Chronology of America's Freight Railroads

KEY TAKEAWAY

North America's freight railroads have the safest and most efficient freight rail network in the world. the last decade was the safest ever for U.S. railroads, with the 2023 hazmat accident rate at its lowest ever. Freight rail is the most fuel-efficient way to move goods over land, and rail has America's best infrastructure, according to the American Society of Civil Engineers.

Since their birth nearly 190 years ago, railroads have played a crucial role in America's development. Thanks to partial deregulation in 1980, railroads have increased productivity, lowered rates and reinvested hundreds of billions of dollars in private funds — not taxpayer funds — back into their networks to create what is now the safest and most efficient freight rail system in the world. The high quality of America's privately-owned freight railroads must be maintained to continue to meet America's transportation needs and help our economy grow.

1830-1850: Railroads Critical to Early U.S. Development

America's first intercity railroad, the 13-mile Baltimore and Ohio Railroad was completed in early 1830. By 1850, more than 9,000 miles of railroad were in operation. In these early years, railroads provided a means for previously inaccessible areas to be developed, for mineral, timber and agricultural products to get to market, and for the developed and undeveloped areas of a growing nation to be bound together. The North's victory in the Civil War was partly due to its well-organized rail operations and the fact that most locomotive and railcar-building plants were in the North.

1887-1970: Regulation & the Big Slide

In 1887, the Interstate Commerce Act created the Interstate Commerce Commission (ICC) and made railroads the first U.S. industry subject to comprehensive federal economic regulation. Over time, excessive regulation would nearly destroy the rail industry. By 1917, the 1,500 U.S. railroads operated around 254,000 miles and employed 1.8 million people — more than any other industry. Rail mileage had already peaked (in 1916), and rail employment would soon (around 1920).

The Great Depression devastated railroads. Rail industry revenue fell by 50% from 1928 to 1933. By 1937, more than 70,000 miles of railroad were in receivership, representing around 30% of all rail miles. Many railroads were in financial trouble on the eve of World War II. A surge in war-related traffic brought a temporary reprieve, but by 1949, rail traffic had fallen 28% from its 1944 level. Railroads were losing huge amounts of money on passenger operations, but government regulators often refused to allow railroads to discontinue money-losing passenger routes.

Throughout the 1950s and 1960s, the rapid growth of truck and barge competition (aided by tens of billions of dollars in federal funding for construction of the interstate highway and inland waterway systems) and huge ongoing losses in passenger operations led to more railroad bankruptcies service abandonments and deferred maintenance.

Misguided railroad regulation was a major factor behind the rail industry's decline.

For example, the ICC set maximum and minimum rates for rail shipments, with rates often unrelated to costs or demand. The ICC generally tried to keep rates low for grain and other bulk commodities at the expense of higher rates for many kinds of manufactured goods that moved in smaller quantities. As a result, many shippers of this higher-rated freight diverted the freight to the highways instead.

The concept of "open routing" added to railroad problems. The rail network was much like a web: several possible routes could often be used to move freight between two points. The cost to a railroad of a more circuitous route is generally higher than the costs of a more direct route. However, regulation generally kept rates for routes between two points similar, even if railroads incurred much higher or lower costs to use some routes than others.

Because regulation made it difficult for railroads to adjust individual rates, railroads typically resorted to across-the-board rate increases as their costs rose. This meant rail rates tended to reflect cost patterns that existed in the past. Subsequent changes in technology and traffic flow that may have significantly altered those cost patterns were often ignored.

Sometimes, regulation made no sense. One infamous example involved "Big John" cars. In the early 1960s, the Southern Railway asked the ICC for permission to sharply reduce rates for grain shipments using new 100-ton hopper cars. The ICC refused, partly because the lower rates would take business away from waterways. Only after a U.S. Supreme Court decision in its favor was the Southern Railway able to introduce the new cars. Likewise, regulations prevented railroads from offering lower rates to shippers who used "unit trains." Consequently, it was not profitable for railroads to introduce this innovation until the 1960s, long after it otherwise would have been.

