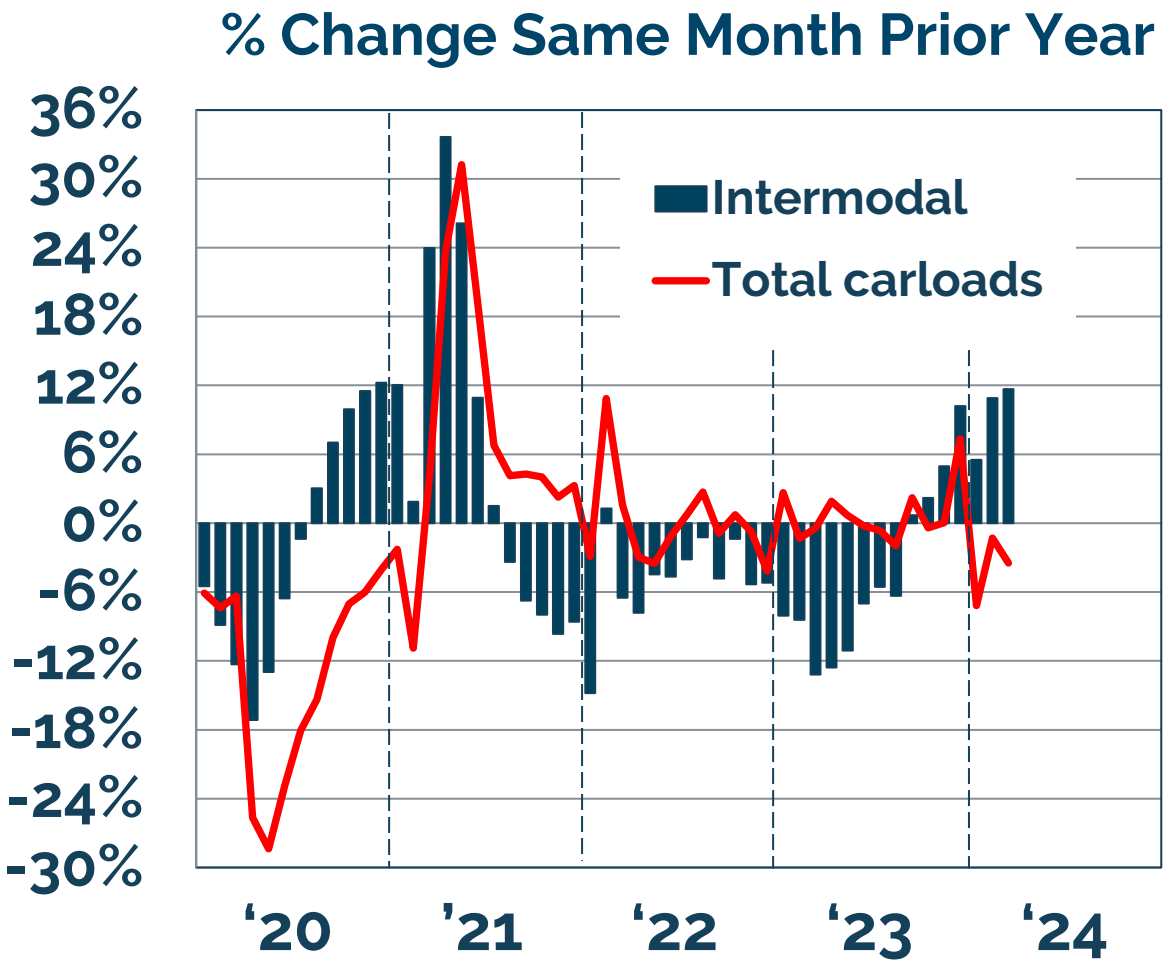
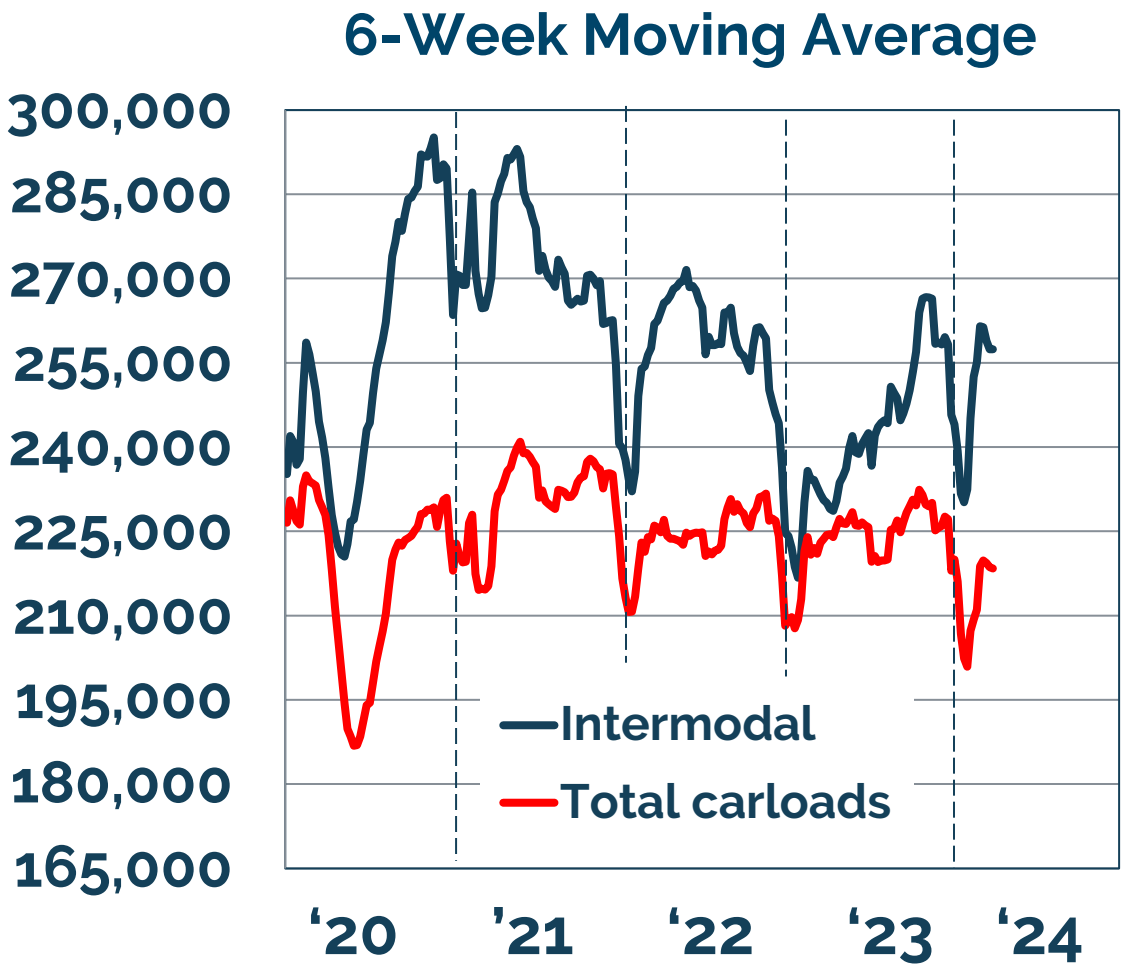
Railroad Update

