

On Track for

CN's commitment to sustainability is changing the course of the future



Founded: 1919

Headquarters: Montreal, Quebec

Canada's largest railway

Nearly 20,000 route miles of track

Transports goods across Canada and Mid-America, connecting ports on three coasts - the Atlantic, Pacific and Gulf of Mexico

An industry leader in rail fuel efficiency





Canadian National Railway Company (CN) is a leading North American transportation logistics company, moving more than \$250 billion (CAD) of goods every year. With a tri-coastal network that spans Canada from east to west, south through the Midwest and to the Gulf of Mexico, CN's network is expansive — because it's so critically important to the global economy.

"If you eat it, have it in your house, if you touch it ... chances are, we moved it," says François Bélanger, CN's carbon transition director. "So, the food we eat, the wood that builds our homes, the cars we drive and everything in between - CN gets it to us."

### "Sustainability is at the center of how we do business."

François Bélanger, CN's Carbon Transition Director



# **Moving Goods Responsibly**

On average, trains are four times more fuel efficient than trucks. That means by moving long-haul freight by rail, greenhouse gas (GHG) emissions can be reduced by up to 75%. And CN has made bold goals around sustainability to reach a 43% reduction in carbon emission intensity by 2030 compared to a 2019 baseline — as well as committing to setting a 2050 net zero target (in line with a 1.5-degree Celsius scenario).

CN already has taken steps to make these goals a reality. It was the first North American railroad to:

- + Set an approved science-based target for capping GHG emissions
- + Provide shareholders a vote on a climate action plan
- + Implement a cold-weather test with biofuels to evaluate long-term performance on locomotives

"Sustainability is at the center of how we do business," Bélanger says. "Our vision is to power sustainable growth for our customers, our shareholders and the communities in which we operate."

# Putting Sustainability to the Test with REG

CN is committed to improving locomotive operating efficiencies to reduce its carbon footprint. As an industry leader in sustainability, the company is determined to make a difference in its carbon reduction while also keeping current locomotives operating.

"In order to advance our sustainability efforts, we need to test high level blends of biodiesel and renewable diesel," says Dilani Abeywickrama, a mechanical engineering manager with CN. "It's important for us to test blends of 100% renewable fuel consisting of biodiesel and renewable diesel so we can learn about these solutions and use them in our fleet."

The test began in the winter of 2022, when CN transitioned a fleet of trains to run exclusively on fuel blends produced by Renewable Energy Group, Inc. (REG). CN purposely chose its location in Greenville, Pennsylvania to kick off the two-year-long test, to better evaluate how renewable fuels perform in cold weather climates over time. Through a close partnership with Progress Rail — a Caterpillar company and one of the largest manufacturers of freight locomotives worldwide — the testing by CN and REG is a breakthrough for the companies' shared sustainability goals.

"We've done lab testing and now long-term testing to see how these blended fuels affect our hardware," says Bill Clark, project manager for Progress Rail. "We need to see what this data tells us. REG has shown CN that they understand the technology and blending, and we're excited to see how it performs in our locomotives."

As REG's newest high-quality biodiesel fuel, PuriD™ is running a fleet of CN locomotives in the first locomotive real-winter trial of the product.

#### Benefits of PuriD™ include:

- + Excellent combustion and lubricity
- + Low particulate matter
- + Ability to blend seamlessly with renewable diesel in year-round applications

## Rolling Toward a Cleaner Future, Now

The transition to 100% renewable fuel levels has been seamless for CN and its customers since initial testing began. Bélanger says prior concerns about cold-weather operations have not been experienced so far, with trains running at full capacity with no issues.

"What's most important is that we made this adjustment without any impact to our operations or to our customers," Bélanger says. "They don't see any difference in the service that we offer."

CN's willingness to initiate its first long-term test of biodiesel and renewable diesel in the middle of winter demonstrates its confidence in REG's solutions, too. The test marks the first where 100% renewable fuel is being used in locomotives in the U.S. It also serves as an example to other companies that strive to achieve sustainability goals but aren't quite ready to take the leap. For the last 25 years, REG has worked to produce some of the highest quality renewable fuels in the world — but it takes leaders like CN and Progress Rail to step up.

"We know what our fuel is capable of, and we've been working for many years to make sure our fuels work well in any condition," says Dave Slade, chief technologist with REG. "For CN to come to us and trust us to do their first trial and really be out in front of everybody else tells us how serious they are in making these steps toward our collective sustainability goals."



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