1970s: Railroads at the Brink

By the 1970s, excessive regulations, intense competition from trucks and barges, and changing shipping patterns drove railroads to the brink of ruin:

- The Rail Passenger Service Act of 1970 created Amtrak and relieved freight railroads of most of the huge losses (then around $200 million per year, or around $850 million in today's dollars) incurred in passenger service, but conditions continued to deteriorate on the freight side.

- During the 1970s, most major railroads in the Northeast and several major Midwestern railroads went bankrupt. Bankrupt railroads accounted for more than 21% of the nation's rail mileage.

- Railroads lacked the funds to maintain their tracks properly. By 1976, more than 47,000 miles of track had to be operated at reduced speeds because of unsafe conditions. Railroads had billions of dollars in deferred maintenance, and the term "standing derailment" — when railcars that were standing still simply fell off poorly maintained track — was often heard.

- By 1978, the rail share of intercity freight had fallen to 35%. Between 1970 and 1979, the rail industry's return on investment never exceeded 2.9% and averaged just 2.0%. The rate of return had been falling for decades: it averaged 4.1% in the 1940s, 3.7% in the 1950s, and 2.8% in the 1960s.

- Oppressive regulation continued to harm the industry. As the U.S. Department of Transportation said in 1978, "The current system of railroad regulation … is a hodge-podge of inconsistent and often anachronistic regulations that no longer correspond to the economic condition of the railroads…or the often-conflicting needs of shippers, consumers, and taxpayers."

The Staggers Rail Act of 1980: Balanced Regulation

The status quo was untenable, so Congress had two options: nationalize the railroads at a continuing cost of untold billions of dollars or replace the excessive regulation of the past with a more balanced regulatory framework. Congress wisely chose balanced regulation and passed the Staggers Rail Act of 1980. By passing Staggers, Congress recognized that railroads faced intense competition for most of their traffic, but excessive regulation prevented them from competing effectively. To survive, railroads needed a new regulatory system that allowed them to act like most other businesses in managing their assets and pricing their services.

The Staggers Act ushered in a new era in which railroads could largely decide for themselves — rather than have Washington decide for them — what routes to use, what services to offer and what prices to charge. Railroads were allowed to base their rates on market demand; railroads and shippers could enter into confidential contracts; procedures for abandoning or selling unneeded rail lines were streamlined, and the need for railroads to earn adequate revenues to support their operations was explicitly recognized.

The Post-Staggers Era: Railroads are Reborn

The more balanced and reasonable regulatory environment created by Staggers has been a great success for rail shippers, railroads and the public at large:

- America's freight railroads operate almost exclusively on infrastructure that they own, build, maintain and pay for themselves. By contrast, trucks, airlines, and barges operate on highways, airways and waterways that taxpayers finance. America's freight railroads have spent more than $780 billion since 1980 to create a freight rail network that is second to none in the world.

- Average rail rates (measured by inflation-adjusted revenue per ton-mile) are 40% lower than in 1981. This means the average rail customer can ship far more freight for the same price it paid more than 40 years ago.

- Nothing is more important to railroads than safety. The last decade was the safest ever for U.S. railroads.

- Railroads move a ton of freight an average of nearly 500 miles per gallon of fuel**.** On average, trains are three to four times more fuel efficient than trucks. Railroads also reduce highway gridlock and greenhouse gas emissions.

- Freight railroads are stronger financially. Improved rail earnings are a positive development because they allow railroads to make the massive investments needed to keep their networks in top condition, improve service and add the new rail capacity America will need in the years ahead.