Rail Energy Transportation Advisory Committee

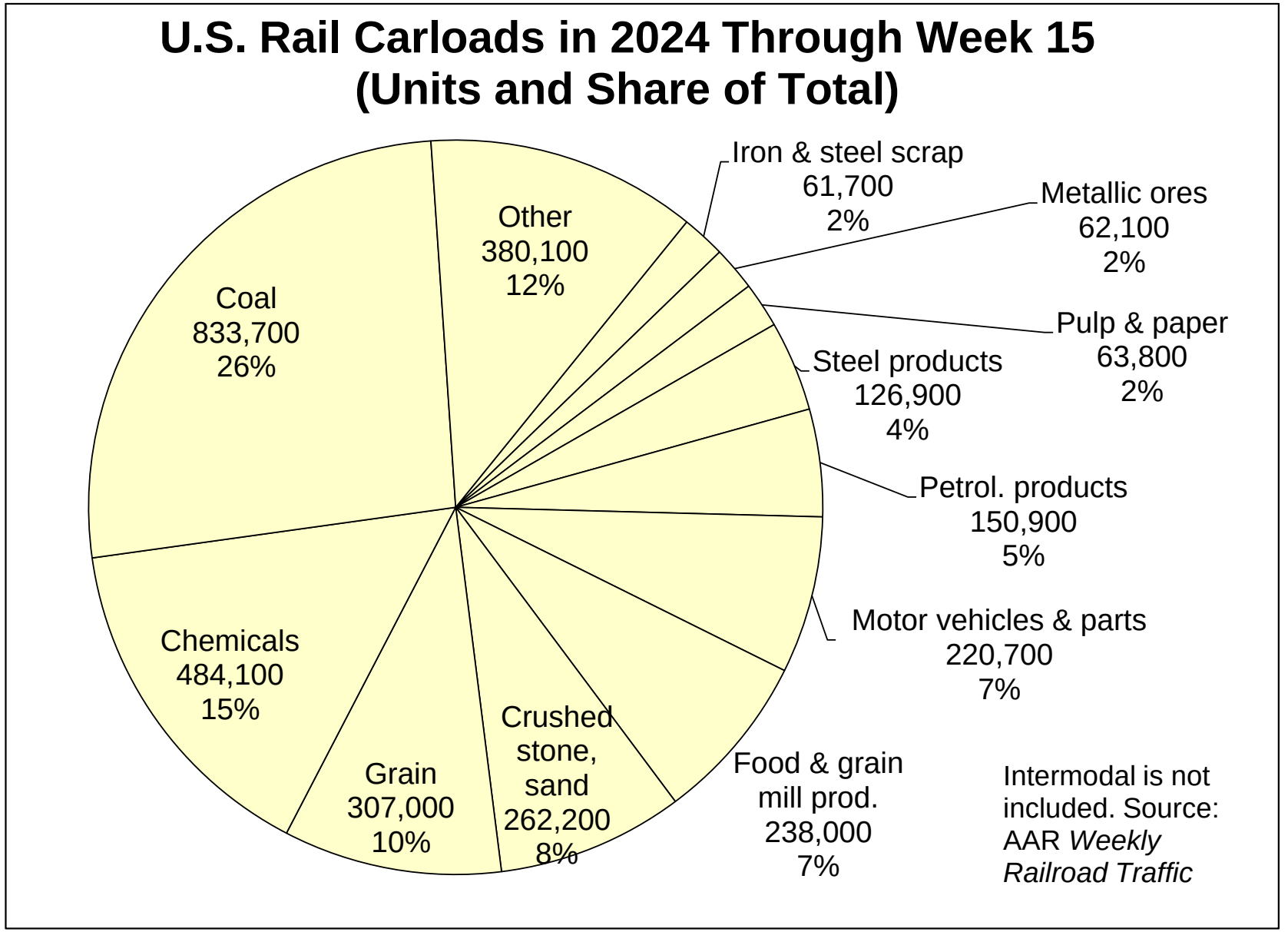
April 17, 2024

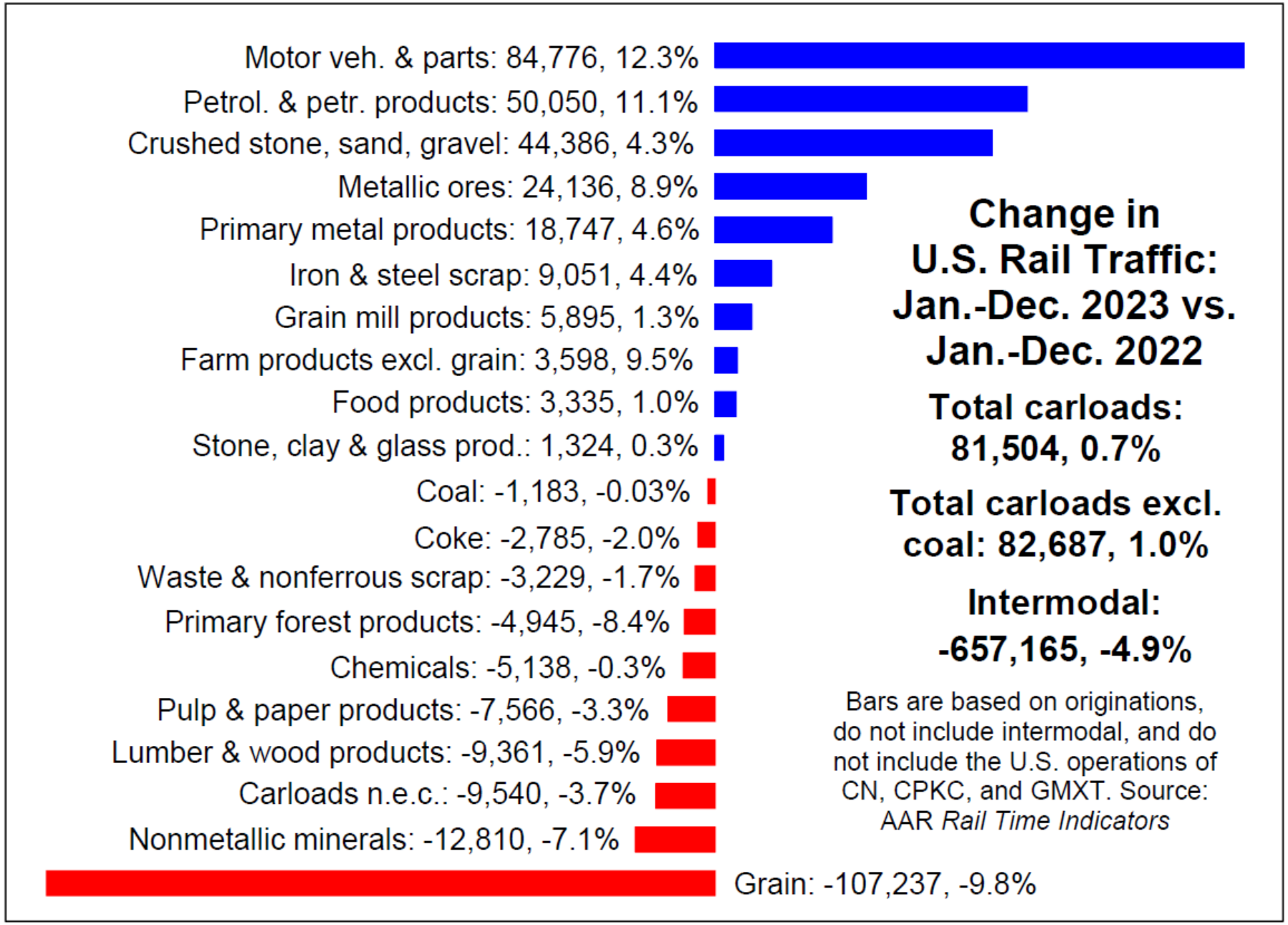
U.S. Rail Traffic: Jan. 2020-March 2024





Data are based on originations, are not seasonally adjusted, and don't include the U.S. operations of CN, CPKC, and GMXT. Source: AAR


U.S. Rail Carloads in 2024 Through Week 15
(Units and Share of Total)
Coal
833,700
26%
Other
380,100
12%
Iron & steel scrap
61,700
2%
Metallic ores
62,100
2%
Pulp & paper
63,800
2%
Steel products
126,900
4%
Petrol. products
150,900
5%
Motor vehicles & parts
220,700
7%
Food & grain
mill prod.
238,000
7%
Crushed
stone,
sand
262,200
8%
Grain
307,000
10%
Chemicals
484,100
15%
Intermodal is not
included. Source:
AAR *Weekly*
Railroad Traffic


Motor veh. & parts: 84,776, 12.3%
Petrol. & petr. products: 50,050, 11.1%
Crushed stone, sand, gravel: 44,386, 4.3%
Metallic ores: 24,136, 8.9%
Primary metal products: 18,747, 4.6%
Iron & steel scrap: 9,051, 4.4%
Grain mill products: 5,895, 1.3%
Farm products excl. grain: 3,598, 9.5%
Food products: 3,335, 1.0%
Stone, clay & glass prod.: 1,324, 0.3%
Coal: -1,183, -0.03%
Coke: -2,785, -2.0%
Waste & nonferrous scrap: -3,229, -1.7%
Primary forest products: -4,945, -8.4%
Chemicals: -5,138, -0.3%
Pulp & paper products: -7,566, -3.3%
Lumber & wood products: -9,361, -5.9%
Carloads n.e.c.: -9,540, -3.7%
Nonmetallic minerals: -12,810, -7.1%
Grain: -107,237, -9.8%
Change in U.S. Rail Traffic: Jan.-Dec. 2023 vs. Jan.-Dec. 2022
Total carloads: 81,504, 0.7%
Total carloads excl. coal: 82,687, 1.0%
Intermodal: -657,165, -4.9%
Bars are based on originations, do not include intermodal, and do not include the U.S. operations of CN, CPKC, and GMXT. Source: AAR Rail Time Indicators

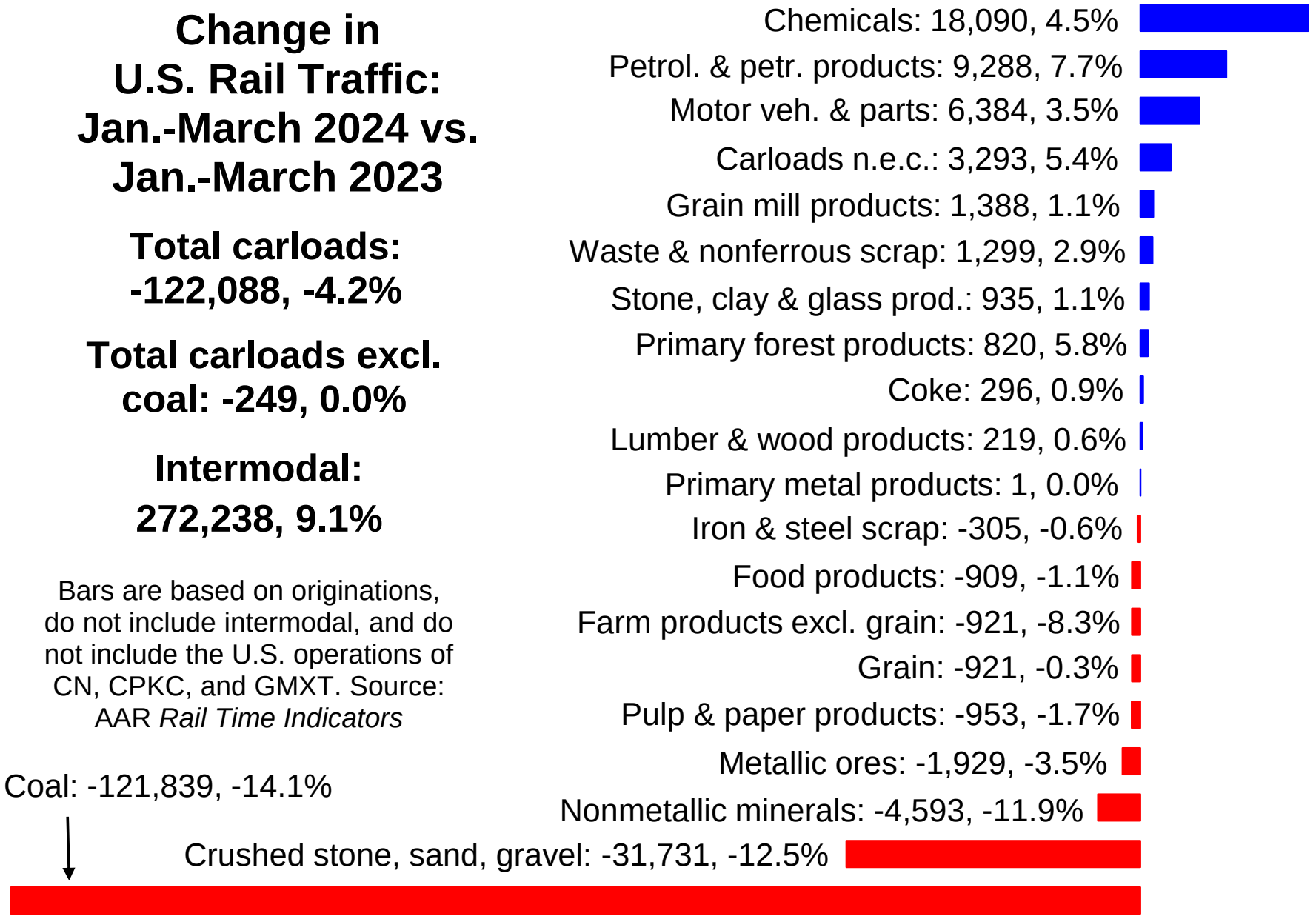
Change in U.S. Rail Traffic: Jan.-March 2024 vs. Jan.-March 2023

Total carloads: -122,088, -4.2%

Total carloads excl. coal: -249, 0.0%

Intermodal: 272,238, 9.1%

Bars are based on originations, do not include intermodal, and do not include the U.S. operations of CN, CPKC, and GMXT. Source: AAR *Rail Time Indicators*

