Transportation

# 2024 Rail Equipment Finance Conf: Orders coming off a bottom; cars rangebound

Industry Overview

08 March 2024

Equity
United States
Rail Transport/Railroads

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WAB: Wabtec

CNI: Canadian National

CPKC: Canadian Pacific Kansas City

CP: Canadian Pacific

KSU: Kansas City Southern Industries

## Production up from bottom yet demand still uncertain

We attended the 2024 Rail Equipment Finance Conference in La Quinta, CA (March 3-6). Equipment deliveries have begun to increase from Freight Recession lows, reflecting an improving rail volume backdrop. However, outlooks remained variable among carriers, shippers, manufacturers, and lessors. In 2023, the North American railcar build was 44,754, returning to annual replacement levels of 42,000-50,000/year. Presenter outlooks mostly target deliveries to remain rangebound (or slightly lower) in 2024, while lessor GATX sees a path to a new ramp in builds. New North American locomotive builds and modernizations were about 125/year in '22/'23, most of which were mods, as WAB appeared to build ~60 new units in 2023 (half of a 110-unit order by BNSF and 10 Tier IV units for CNI), after a few years at near zero builds. This remains well below the 500 units/year annual replacement level. Rail velocity increased 4% on average in 2023, outpacing the 1% decline in volumes, suggesting an uncertain equip demand backdrop.

## Railcar deliveries back at replacement after 3 years below

There were 1.637 million railcars in the North American fleet at year-end 2023 (570k covered hoppers, 439k tank cars, 208k flatbeds, 195k gondolas, 111k hoppers, and 104k boxcars), up from 1.625 million in 2022, the 2nd consecutive growth year after two down years. There were 44,754 new railcars built/delivered in 2023, up from 40,735 railcars in 2022, returning to the annual equipment replacement level of 42,000-50,000/year (on a useful asset life of 40-50 years). This follows a three-year period of deliveries below replacement as lessors and carriers pulled back on newbuilds given muted demand. The average age of the North America railcar fleet was 20.2 years in 2023 (median age was 18.1 years), up slightly from a 20.1 year average in '22, its highest in 10 years.

## Locomotive fleet falling w/ newbuilds below replacement

There were 37,600 locomotives in the North American fleet at year-end 2023, down from 37,700 in 2022 and the 2017 peak of 39,500. New unit adds and modernizations were less than 200 units combined in 2023, well below the 500 units/yr avg replacement as rail demand for power units remains soft as carriers sit on parked capacity. Average age of the North American loco fleet is 27.4 years, up from 26.5, the oldest average fleet age in recorded history. Carriers continue to shift to AC powered units from DC as the fleet is now split 39% AC and 61% DC (from 26% AC, 74% DC in 2009). Carriers prefer modernization programs to refresh equipment at half the cost of a newbuild.

## Class I capital spending ticks up 9% from 2023

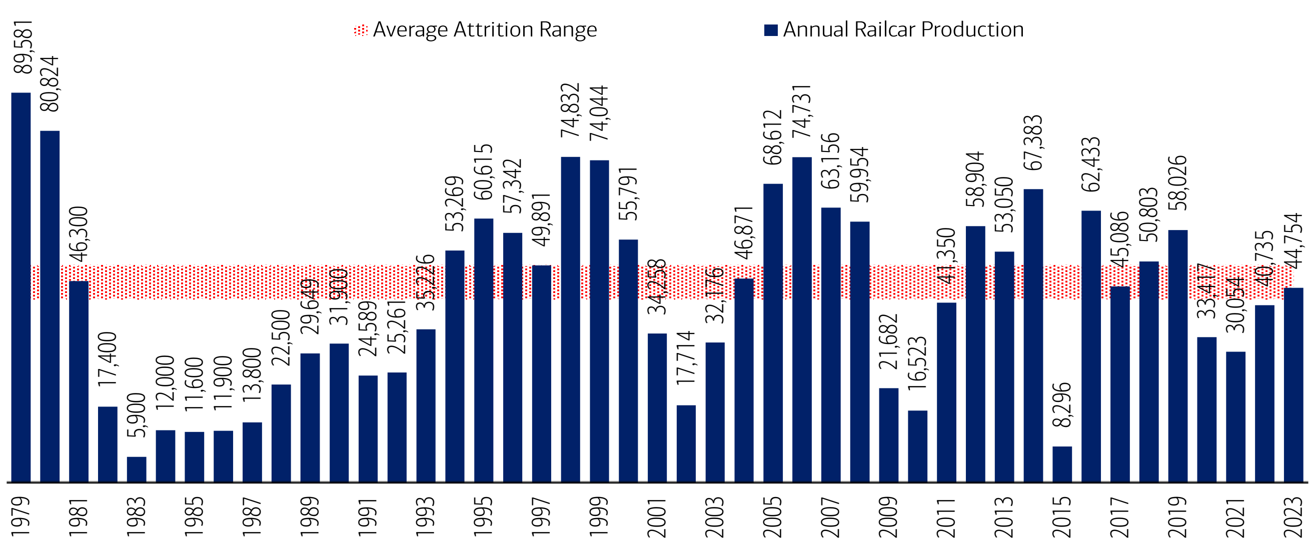
Class I rail capex was $17.4 billion in 2023, up 9% year-year, yet below 2015's peak of $19.1 billion. The increase was led by +18% at CPKC (against a combined CP-KSU base) as it invests in its integrated network post-acquisition. Total capex ticked up for the second consecutive year yet demand for new equipment remains muted given loco mod programs, a shift in asset ownership to lessors/shippers from carriers, and accelerating service gains outpacing volume growth. Alternative fueling options remain a focus, with reversibility back to diesel a key focus (see Wabtec Report) as carriers seek flexibility. Wabtec remains a key contributor and our top pick in the sector. Railcar manufacturer The Greenbrier Companies is refining its costs and moving to improve returns.