Moving More Freight by Rail is Good Public Policy

As America's economy grows, the need to move more freight will grow too. Recent forecasts from the Federal Highway Administration found that total U.S. freight shipments will rise from an estimated 19.3 billion tons in 2020 to 24.1 billion tons in 2040 — a 30% increase. Railroads are the best way to meet this demand, but that can happen only if they have adequate capacity. Railroads will continue to pour huge sums back into their networks, but policymakers have a role too. Policymakers can help ensure that America has the rail capacity it needs in the future by:

- *Retaining a balanced regulatory system* that protects rail customers from unreasonable railroad conduct while giving railroads the freedom to largely decide for themselves how to manage their operations.

- *Engage in public-private partnerships* that allow governments to expand the use of freight rail while paying only for the public benefits of a project, with the railroads paying for the benefits accruing to them.

- *Retaining existing truck size and weight limits.* The taxes and fees heavy trucks pay are far less than the cost of the highway damage that heavy trucks cause**.** This multi-billion-dollar underpayment would become even greater if truck size and weight limits were increased.

Timeline: 1797 to Today

- **1797: Steam Locomotive Invented:** The steam locomotive is invented in England.
- **1823: 1st Public Railway:** The first public railway in the world opens in England.
- **1827: 1st Railroad in North America:** The first railroad in North America — the Baltimore & Ohio — is chartered by Baltimore merchants.
- **1830: 1st Passenger Service:** The first regularly-scheduled steam-powered rail passenger service in the U.S. begins operation in South Carolina, utilizing the U.S.-built locomotive "The Best Friend of Charleston."
- **1831: U.S. Mail Carried:** U.S. mail is carried on the rails for the first time.
- **1832: Strasburg Railroad Begins:** It is still in business and is the oldest continuously operated railroad in the country.
- **1833: President Jackson Rides the Rails:** Andrew Jackson travels from Baltimore to Ellicott's Mills, becoming the first sitting U.S. president to ride the rails. Approximately 380 miles of railroad are in operation in the U.S.
- **1838: More States Have Rail:** Five of the six New England states have rail service, as do frontier states like Kentucky and Indiana.
- **1840: Rail Expands:** More than 2,800 miles of railroad are in operation in the U.S.
- **1842: Dickens Rides the Rails:** Charles Dickens rides the rails while visiting the U.S. to lecture in favor of an international copyright agreement and in opposition to slavery. Comparing U.S. and English railroads, he wrote, "There are no first and second class carriages as with us; but there is a gentleman's car and a ladies' car: the main distinction between which is that in the first, everybody smokes; and in the second, nobody does."
- **1850: Rail Expands:** More than 9,000 miles of railroad are in operation in the U.S., as much as in the rest of the world combined.
- **1851: 1st Refrigerated Railcar:** First refrigerated railcar known to have been built in the U.S. begins service when eight tons of butter were shipped from Ogdensburg, NY, to Boston.
- **1854: Attorney Lincoln Represents IL Rail:** Attorney Abraham Lincoln represents the Illinois Central Railroad.

- **1860: Rail Expands:** More than 30,000 miles of railroad are in operation in the U.S.

- **1860: Chicago Becomes a Rail Hub:** Chicago, with 11 railroads, becomes America's leading railway center.

- **1862: Transcontinental Railroad Construction Begins:** President Abraham Lincoln formally inaugurates the transcontinental railroad construction that will ultimately link California with the rest of the nation.

- **1861-865: Railroads Support During War:** The Civil War becomes the first major conflict in which railroads play a major role, as both sides used trains to move troops and supplies.

- **1863: Railroad Gauge Set:** Congress designates 4 feet, 8.5 inches as the gauge for the transcontinental railroad. Eventually, this gauge will become the industry standard. Since 1887, nearly all U.S. railroads have been this width.

- **1865: Golden Age Begins:** The "golden age" of railroads begins. For nearly half a century, no other mode of transportation challenged railroads. During these years, the rail network will grow from 35,000 miles to a peak of around 254,000 miles in 1916.