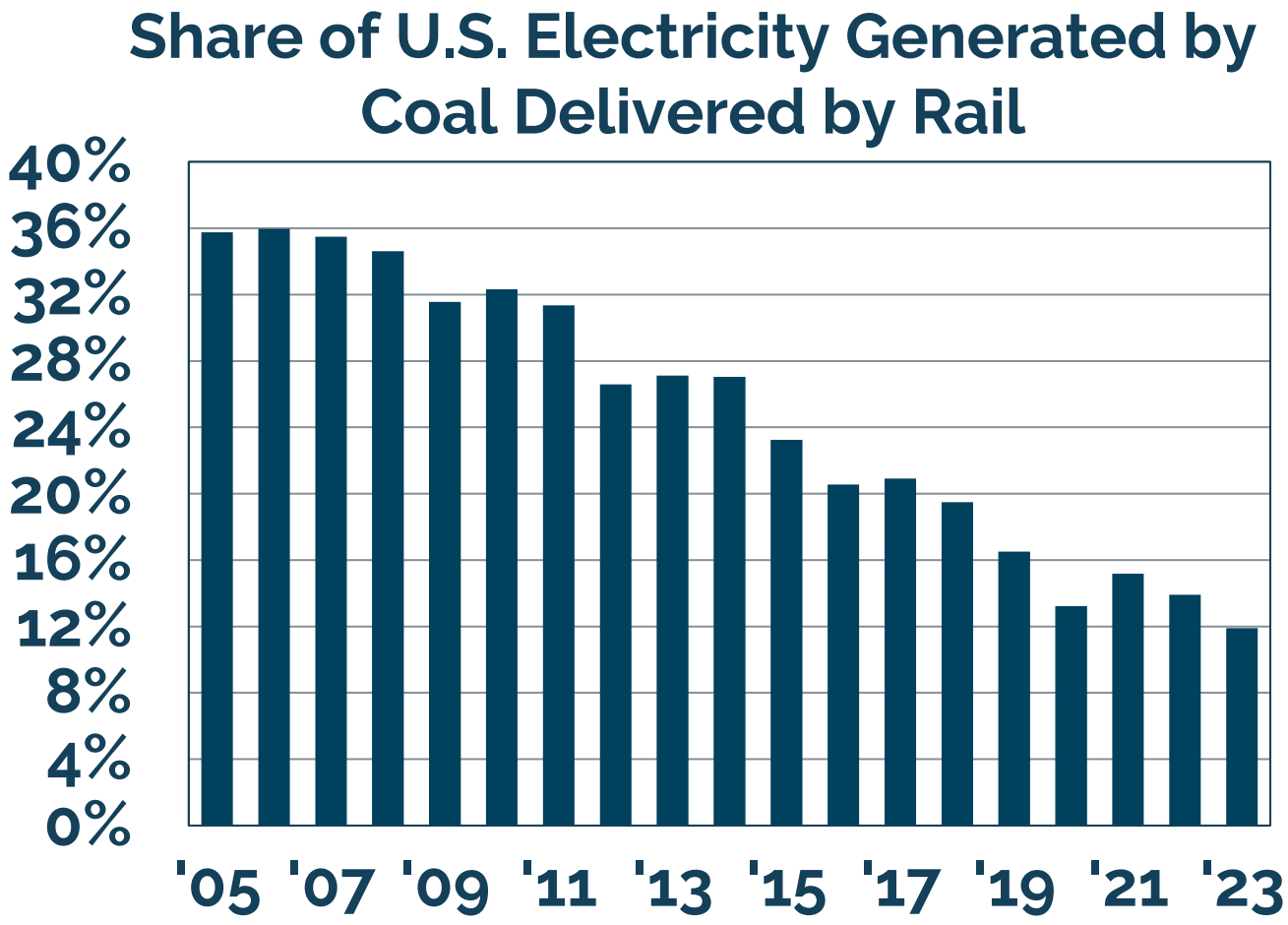


Continued Decline for Coal

% Share U.S. Electricity Generation

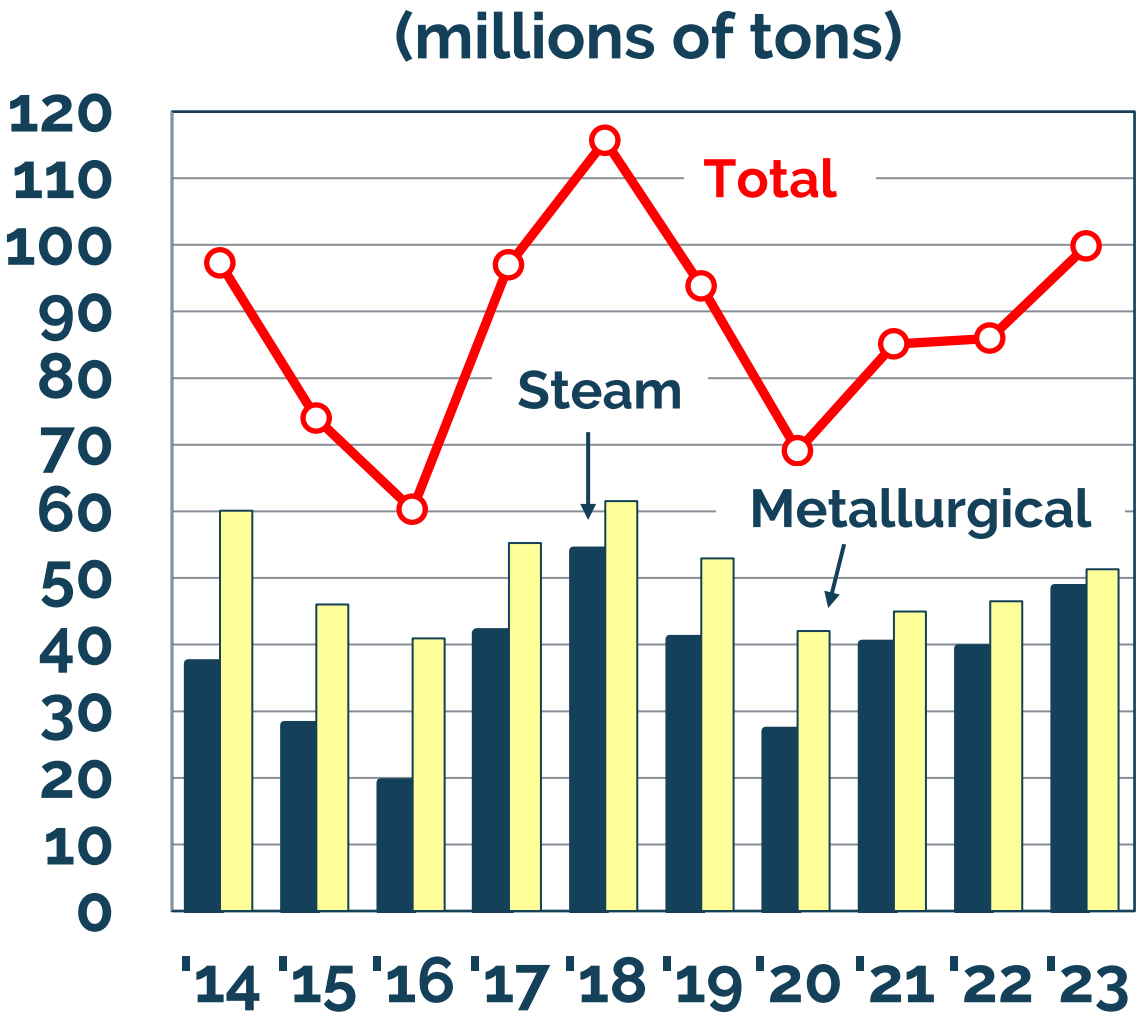
	2000	2010	2020	2023
Coal	52%	45%	22%	16%
Natural Gas	16%	24%	38%	43%
Nuclear	20%	20%	19%	19%
Renewables	2%	4%	13%	16%
Hydro	7%	6%	6%	6%
Other	3%	1%	1%	1%

Source: Energy Information Administration

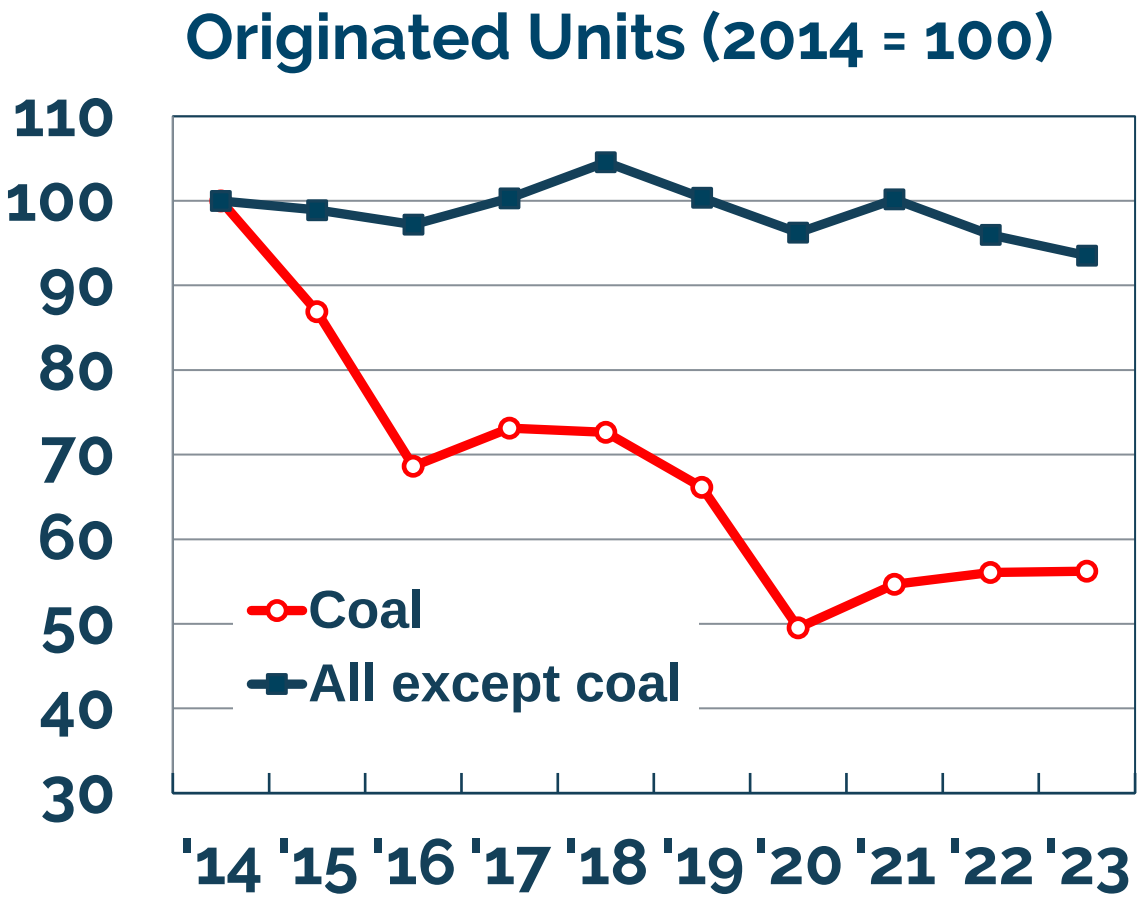


Figures are estimates based on AAR analysis of EIA data.