## Railcar deliveries return to annual replacement range

**The North American railcar fleet was 1.637 million at year-end 2023** (570k covered hoppers, 439k tank cars, 208k flatbeds, 195k gondolas, 111k hoppers, 104k boxcars, and 10k+ other types), up from 1.625 million in 2022, a second consecutive growth year after two consecutive down years. North American railcar deliveries were 44,754 in 2023, up 10% from 40,735 in 2022, and back in the range of annual replacement of 42,000-50,000/year, which is based on an industry fleet useful asset life of 40-50 years. Demand view from carriers and lessors remain highly variable given the improved service performance at the Class I's, an improving outlook for rail volumes, their long asset duration, although contrasted by no new major design developments (since the move to shorter but higher capacity covered grain hoppers a few years prior). Lessor GATX noted that actual replacement levels should be considered around 35,000/year range in a low rail carload growth environment (with a 40,000-50,000 replacement level likely too optimistic). Nevertheless, Mr. Paul Titterton, GATX's EVP & President of Rail North America, sees a scaling new car replacement cycle, as rail service gains drive carload growth. Although the sequential improvement in railcar deliveries augurs well for leading US manufacturer Greenbrier, which holds 40% of the North American railcar backlog (vs Trinity Industries' 50% ,Freightcar America's 6%), improving carrier service could be a headwind for ordering activity as increased asset turns reduce carriers' capital needs.

**Exhibit 1: Annual North America Railcar Fleet Production**

There were 44,754 total railcars manufactured in 2023, in-line with annual average attrition range of 42k-50k/year after 3 years below.




**Source:** BofA Global Research, Rail UMLER 2024, National Steel Car Ltd, ARCI Committee of the Railway Supply Institute

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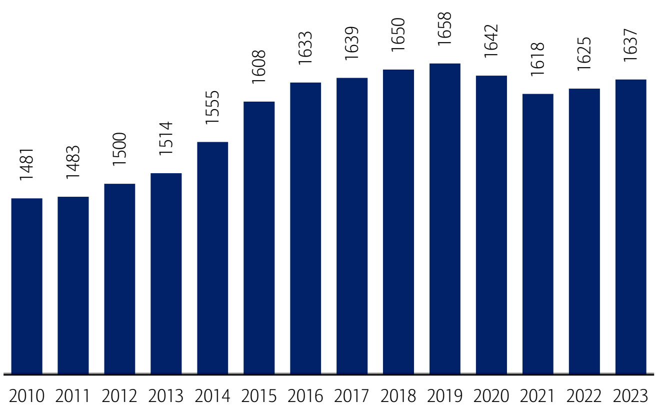
## Industry railcar fleet age reaches new 10-year high

**The average age of the North American railcar fleet was 20.2 years** at year-end 2023, up from 20.1 years at year-end 2022, its highest in 10 years. The industry fleet's median age is 18.0 years, up from 17.6 years last year. New fleet additions have been selective with a focus placed on higher capacity cars with gross rail load (GRL) of 286,000 pounds, with some GRL 220's (auto racks) as well, with newer cars being shorter, allowing greater weight and more cars per train, and thus fewer crews required to move more freight. Additionally, Dr. David Humphrey, Railinc Senior Data Scientist noted that higher aged car types, such as boxcars (33,000 of the 64,000 car fleet expected to retire in next 10 years) and Grain/Fertilizer cars (90k of the 277k car fleet are expected to retire in the next 10 years) should lead growth based on replacement demand.

Dr. Humphrey noted that increases in mill gondolas (steel mill feeder), coil gondolas (steel mill output; driven by elevated steel demand), and high-capacity grain hoppers (as 5000+ cubic feet capacity hoppers replace smaller <5000 cubic feet cars) more than offset decreases in coal hoppers. North American railcars are primarily owned by railcar lessors (47% of fleet) given the rising compliance complexities towards owning and operating rail equipment. Alternatively, ownership by rail carriers (21%) and shippers (18%) continues to fall (TTX owns the remainder at 14%) given shifting capital focus in a decelerating economic backdrop. The two most common railcar types are Covered Hoppers (35% of fleet) and Tank Cars (27%), whereas the 10 most common car types (of 700+ total car types) account for 52% of the active railcar fleet.