- **1865: Tank Car Invented:** Charles P. Hatch of the Empire Transportation Company invents the railroad tank car. The earliest tank cars were flat cars with wooden tubes mounted on top used to transport several thousand gallons of crude oil. In addition to oil products, early tank cars transported, among other things, pickles in brine and oysters on ice.

- **1869: Golden Spike:** On May 10, at Promontory, in the Utah Territory, the "Golden Spike" joins the Union Pacific and Central Pacific railroads, marking the completion of the first transcontinental railroad.

- **1872-1945: Presidents Choose Rail Travel:** Presidents from Ulysses S. Grant to Franklin D. Roosevelt travel largely by train. For them, as for virtually every American, the railroad offers the fastest and safest means of travel.

- **1881: Rail Expands:** Railroad mileage in the U.S. exceeds 100,000.

- **1893: Train Goes Faster than 100 MPH:** On May 10, Locomotive No. 999 of the New York Central hits 112.5 miles per hour between Batavia and Buffalo, New York — the first time a train exceeds 100 miles per hour.

- **1902: Rail Expands** Railroad mileage in the U.S. exceeds 200,000, double what it was just 20 years earlier.

- **1911: Chrysler Begins an Auto Career:** Walter Chrysler begins working for the fledgling auto industry. The son of a railroad engineer, Chrysler was a top-notch railroad mechanic and had spent years roaming the West working for various railroads and then for the American Locomotive Company (ALCO). In the future, railroads will move 75% of America's light trucks and cars.

- **1917: Government Seizes Rail:** The federal government seizes control of the railroads for the duration of World War I. When they were returned to private ownership in 1920, they were seriously run-down and needed substantial maintenance and improvement.

- **1900-1940: Rail Faces Competition:** Other modes of transportation grow from small beginnings to challenge rail dominance in freight and passenger transportation. By the eve of World War II, automobiles, large buses, trucks, planes, and pipelines — supported by government subsidies and less burdened by regulation than railroads — become full-fledged competitors to railroads.

- **1926-1929: Thurgood Marshall Works as a Porter:** Future U.S. Supreme Court Justice Thurgood Marshall works as a railroad porter during the summers.

- **1929-1938: Great Depression Affects Rail:** The Great Depression forces substantial segments of the rail industry into bankruptcy.

- **1933: Continuous Welded Rail:** Continuous welded rail is laid for the first time in the U.S. Continuous welded rail eliminates the familiar "clickety-clack" that, although perhaps soothing to rail passengers, represents the gradual wearing down — chip by chip — of the ends of each separate length of rail.

- **1936: Intermodal is Born:** The Chicago Great Western Railroad moves several hundred truck trailers on flatcars modified for this purpose. This is the beginning of the intermodal concept as we generally know it today.

- **1941-1945: Railroad Support During WWII:** Railroads remain under private control during World War II and, on average, move twice the monthly volume of freight and passengers as during World War I. During 45 months of the war, the railroads move 90% of all Army and Navy freight and more than 97% of all military personnel in organized groups within the U.S. The latter include the operation of nearly 114,000 special troop trains.

- **1945-1970: Big Investments Post WWII:** Railroads enter the post-war era with a new sense of optimism, leading them to invest billions of dollars in new locomotives, freight equipment, and passenger trains. This investment will see the last steam locomotive retirement by the late 1950s in favor of diesel engines. Despite this modernization, the decline in rail market share that began before the war resumes.

- **1945-1953: The Last Railroad President:** President Harry S Truman is the last "Railroad President." His successors will rely primarily on planes and automobiles, using trains largely for campaign trips.

- **1955: Intermodal Becomes Separate Category:** Intermodal freight — the movement of containers and highway trailers by rail — is reported as a separate category of freight for the first time. In this year, railroads move 168,000 carloads of trailers and containers.

- **1956: Trade Globalization:** Trucking executive Malcom McLean converts a military tanker into the first marine containership: the Ideal X sailed from New Jersey to Houston with 58 containers on board. McLean's innovation, which quickly brought huge productivity gains to ocean transportation, is a key technology that makes the globalization of trade possible.