U.S. Coal Exports

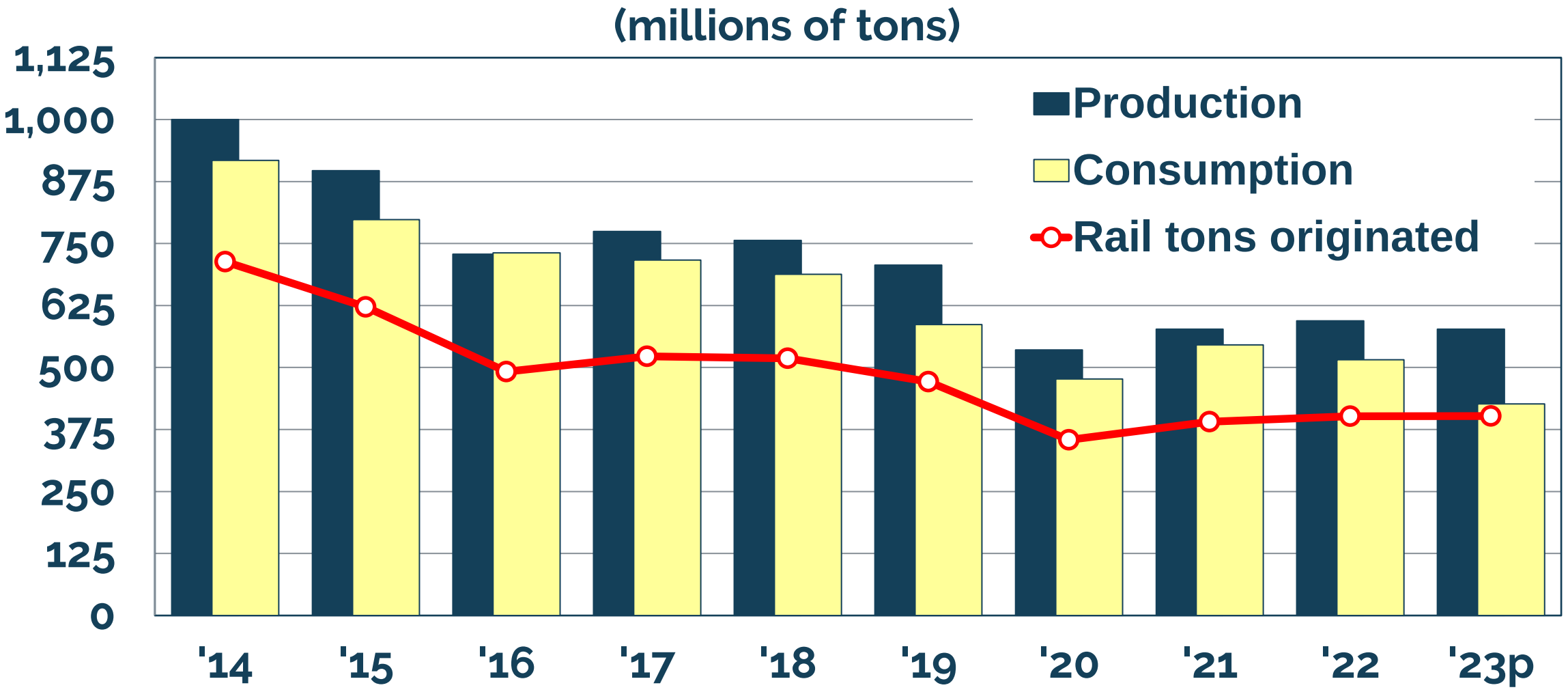


Source: Energy Information Administration



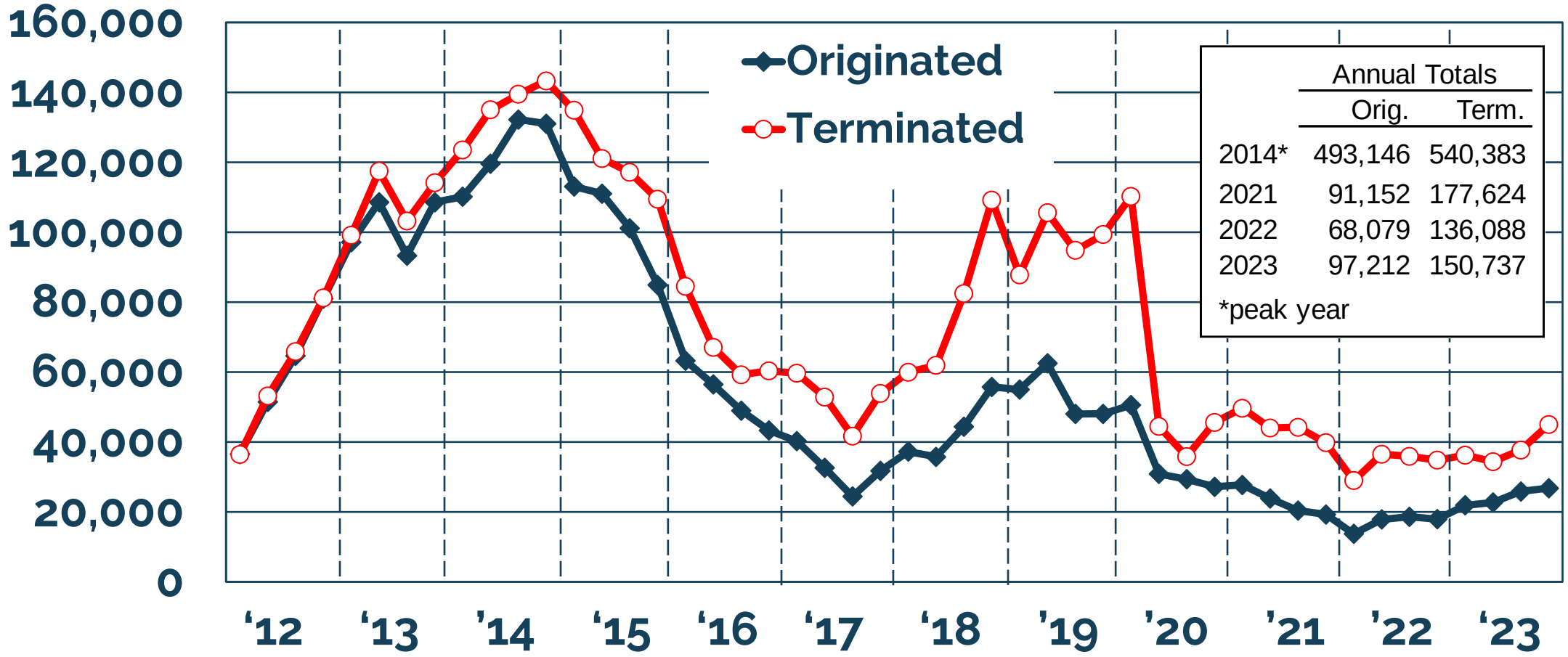
Data are for Class I railroads.
Source: AAR *Freight Commodity Statistics*

U.S. Production, Consumption, and Rail Originations of Coal



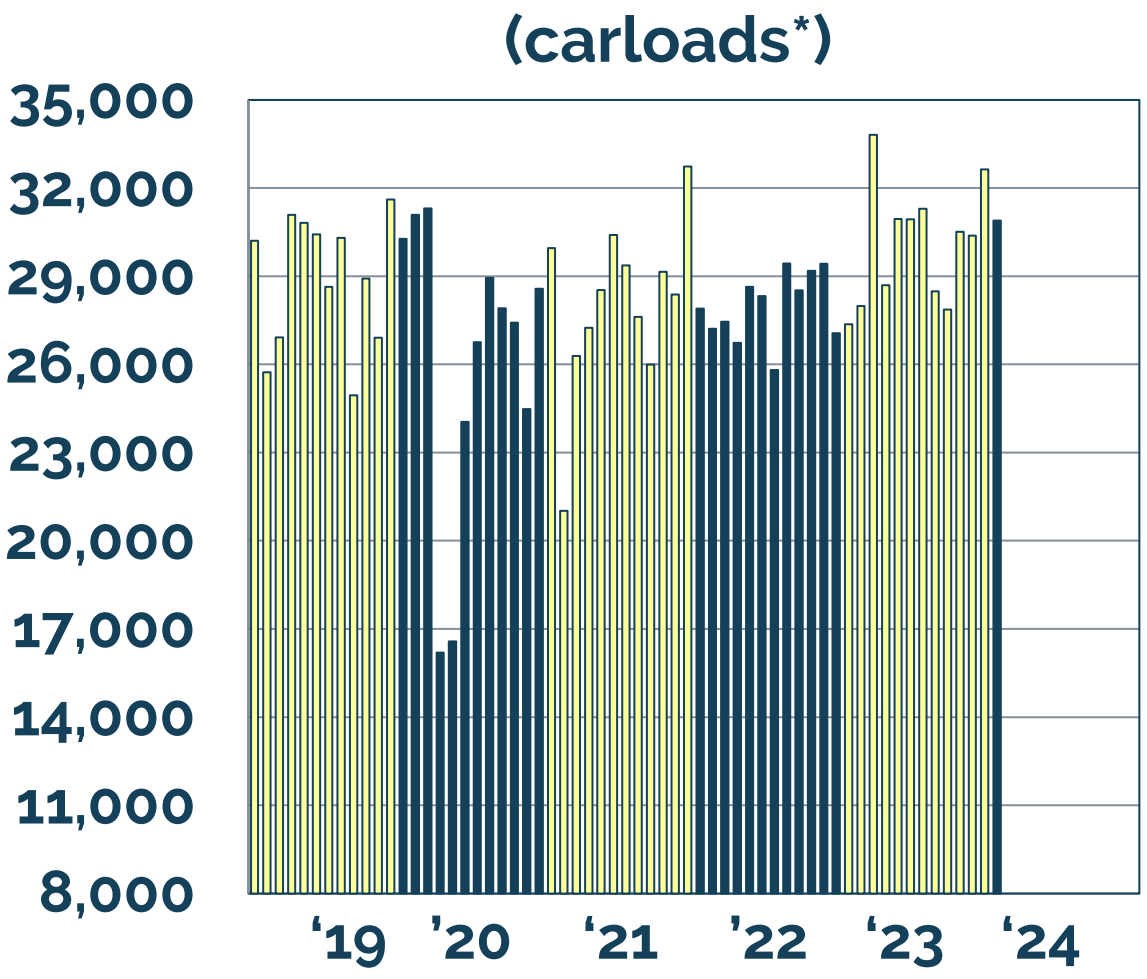
p – preliminary Source: EIA for production and consumption; AAR for rail tons originated.