**Exhibit 2: North American Railcar Fleet (in thousands)**
Total railcar fleet grew in 2023 for the second consecutive year.




**Source:** BofA Global Research, Railinc, UMLER 2023, National Steel Car Ltd
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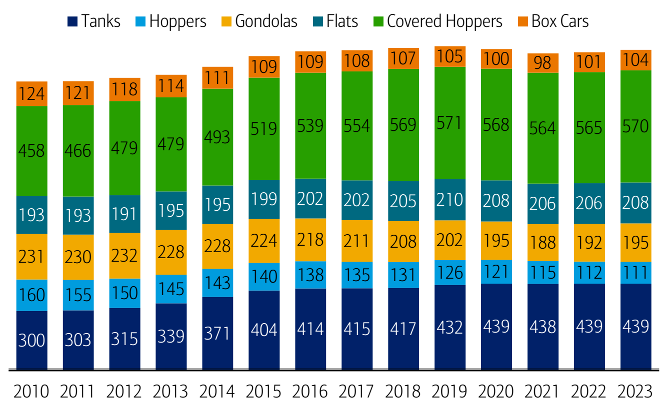
**Exhibit 3: North American Railcar Fleet by Car Type**
Mill/coil gondola and grain hopper growth offset decrease in coal hoppers




**Source:** BofA Global Research, Railinc, UMLER 2023, National Steel Car Ltd
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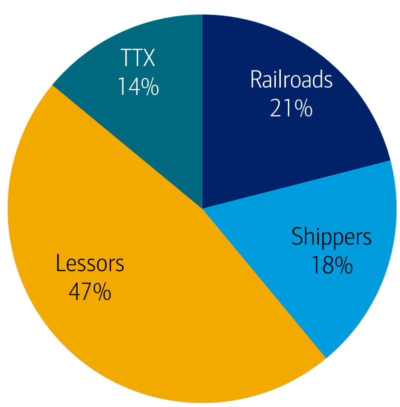
**Exhibit 4: North American Railcar Fleet Ownership Mix**
Railcar lessors are the primary owners of the North American railcar fleet.




**Source:** BofA Global Research and GATX
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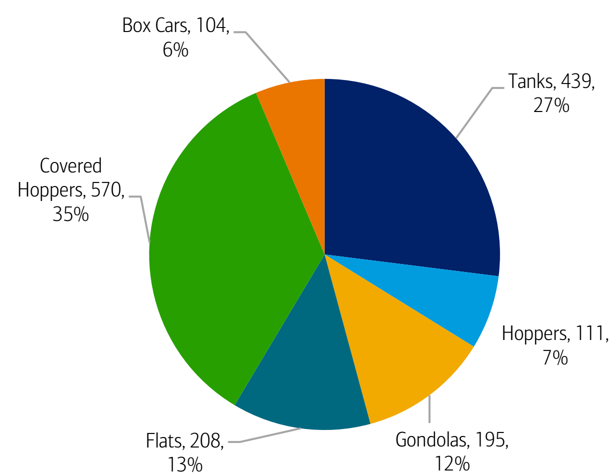
**Exhibit 5: North American Railcar Fleet Car Type Mix**
Covered Hoppers and Tank Cars are the two most common car types




**Source:** BofA Global Research, Railinc, UMLER 2023, National Steel Car Ltd
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## North American locomotive fleet continue to shrink

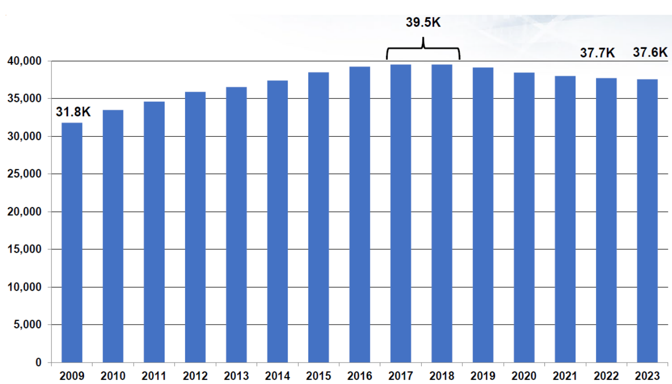
**There were 37,600 locomotives** in the North American fleet at year-end 2023, down 100 from 37,700 at year-end 2022, the 5th consecutive year of declines. Of the 37,600 total fleet, we estimate 25,200 (or 67%) are road locomotives, 8,650 (or 23%) are switcher/yard locomotives, and 3,750 (10%) are 4-axle and 6-axle used by short-lines and Class I's for yards. Average locomotive age was 27.4 years, up from 26.5 years in 2022, the oldest we have seen on record. Mr. Humphrey suggested a 75-year average useful life, indicating replacement of about 500 locomotives per year. New units delivered remain highly constrained, as carriers continue to prefer modernization to refresh their average fleet age.

