

Long freight trains save on fuel and crews, reducing the cost of rail transportation.

By Daniel Machalaba
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The freight train is now on track to stretch up to 3 miles long, with 200 cars or more. And it's being powered, in part, by an unusual energy source: the activist investor.

Companies have plenty of reasons to keep adding train cars. Long trains save on fuel and crews, reducing the cost of rail transportation.



Long freight trains save on fuel and crews, reducing the cost of rail transportation. (CHASE GUNNOE / CHASE GUNNOE)

Longer trains also decrease the volume of trains through communities and improve productivity, said Raquel Espinoza, spokeswoman for Union Pacific Corp. And fewer trains on the network frees up track space for other traffic.

“Railroads thrive on economies of scale,” said Christopher Barkan, professor and director of the railroad engineering program at the University of Illinois in Urbana-Champaign, Ill. “Longer trains are the most important advance in achieving economies of scale in the past quarter century.”

A confluence of pressures — from the long-term decline of coal deliveries to competition from trucking to activist investors — are forcing railroads to improve efficiency and cut costs.

In a nod to activist investors, who have pressed for improved operations and the return of capital to shareholders, major railroads now report average train length with quarterly earnings. CSX Corp., for instance, in April said its average train length rose five per cent in the first quarter from a year earlier, a signal to investors and analysts that the railroad is gaining efficiency.

Operating trains that are double the length of standard size trains involves mastering the distribution of weight and pulling force. The longest, heaviest trains may have four locomotives in front, two in the middle and two at the end.

Some critics say the railroads are moving in the wrong direction, given the demand for faster, more frequent deliveries of smaller batches of raw materials and goods. Long trains take longer to assemble and disassemble in freight yards and can lead to delays on main lines.

“Every time I see one of these trains, I think this type of operation is destroying our ability to compete in the freight marketplace,” said Edward Burkhardt, president of Rail World, a railroad consulting and investing company, and an advocate for short, fast trains.

And as these superlong trains test the limits of physics, concerns are growing surrounding safety and the impact on the communities they pass through. Long trains can block multiple crossings, delaying emergency vehicles and other motorists, as they take five minutes or more to go from front to back through a crossing,

“I used to think that 100 cars was a long train,” said Norman Schmelz, mayor of Bergenfield, N.J., which is located on a busy CSX freight route. Now, he sees freight trains twice that size. “Waiting for them to pass seems an eternity,” he said. “They go on forever.”

A high-profile accident with a long train last year has caught the attention of regulators. The National Transportation Safety Board said train length, car arrangement and operation are a part of its investigation into the derailment of a 178-car CSX freight on a mountain grade in Hyndman, Pa., in August 2017. The Government Accountability Office, the investigative arm of Congress, has launched a study into the safety and other issues related to longer trains.

In response to Hyndman and other accidents, CSX has recently hired a firm to audit its safety and also added a senior safety executive to its management team.

John Gray, senior vice-president of policy and economics at the Association of American Railroads, said that the long trains represent a fraction of all freight trains and that 95 per cent of trains are shorter than 10,000 feet.

What's more, he said, railroads are taking advantage of the nearly \$100 billion spent on rail infrastructure and equipment over the past several years. The spending included high-horsepower locomotives and upgraded track strong enough to withstand the extreme forces that can pull a long, heavy train off of the track on tight curves.

Some railroads are adding remotely controlled diesel locomotives at the end or in the middle of superlong trains so that locomotives are both pulling and shoving at the same time. Distributing the locomotive power reduces the heavy loads on the couplers that can break a train in two, improves train handling by reducing slack action and makes brake applications quicker and smoother.

As a business strategy, superlong trains are in for the long haul. Cameron Scott, Union Pacific's chief operating officer, told investors late last month that the railroad is running 14,000- to 15,000-foot trains on a daily basis on a good portion of its double track railroad. "And we're doing it very safely," he said. "So from a safety perspective there is not an issue there."

At Berkshire Hathaway Inc.'s BNSF Railway, train length averages about 8,000 feet. BNSF spokeswoman Amy Casas said the railroad is testing cargo trains as long as 16,000 feet on its double track Southern Transcon route between Southern California and Chicago.

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