- **1961: Railroad Embrace Technology:** Missouri Pacific acquires the rail industry's first solid-state computer, an IBM 7070. Railroads will become one of the earliest major users of computer technology.

- **1968: 1st Training Simulator:** Southern Pacific acquires the rail industry's first locomotive engineer training simulator.

- **1970-1975: Railroads Go Bankrupt:** Burdened by excessive regulation and faced with heavily subsidized competition, nine Class I railroads, representing almost one-quarter of the industry's trackage, file for bankruptcy protection. In June 1970, the giant Penn Central declares bankruptcy. At the time, it was the biggest corporate bankruptcy in U.S. history.

- **1970: Amtrak is Born:** The Rail Passenger Service Act of 1970 creates Amtrak to take over intercity rail passenger service. Amtrak officially began service on May 1, 1971.

- **1976: Conrail is Born:** The Railroad Revitalization and Regulatory Reform Act creates the Consolidated Rail Corp. (Conrail) from six bankrupt Northeast railroads. The legislation also includes regulatory reforms that are supposed to make the rail regulatory system more responsive to changed circumstances.

- **1980: Staggers Act Revives Rail:** Congress passes the Staggers Rail Act, reducing the Interstate Commerce Commission's regulatory authority over railroads and sparking competition that stimulates technological advances and a restructuring of the industry, including creating hundreds of new shortline and regional railroads using rail lines spun off from larger railroads. Since 1980, railroads have invested $760 billion — their own funds, not taxpayer funds — back into their networks. These investments have led to a safer and more efficient railroad network. If the accident rate and the employee injury rate for all railroads had stayed the same since 1980, there would have been more than 213,000 additional train accidents since 1980 and more than 706,000 additional injuries/illnesses/fatalities. For just Class I railroads, as defined by the FRA and using the FRA numbers (not the R-1 numbers) for train-miles, the comparable savings from 1980 through 2022 are 176,000 accidents and 510,000 injuries.

- **1987: Conrail Privatized:** Conrail is privatized in what was the largest share offering in U.S. history at that time. Investors pay $1.9 billion to buy shares in the railroad.

- **1996: STB Replaces ICC:** After 108 years, the Interstate Commerce Commission goes out of existence and is replaced by the Surface Transportation Board, which assumes responsibility for the remaining regulation of rail rates and services.

- **2004: FRA Recognizes Rail Safety:** In a June report, the Federal Railroad Administration (FRA) notes, "By nearly every indicator, long-term safety trends on the nation's railroads appear very positive. Overall, the safety performance record of the nation's railroads has been one of continuous improvement."

- **2006: Intermodal Grows:** U.S. and Canadian railroads move 14.6 million intermodal trailers and containers, an all-time high.

- **2008: PTC Mandated:** In October, Congress passes "The Rail Safety Improvement Act of 2008" (RSIA). The law mandates that Positive Train Control (PTC) be installed on railroad main lines used to transport passengers or toxic-by-inhalation (TIH) materials. Coal again becomes the top U.S. rail industry revenue source, overtaking intermodal (which had taken over the top spot in 2003). Class I railroads originate a record 879 million tons of coal.

- **2009: Fuel Efficiency Gains:** In November, an independent report prepared for the FRA finds that railroads, on average, are four times more fuel efficient than trucks. The severe recession leads to sharply lower rail traffic. Every major commodity category of rail traffic is down in 2009, most of them sharply.

- **2011: Ethanol Grows:** Ethanol carloads on U.S. railroads rise to nearly 341,000, up from fewer than 40,000 in 2000. In 2011, ethanol accounted for 1.2% of total U.S. rail carloads, up from 0.1% in 2000. Railroads account for approximately two-thirds of ethanol movements.