**WAB focused on propulsion tech:** Leading rail locomotive manufacturer Wabtec highlighted its focus in developing various locomotive propulsion technologies and increasing the use of alternative fuels (biofuels and renewables). It aims to allow up to 100% alternative fuel mix by 2H24 (its solution allows 20% bio-diesel and up to 100% renewable diesel mixes into existing locomotives), which can reduce carbon emissions by 60%. The key is its reversibility, for when a customer can't find renewables it can switch back to diesel. It is testing joint-use hydrogen engines, with 50% energy content from hydrogen, allowing a mix of bio, renewable, and hydrogen, which can reduce emissions by 80%. Additionally, WAB is set to deliver its first FLXdrive electric locomotive in 2024, highlighting it remains at the forefront of propulsion solutions.

**Transition launch to take a decade:** In anticipating the next generation of locomotive power, electric, hydrogen, or hybrid power solutions, Don Graab, GM at Triangle Brothers & Assoc, and a former VP Mechanical at Norfolk Southern, noted that any solution will take time, as the rail industry moves slowly given long-lived assets and suppliers and manufacturers would have to ramp production capabilities. At its peak over the past 20 years, nearly 1400 locomotives were built in one year. The industry has built between 0 and 100 per year in each of the past 3 years. Thus, if the rail industry were to look to replace 25% of its existing road locomotive fleet with new propulsion power (and move away from diesel electric), or 6,000 locomotives of a 24,000 base (simplifying the math from 25,500 road locomotives for rounding purposes), the industry would need the capacity to build 1,200 locomotives per year to introduce the new units over a 5-year period. While Wabtec has ample capacity to scale, given its Erie and Ft. Worth locomotive production plants, and Progress Rail owns its Muncie plant, thus providing potential ability to scale, EMD shut its Ontario plant, whereas others could potentially scale as well, such as Bombardier. Mr. Graab noted that suppliers would need a few years to get to scale, perhaps as long as 5-years, indicating a near decade before just 25% of the fleet could be adapted if a decision were made to move forward asap.

**Exhibit 6: North American Locomotive Fleet Count**

Total fleet count was 37,600 in 2023, down for the 5th consecutive year




**Source:** BofA Global Research, UMLER 2023 and Railinc.

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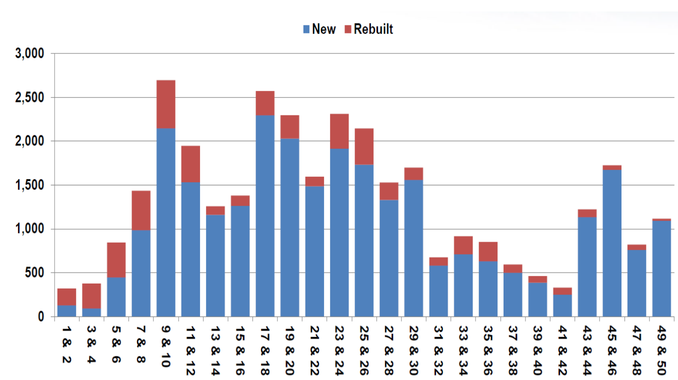
**Exhibit 7: North American Locomotive Mix (New/Rebuilt) by Age**

Newer locomotives (<7 years of age) tend to be modernized equipment




**Source:** BofA Global Research, UMLER 2023 and Railinc

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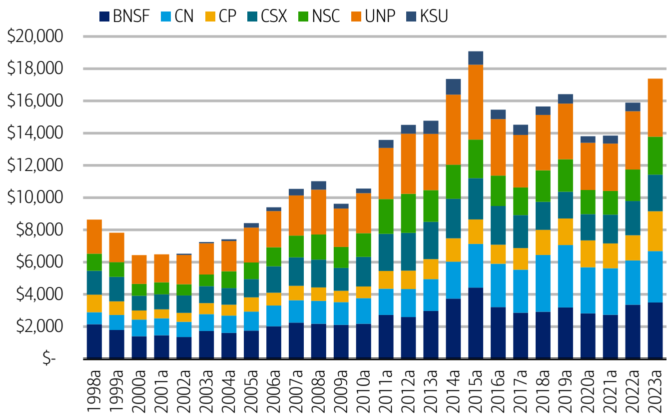
**Exhibit 8: North American Class 1 Rail Capital Expenditure**

Rail capital spending increased 14% year-year in 2024 vs 2023. .




