more information, see Figure 4.15. Work with railroads to identify priorities and funding to increase resilience.

MANY VERMONTERS EMPHASIZE THE IMPORTANCE OF PROTECTING THE ENVIRONMENT, AND THERE IS A CURRENT FOCUS ON REDUCING GHG EMISSIONS. INVESTMENT IN RAIL TRANSPORTATION IS AN EFFECTIVE STRATEGY. INCREASING USE OF RAILROADS CAN REDUCE EMISSIONS FROM TRANSPORTING GOODS AND INCREASE LONG-DISTANCE TRAVEL OPTIONS. AT THE SAME TIME, THESE CHANGES HELP BUSINESSES TO IMPROVE PRODUCTIVITY AND VERMONT'S COMMUNITIES TO GROW IN A SUSTAINABLE MANNER.

For more information, please visit the VTrans Rail Program Plans and Reports webpage at <https://vtrans.vermont.gov/rail/reports>.