- **2012: Amtrak Grows:** Amtrak ridership and ticket revenue set records for the Thanksgiving period. Amtrak carried a record 737,537 passengers during Thanksgiving 2012, up 1.9% over the previous year and the prior record set in 2011.

- **2012: Intermodal Grows:** Intermodal revenue (approximately $15.0 billion) surpasses coal ($14.3 billion) as the top source of U.S. freight rail industry revenue.

- **2014: AskRail Launches:** A collaborative effort among the emergency response community and all North American Class I railroads, the app provides first responders with immediate access to accurate, timely data about what type of hazardous materials a railcar is carrying so they can make an informed decision about how to respond to a rail emergency. Class I railroads originate more than 493,000 carloads of crude oil, up from 9,500 in 2008, 29,600 in 2010 and 234,000 in 2012. By serving almost every refinery in the U.S. and Canada, railroads offer market participants enormous flexibility to shift products quickly to different places in response to market needs and price opportunities.

- **2015: Railroads Make Record Investments:** Freight railroads spend $30.3 billion — more than ever before — to build and maintain locomotives, freight cars, tracks, bridges, tunnels and other infrastructure and equipment. America's freight railroads operate almost exclusively on infrastructure they own, build, maintain, and pay for themselves. By contrast, trucks, airlines, and barges operate on highways, airways, and waterways that are overwhelmingly publicly financed.

- **2017: Crude Oil Declines:** Class I railroads terminate 208,036 carloads of crude oil, down from a peak of 540,383 in 2014. The decline is due largely to the construction of many new crude oil pipelines.

- **2018: Intermodal Sets New Record:** Railroads originate 14.5 million intermodal containers and trailers, setting a new annual record. In 1990, containers accounted for 44% of intermodal traffic. By 2000, the share was 69%. In 2018, it was 91%. Containers are generally more efficient than trailers because they can be "double-stacked."

  A study from Towson University's Regional Economic Studies Institute finds that, in 2017 alone, the operations and capital investment of America's major freight railroads supported approximately 1.1 million jobs (nearly eight jobs for every railroad job), nearly $219 billion in economic output, and $71 billion in wages. Railroads also generated nearly $26 billion in tax revenues. In addition, millions of Americans work in industries that are more competitive in the tough global economy thanks to the affordability and productivity of America's freight railroads.

- **2019: Coal Declines:** Class I railroads originate 471 million tons of coal, down 46% from 2008's peak of 879 million tons. Coal accounted for 23% of U.S. electricity generation in 2019, down from 50% in 2005 and 45% in 2010. Class I railroads pay $1.4 billion in state and local property taxes, double what they paid ten years earlier. Unlike trucks and barges, railroads pay property taxes on their infrastructure. In many states, railroads also pay taxes on the value of their freight cars.

- **2020: Staggers Turns 40:** October marks the 40th anniversary of the Staggers Rail Act of 1980. The global superiority of U.S. railroads is a direct result of the deregulatory reforms embodied in the Staggers Act. Deregulation allowed railroads to improve their financial performance from anemic levels before Staggers to more moderate levels, allowing them to plow back hundreds of billions of dollars into their infrastructure and equipment.

Freight railroads adapt to the COVID-19 pandemic to safeguard employees while ensuring the continued flow of critical goods the nation relies on. Thanks to the relentless dedication of freight rail employees, Class I railroads successfully met the congressionally mandated deadline to have PTC fully operable by the end of 2020. Today, PTC is fully implemented and in operation on 100% of Class I PTC route-miles network-wide.

- **2021: Freight Railroads Proposed Climate Change Policies:** Powered by ongoing investments, railroads continue to be the most fuel-efficient way to move freight over land, moving one ton of freight nearly 500 miles per gallon of fuel, on average. Freight railroads propose solutions to policymakers to help continue to combat climate change.

- **2022: Historic Labor Negotiations Wrap:** The gains in the agreement are significant, including historic wage increases, best-in-class healthcare, and meaningful progress in creating more predictable, scheduled work shifts.