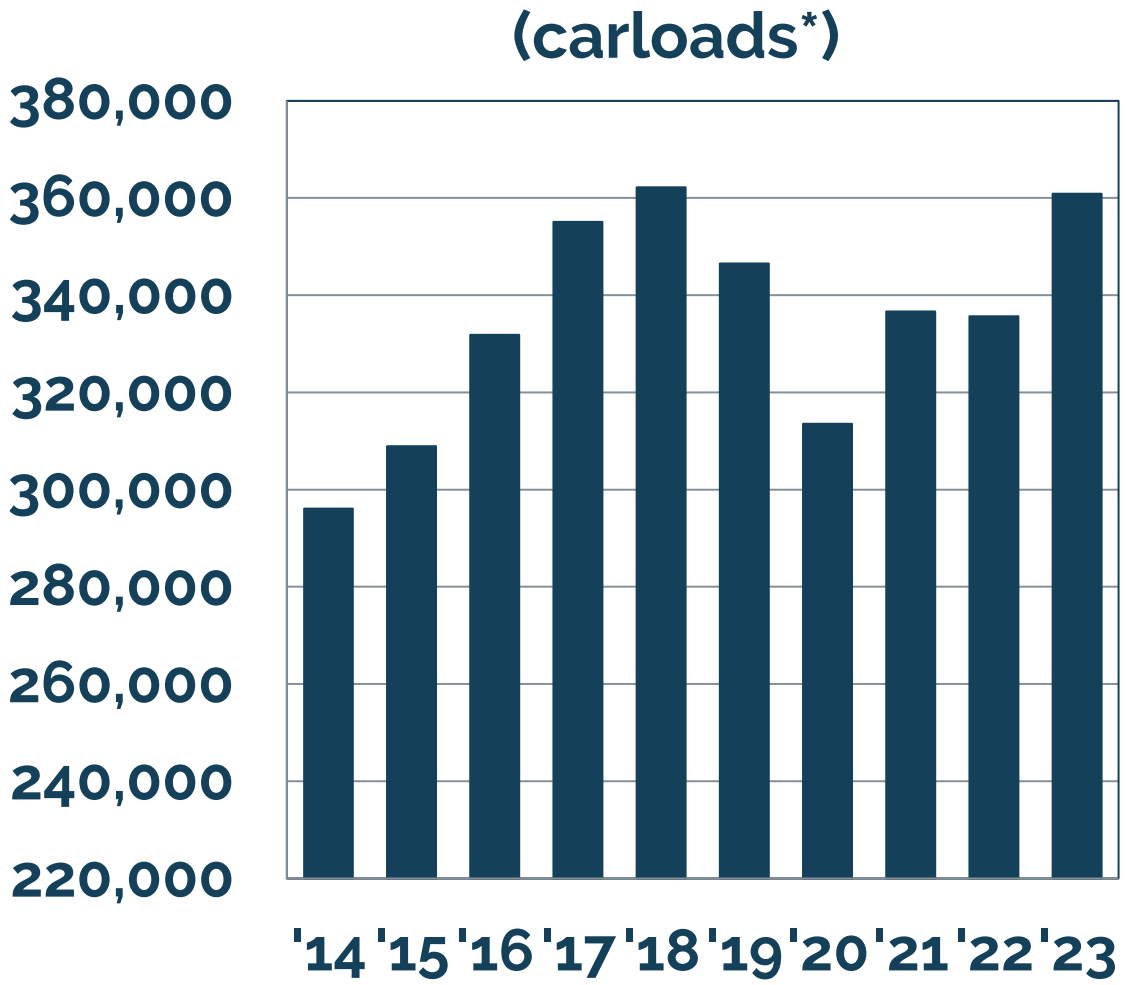
U.S. Rail Carloads of Crude Oil by Quarter



Data are for Class I railroads only. Source: AAR *Freight Commodity Statistics*

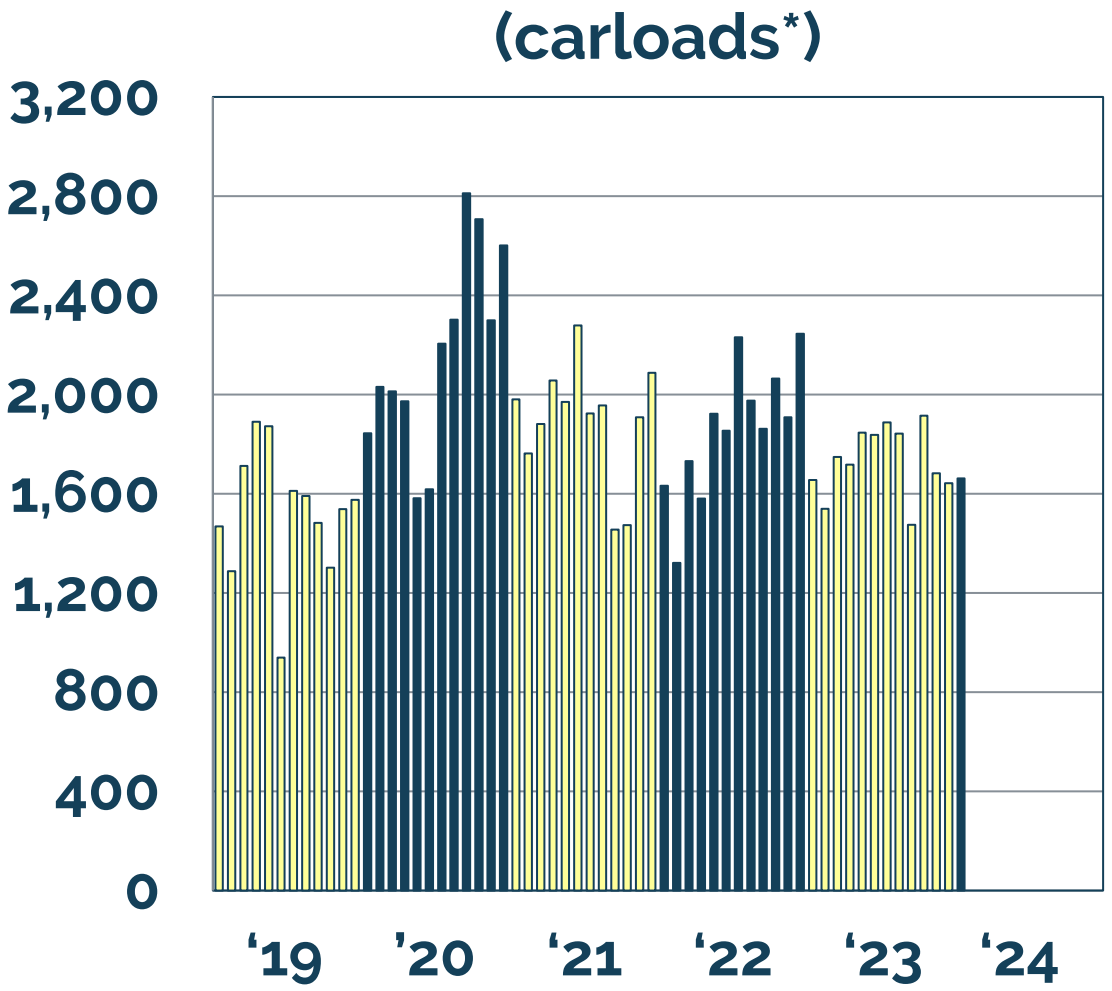
U.S. Ethanol Shipments by Rail

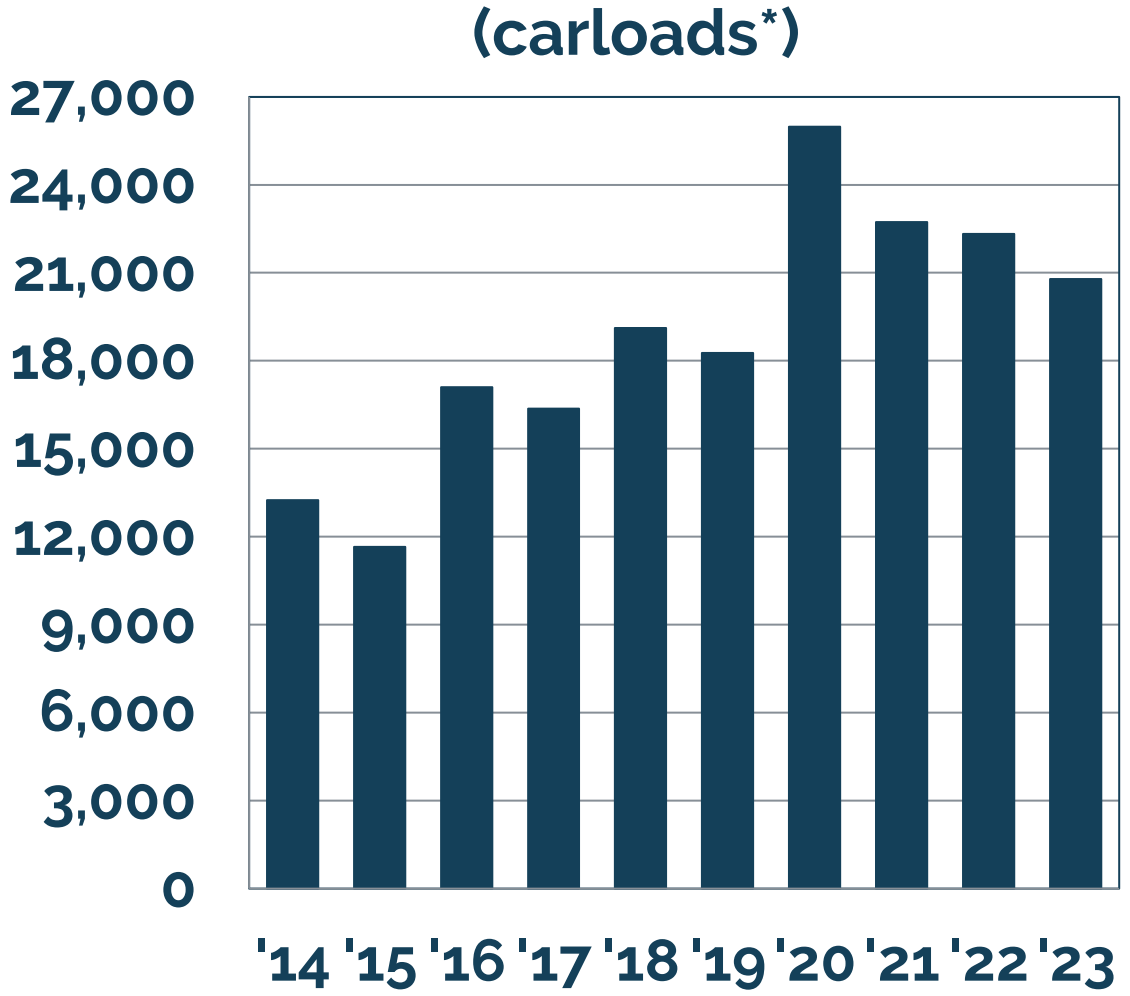




*Assumes 715 barrels (30,030 gallons) per carload. Figures in these charts might differ from figures from different rail traffic sources. Source: Energy Information Administration