**Source:** BofA Global Research estimates and company reports.

**CP prior to 2022 was standalone Canadian Pacific and included its KSU acquisition after.*

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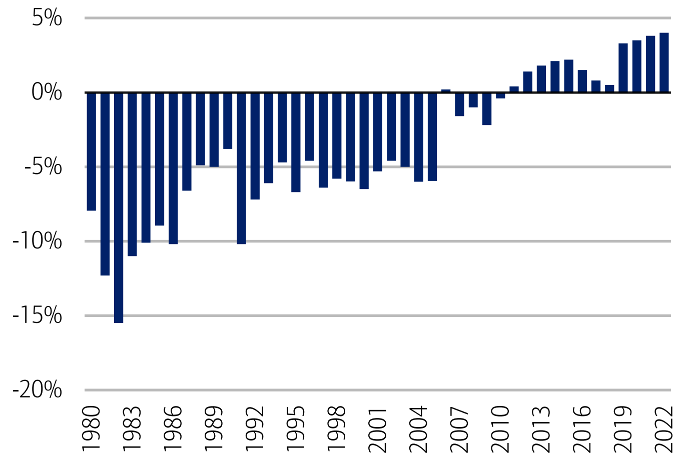
**Exhibit 9: Rail Return on Investment to Cost of Capital Spread**

Rail return on investment outpaced cost of capital only after 2010.




**Source:** BofA Global Research, Surface Transportation Board, American Association of Railroads

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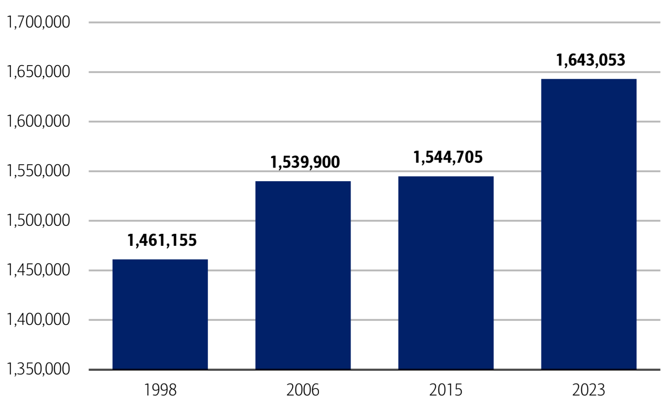
**Exhibit 10: North American Railcar Fleet**

Railcar fleet has expanded to 1.64 mil in 2023 from 1.46 mil in 1998.




**Source:** GATX, UMLER, Railway Supply Institute, Federal Reserve

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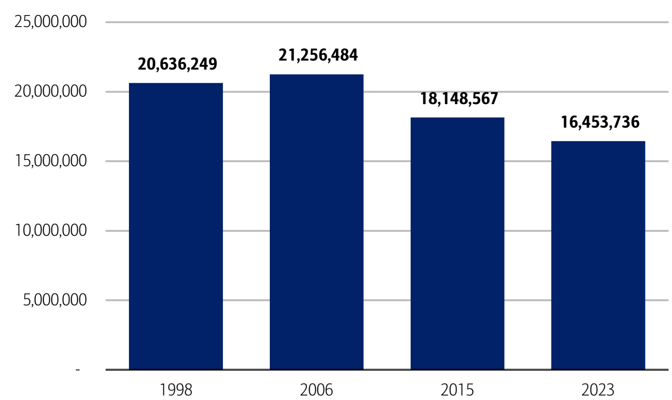
**Exhibit 11: North American Total Rail Carloads**

Total rail carloads have declined to 16.4 mil in 2023 from 20.6 mil in 1998.




**Source:** GATX, UMLER, Railway Supply Institute, Federal Reserve

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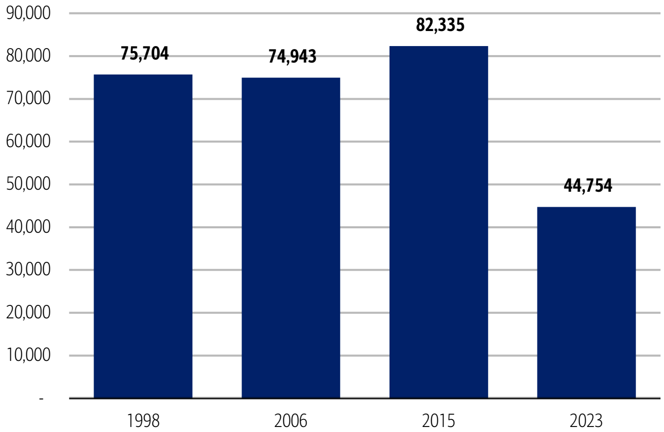
**Exhibit 12: New Railcar Deliveries**

New railcar deliveries have declined to 44,754 in 2023 from 75,704 in 1998.




**Source:** GATX, UMLER, Railway Supply Institute, Federal Reserve

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**Exhibit 13: North American Railcar Categories**

Tank cars and Grain gondolas remain the largest categories in the North American railcar fleet.

| Key Railcar Category | Railcars | %Fleet | Model Number |
|---|---|---|---|
| Tank, Non-Pressured DOT 117 | 98,000 | 6% | T178, T177, T179 |
| Tank, Non-Pressured, CPC 1232 | 50,000 | 3% | T107, T109, T108, T106 |
| Tank, Non-Pressured DOT 111 | 129,000 | 8% | T106, T104, T107, T108 |
| Tank, Pressured | 86,000 | 5% | T389, T419, T907, T929 |
| Grain/Fertilizer | 277,000 | 17% | C114, C113, C314, C313 |
| Plastics | 147,000 | 9% | C214 |
| Sand/Cement | 106,000 | 6% | C112, C111 |
| Pressure Differential | 31,000 | 2% | C614, C612 |
| Coal | 166,000 | 10% | J311, K341, K346, H351 |
| Mill Gondola | 72,000 | 4% | E534, G519, G719 |
| Coil Gondola | 27,000 | 2% | E241, E242, E531, E441 |
| Aggregate | 41,000 | 2% | H350, K344, G119, K384 |
| Box Car | 106,000 | 6% | A606, A406, A402, A405 |
| Intermodal Flat Car | 74,000 | 4% | ETC1 |

**Source:** BofA Global Research and Railinc.

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## Hydrogen favored as the future for rail propulsion tech

As we noted in our September 2022 Rail ESG Primer, North American Class 1 rails have established science-based 2030 emission reduction targets, which they aim to achieve through efficiency improvements (locomotive modernization) and higher biofuel (biodiesel and renewable diesel) blends. The group also expects alternate propulsion technology (battery electric, hydrogen) to aid in the industry's eventual transition to net-zero emissions. While many industry participants remain positive on the rails' ESG goals (though acknowledged that safety and service remain top priorities), equipment manufacturers and rail experts highlighted challenges to the adoption of alternate fuels over diesel.

**Exhibit 14: Class 1 Rails Science Based Emission Reduction Targets**
GHG emission reduction targets across different scopes

| Class 1 | Base Year | Target Year | Scope 1 | Scope 2 | Scope 3 | Net-Zero Target | Note |
|---|---|---|---|---|---|---|---|
| **CN** | 2019 | 2030 | -43% | -43% | -40% | Targets to achieve net zero emissions by '50 | |
| **CP** | 2019 | 2030 | -38% | -38% | -38% | n/a | Targets to reduce Scope 1/2 Greenhouse Gas emissions for its non-locomotive operations by at least 27.5% by 2030. |
| **CSX** | 2014 | 2030 | -37% | -37% | n/a | n/a | Targets to increase company's use of renewable energy to 50% of the Scope 2 footprint, reduce the amount of hazardous waste generated from ongoing operations by 30%. |
| **NSC** | 2019 | 2034 | -42% | -42% | n/a | n/a | |
| **UNP** | 2018 | 2030 | -26% | -26% | n/a | Targets to achieve net zero emissions by '50. | |

**Source:** BofA Global Research and company reports **Note**: CN: Canadian National Railway, CP: Canadian Pacific, CSX: CSX Corp, NSC: Norfolk Southern, UNP: Union Pacific

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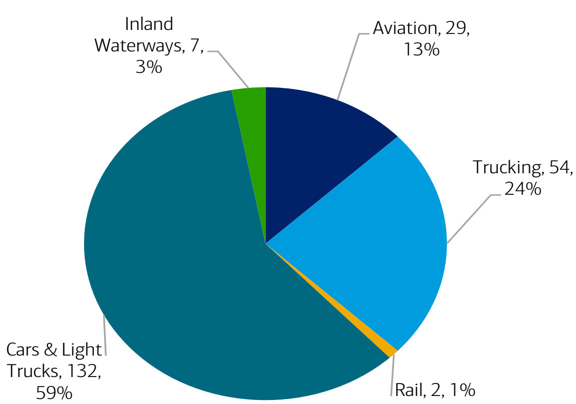
**Exhibit 15: Transport Industry Fuel Consumption Mix (bil gallons)**
Rail only accounted for 2 billion gallons of petrol fuel (of 223 bil) in 2023.




**Source:** Energy Information Administration

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### Biofuel blends lack commercial viability as feedstock remains in shortage

Utilizing biofuel blends as an alternate rail fuel (which can either be a biodiesel-diesel blend or renewable diesel drop-in) can result in 50%-88% less carbon emissions versus traditional diesel fuel according to the California Climate Commission. The magnitude of emission benefits varies based on the source of the biofuel feedstock, degree of blend (5%-20%), and the efficiency of the locomotive engine. Given the clear emission advantage over traditional diesel, Class 1 rails expect the incorporation of biofuels to be a material driver towards achieving 2030 emission reduction targets. Canadian National expects two-thirds of its 2030 target will be based on higher biofuel blends. Union Pacific expects to blend up to 20% of its fuel with biodiesel by 2030.