U.S. Biodiesel Shipments by Rail





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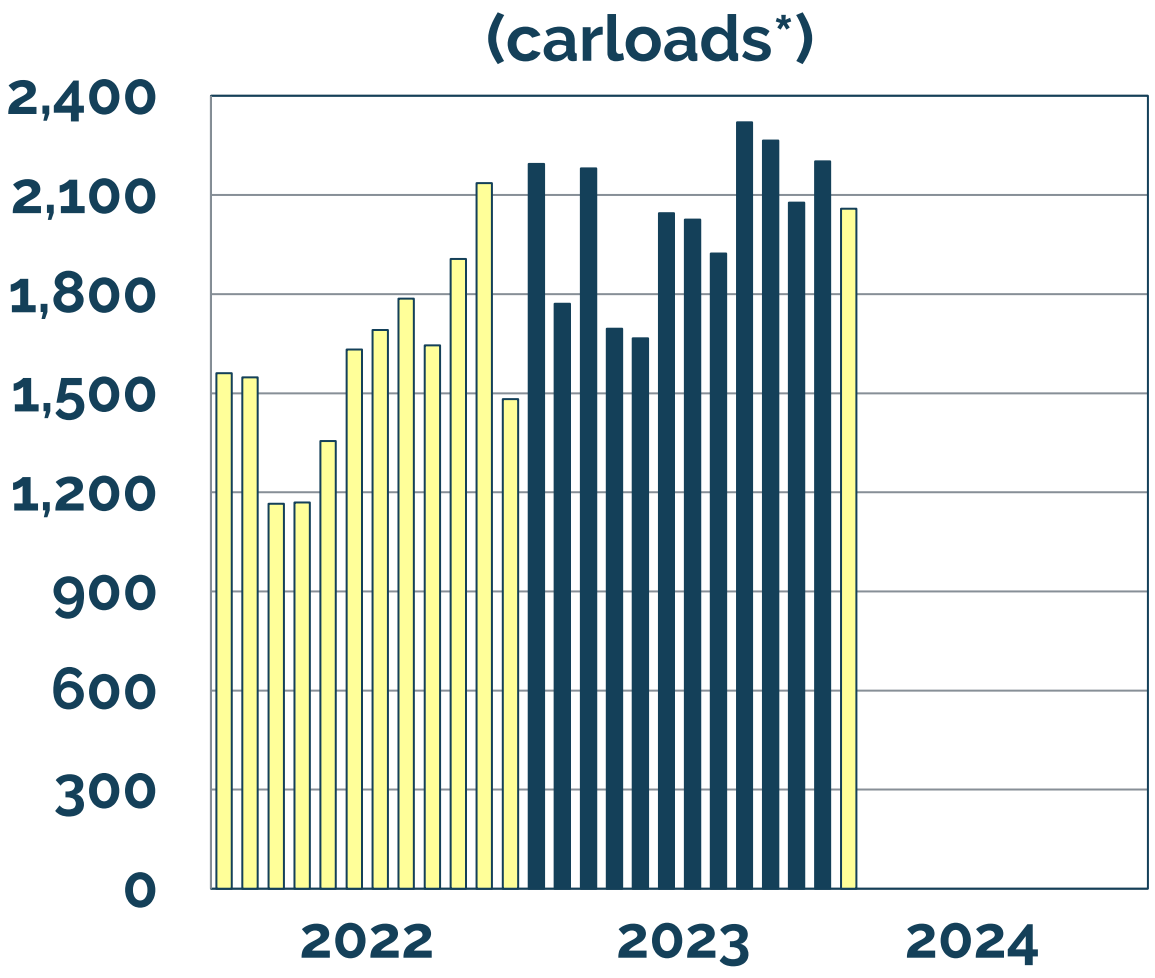
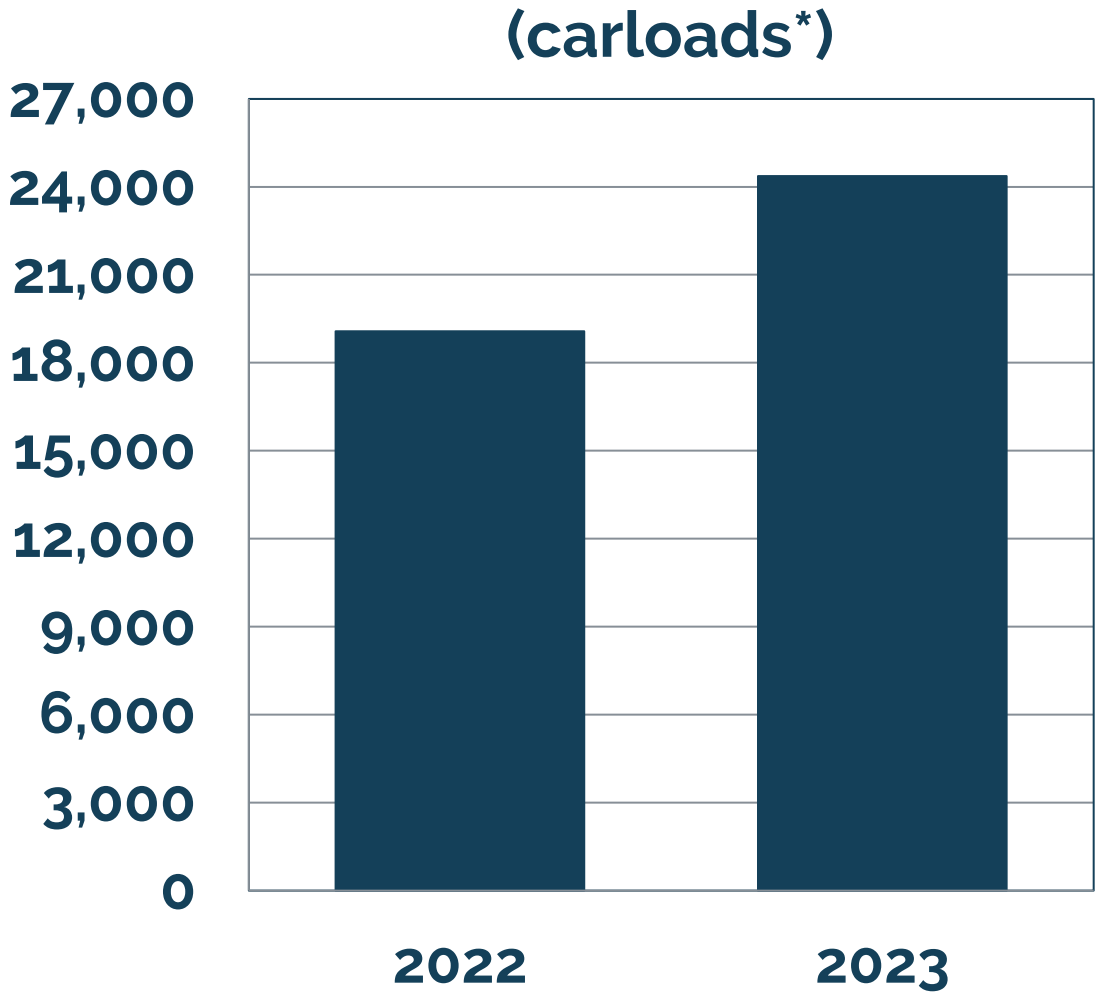
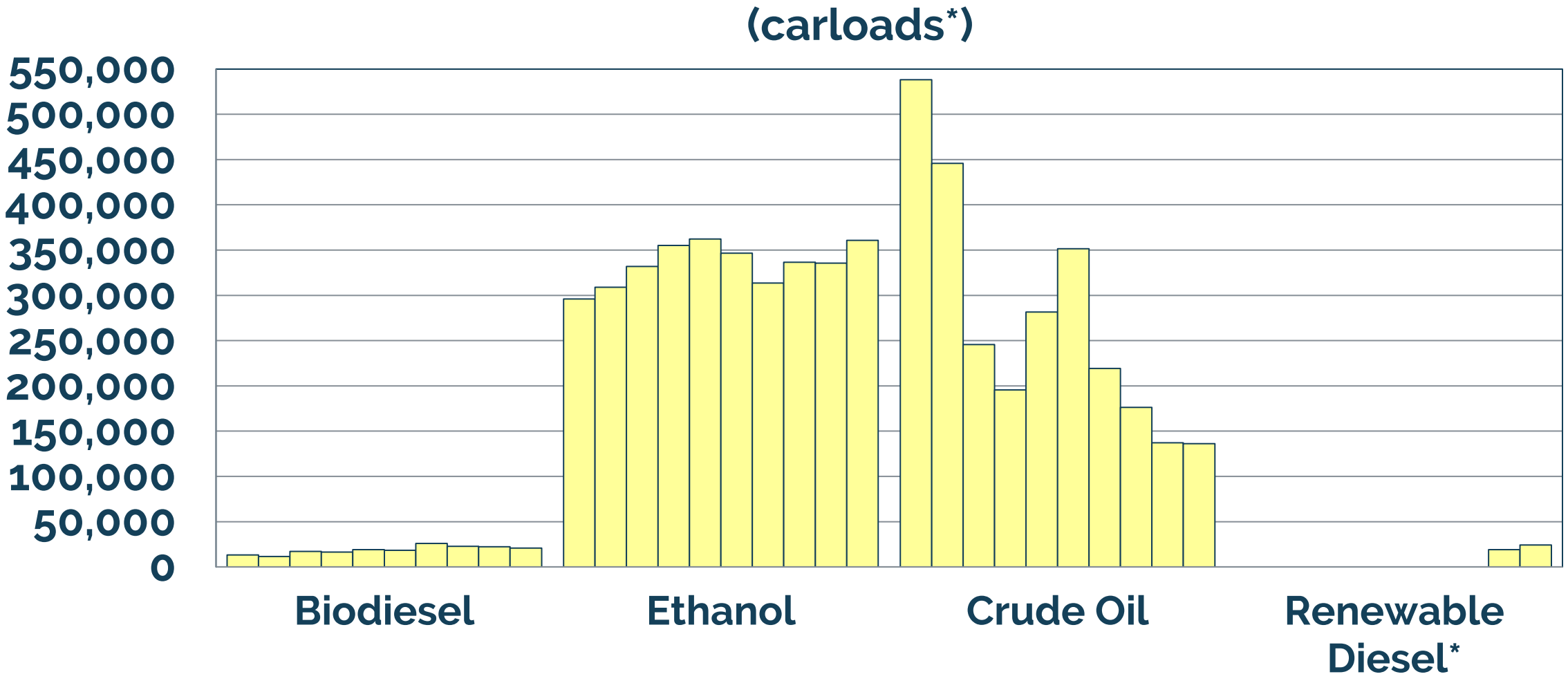
U.S. Renewable Diesel Shipments by Rail