Biofuels remain a less viable long-term alternative to diesel given the lack of available feedstock capacity (vegetable oils, animal tallow) with cooking oil production accounting for ~5% of total oil demand. CNGMotive estimated by dedicating all arable US land to soybean harvest (the highest oil-per-acre plant), the resulting feedstock only address 37% of projected rail fuel demand. Wabtec is expected to have an engine solution to allow 20% biodiesel blend and 100% renewable diesel mix into existing Tier III and Tier IV engines by 2H24, which will be reversible to take diesel fuel if biofuel feedstock is unavailable. Biofuel availability is expected to face fierce competition from airlines given demand for Sustainable Aviation Fuel (SAF). Airlines have no other alternative fuel options and could outbid rails for capacity. Oliver Wyman had estimated SAF demand to reach 3.2 billion to 10 billion gallons on annual basis by 2030, higher than forecasted global biofuel supply of 1.5 billion to 5.4 billion gallons.

**Adoption of battery electric locomotives more suited for niche local routes**

Battery-powered locomotives may deliver fuel savings and emission reductions, with the Wabtec's FLX portfolio already seeing Class 1 orders for certain short line, local freight routes (such as West Coast mine operations for BNSF). By adopting a hybrid consist with both diesel and battery-powered consists, rail carriers can see up to 30% fuel savings. Dynamic braking, which allows residual motor rotations function as a generator when disconnected from power during a braking action, has been a breakthrough technology for battery locomotives which allows trains to charge its battery during transit. Wabtec is currently capable of manufacturing 7-8 megawatt-hour (MWh) batteries and sees a path to eventually produce 20+ MWh capacity locomotive batteries (diesel-equivalent road unit may require up to 80 MWh battery capacity).

The primary challenge for rail battery adoption is currently on power density by battery cell weight. With a 6-axle locomotive weighing 429,000 pounds, or 250,000 pounds without its frame and protection, locomotive batteries require at least 1,400 Wh/kg performance to reach parity with diesel power. Current technology is only capable of ~250 Wh/kg, thus adoption for electric locomotives is still mainly constrained to smaller consists and local freight routes. Thus, the industry still views battery technology as mainly fit for more niche rail freight than a replacement for diesel.

**Hydrogen has commercial potential, yet needs heavy infrastructure investments**

Hydrogen fuel technology remains in its infancy, many view it as the long-term alternate propulsion solution for rails. Class I carrier Canadian Pacific Kansas City's H20EL hydrogen locomotive project has operated over 2,200 zero emission mainline miles moving over 1,300 miles across 20 tests. Wabtec noted its liquid hydrogen fuel cell is in its first phase of application in yard and local shuttle operations. Government support for hydrogen fuel technology has also expanded with $13 billion in available hydrogen tax credits from the Inflation Reduction Act and $9.5 billion in government funding for hydrogen hubs in the Bipartisan Infrastructure Law.

Transport of hydrogen fuel is highly complex as hydrogen reaches its liquid state at -253 degrees Celsius, leading to high contamination risk, and high costs. The lack of available infrastructure to be a major drawback for adoption, compared to the century's worth of investment in diesel fuel infrastructure. Hydrogen also embrittles conventional pipeline infrastructure, thus must be harvested, refined, and consumed at the same site as of today. Despite its challenges, some manufacturers continue to invest in developing hydrogen equipment. Wabtec launched its fuel agnostic engine platform, building off the base of its LNG solution, focusing on developing technology operating on multiple fuel types such as hydrogen, ammonia, or traditional diesel.

# Price objective basis & risk

**Wabtec Corp. (WAB: B-1-7: $141.99)**

Our $156 PO is based on an 23.5x target P/E multiple on our 2024e EPS, above its 9-year historical 15x-21x range on forward earnings (which was normalized, and historically on cash EPS, though before its Feb 2019 GE-T acquisition would have been fairly similar) as we assign a premium to its target multiple given increased confidence on its actualization of backlog and International sale growth.

Downside risks to our PO are a quicker decline in rail volumes/economic activity, delayed replacement capex from the railroads, shrinking government budgets for Transit projects or increasing austerity measures, increased warranty claims on its equipment, and improved parts that delays replacement of equipment.

Upside risks to our PO are larger than expected synergy gains from its GE-T merger, a rapid rebound in rail carloadings, and accelerated rail capex spend on technology and upgrade investments from positive train control. Additionally, increased government expenditures for eco-friendly rail projects could provide upside potential.

# Analyst Certification

I, Ken Hoexter, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

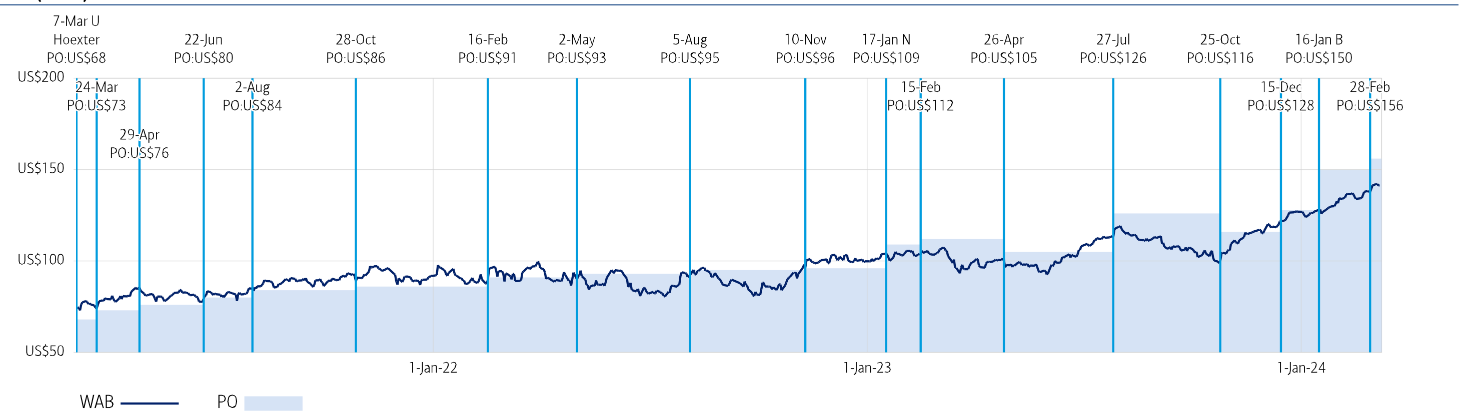
**US - Transportation Coverage Cluster**

| Investment rating | Company | BofA Ticker | Bloomberg symbol | Analyst |
|---|---|---|---|---|
| **BUY** | | | | |
| | Canadian Pacific Kansas City Ltd | CP | CP US | Ken Hoexter |
| | CSX Corporation | CSX | CSX US | Ken Hoexter |
| | FedEx Corp. | FDX | FDX US | Ken Hoexter |
| | J.B. Hunt Transport Services | JBHT | JBHT US | Ken Hoexter |
| | Kirby Corp | KEX | KEX US | Ken Hoexter |
| | Knight-Swift Transportation Holdings Inc | KNX | KNX US | Ken Hoexter |
| | Saia Inc. | SAIA | SAIA US | Ken Hoexter |
| | Teekay Tankers Limited | TNK | TNK US | Ken Hoexter |
| | Union Pacific | UNP | UNP US | Ken Hoexter |
| | Wabtec Corp. | WAB | WAB US | Ken Hoexter |
| | XPO, Inc. | XPO | XPO US | Ken Hoexter |
| **NEUTRAL** | | | | |
| | Canadian National | CNI | CNI US | Ken Hoexter |
| | Old Dominion Freight Line | ODFL | ODFL US | Ken Hoexter |
| | RXO, Inc. | RXO | RXO US | Ken Hoexter |
| | Schneider National | SNDR | SNDR US | Ken Hoexter |
| | Scorpio Tankers Inc. | STNG | STNG US | Ken Hoexter |
| | TFI International | TFII | TFII US | Ken Hoexter |
| | TFI International | YTFII | TFII CN | Ken Hoexter |
| | UPS | UPS | UPS US | Ken Hoexter |
| **UNDERPERFORM** | | | | |
| | ArcBest Corporation | ARCB | ARCB US | Ken Hoexter |
| | C.H. Robinson | CHRW | CHRW US | Ken Hoexter |
| | The Greenbrier Companies | GBX | GBX US | Ken Hoexter |
| | Werner Enterprises | WERN | WERN US | Ken Hoexter |
| | World Kinect | WKC | WKC US | Ken Hoexter |
| **RSTR** | | | | |
| | Norfolk Southern | NSC | NSC US | Ken Hoexter |

# Disclosures

## Important Disclosures

**Wabtec (WAB) Price Chart**




B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

**Equity Investment Rating Distribution: Transport/Infrastructure Group (as of 31 Dec 2023)**

| Coverage Universe | Count | Percent | Inv. Banking Relationships [R1] | Count | Percent |
|---|---|---|---|---|---|
| Buy | 67 | 50.38% | Buy | 44 | 65.67% |
| Hold | 31 | 23.31% | Hold | 13 | 41.94% |
| Sell | 35 | 26.32% | Sell | 17 | 48.57% |

**Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)**

| Coverage Universe | Count | Percent | Inv. Banking Relationships [R1] | Count | Percent |
|---|---|---|---|---|---|
| Buy | 1895 | 53.62% | Buy | 1083 | 57.15% |
| Hold | 832 | 23.54% | Hold | 454 | 54.57% |
| Sell | 807 | 22.84% | Sell | 383 | 47.46% |

[R1] Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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| Investment rating | Total return expectation (within 12-month period of date of initial rating) | Ratings dispersion guidelines for coverage cluster[R2] |
|---|---|---|
| Buy | ≥ 10% | ≤ 70% |
| Neutral | ≥ 0% | ≤ 30% |
| Underperform | N/A | ≥ 20% |

[R2]Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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