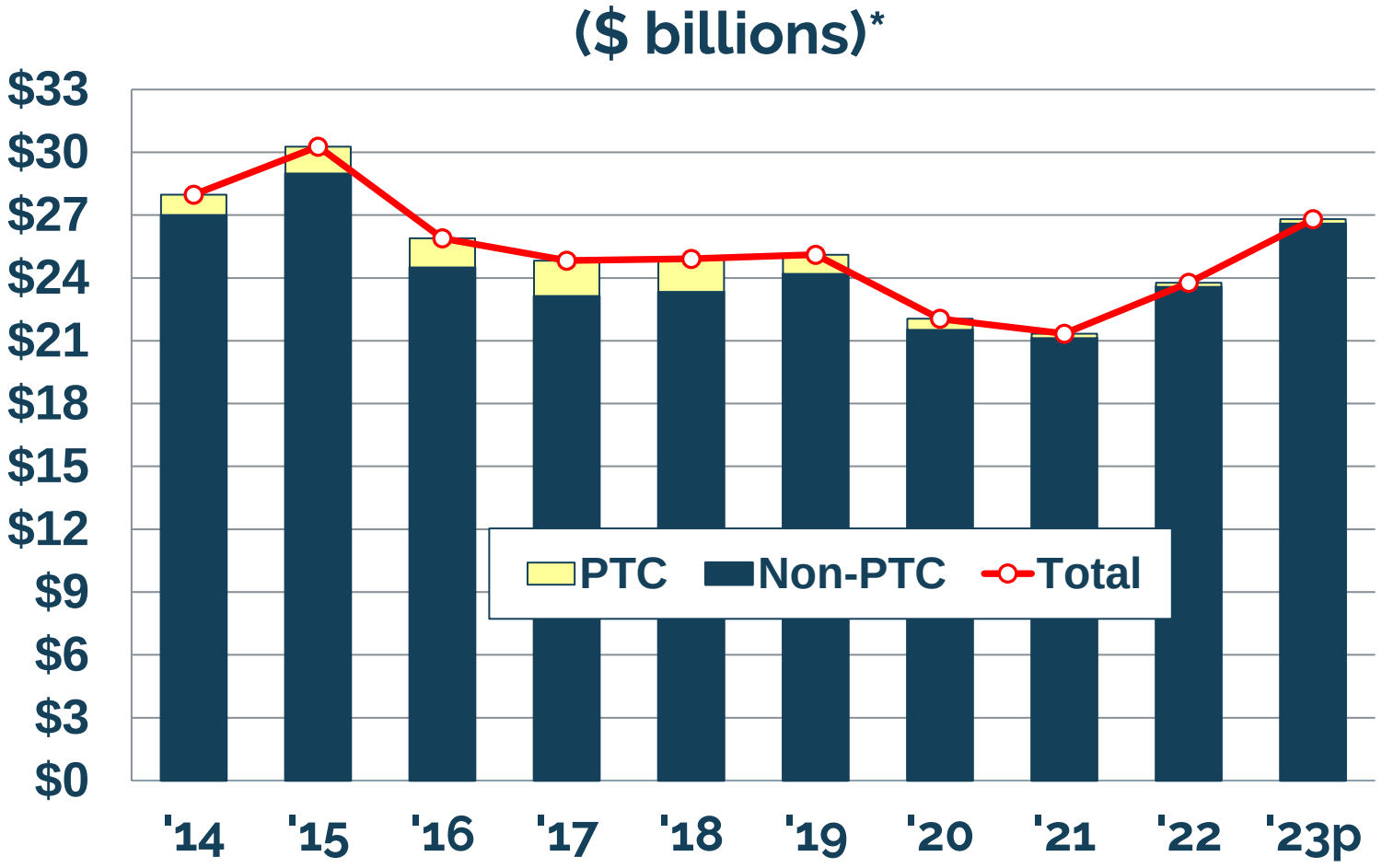
*Assumes 715 barrels (30,030 gallons) per carload. Source: Energy Information Administration

U.S. Shipments of Energy Products by Rail: 2014-2023



*Assumes 715 barrels (30,030 gallons) per carload. Figures in these charts might differ from figures from different rail traffic sources. Source: Energy Information Administration

Freight Railroads Continue to Reinvest Massive Amounts Back Into Their Networks*



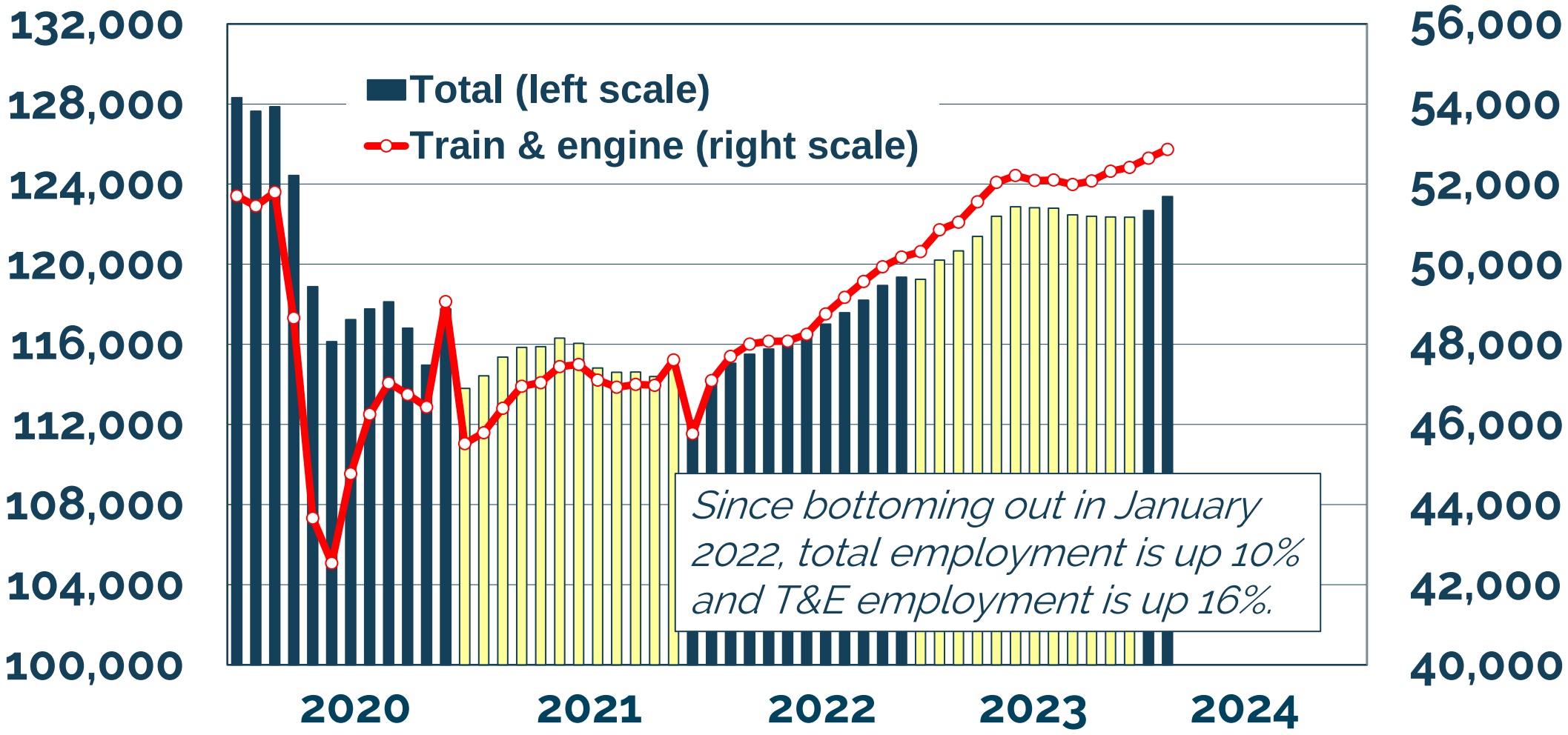
*Class I railroad capital spending + maintenance expenses on infrastructure and equipment. p = preliminary Source: AAR

Capital Spending as % of Revenue*

Avg. all manufacturing	**3.0%**
Petroleum & coal products	2.3%
Food	2.3%
Machinery	2.6%
Motor vehicles & parts	2.8%
Fabricated metal products	3.2%
Primary metal products	3.2%
Wood producs	3.4%
Plastics & rubber products	3.8%
Chemicals	3.8%
Paper	4.3%
Nonmetallic minerals	4.4%
Computer & electr. products	5.0%
Class I Railroads	**18.4%**

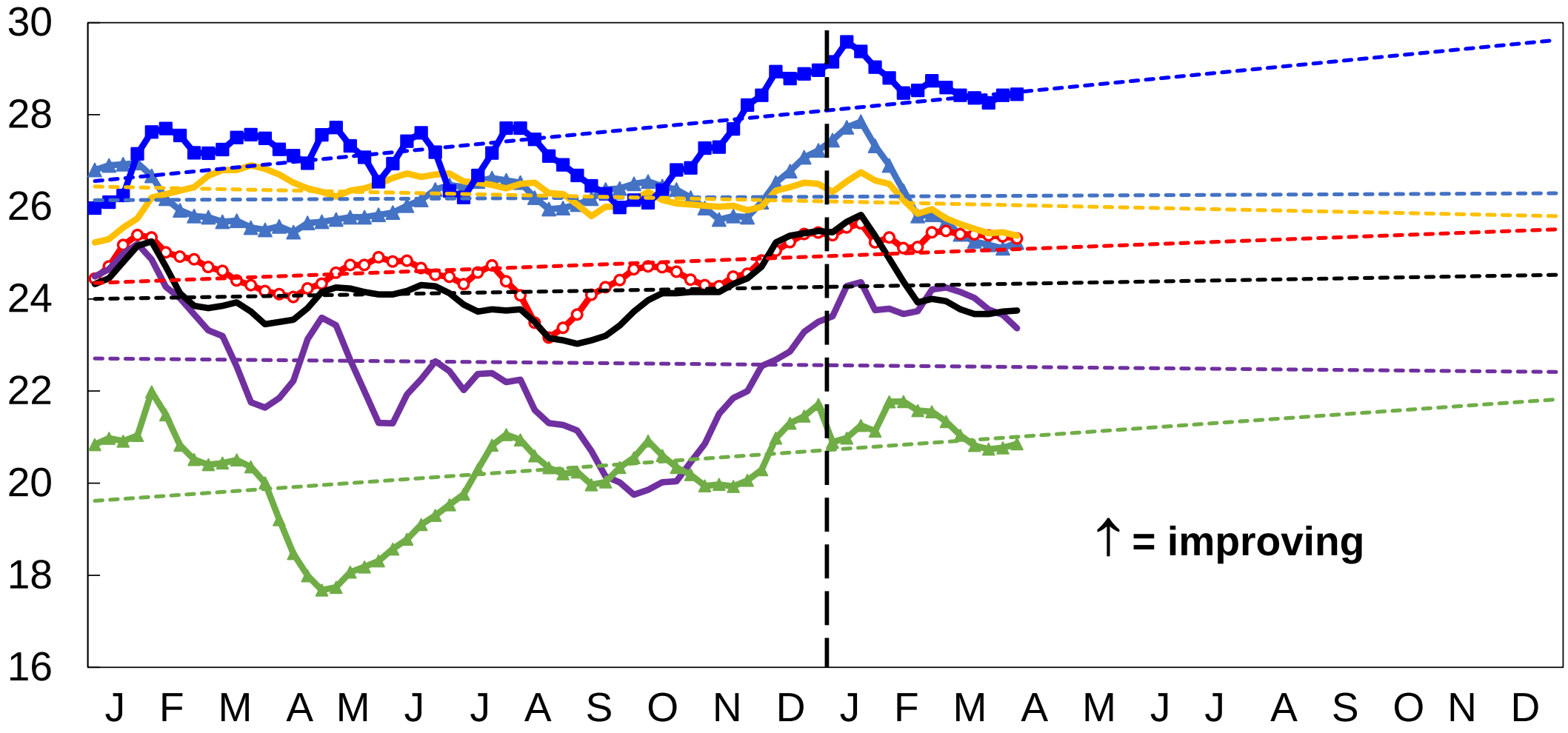
*Avg. 2012-2021
Source: Census Bureau, AAR

Freight Railroads Continue to Invest in Human Capital



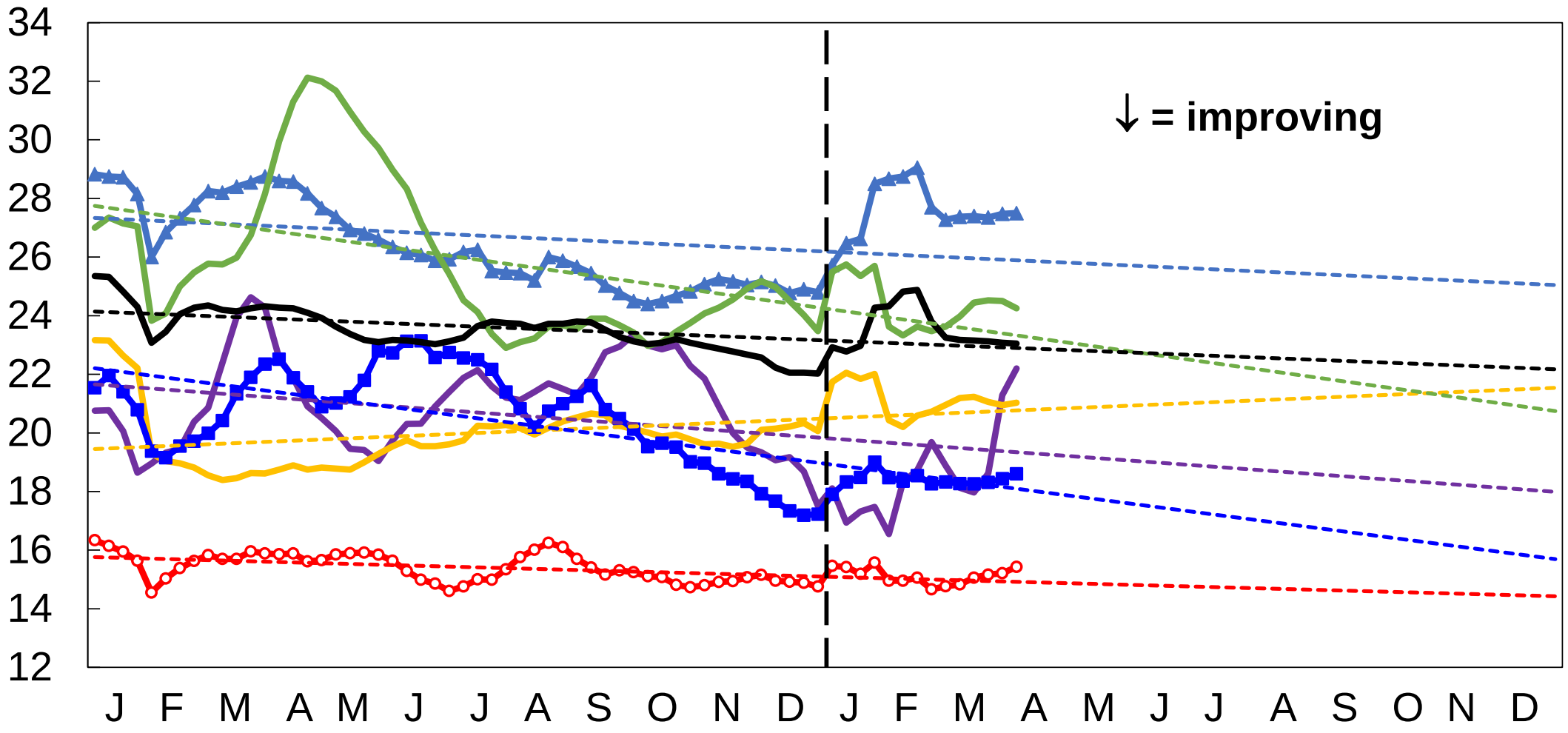
Source: STB

Average System-Wide Train Speed: Jan. 2023 - March 2024
(miles per hour)



Each line is a Class I railroad. Dashed lines are trend lines. Absolute values are not comparable across railroads due to operational and other differences in the respective rail systems. Source: STB

Avg. System-Wide Terminal Dwell Time: Jan. 2023 - March 2024 (hours)



Each line is a Class I railroad. Dashed lines are trend lines. Absolute values are not comparable across railroads due to operational and other differences in the respective rail systems. Source: STB


CP
8548

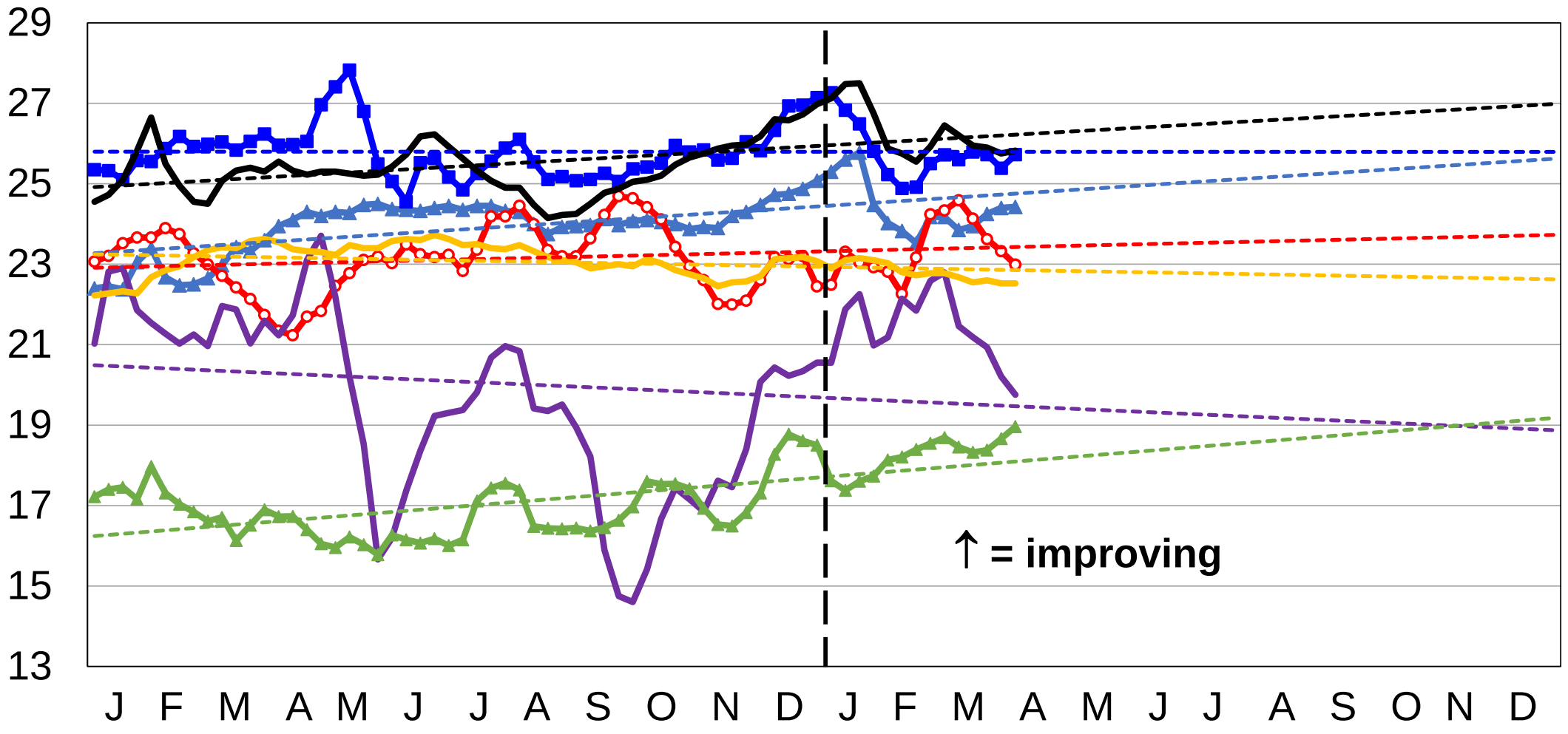

3107
3107


CSX


2555
2595
CN

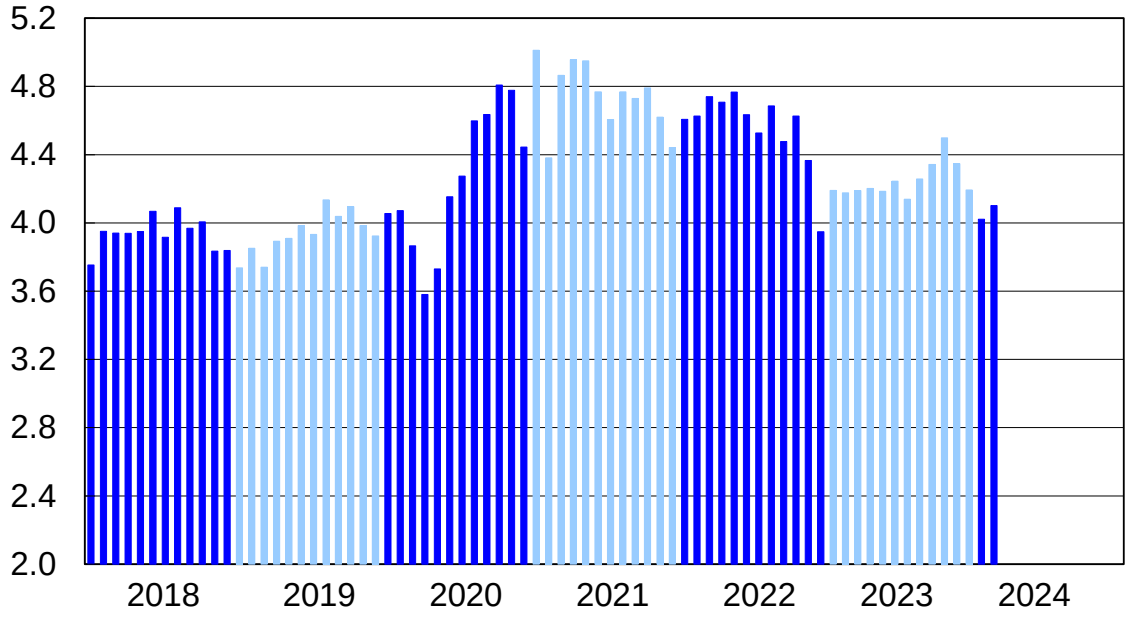

KCS

Average Coal Train Speed: Jan. 2023 - March 2024
(miles per hour)



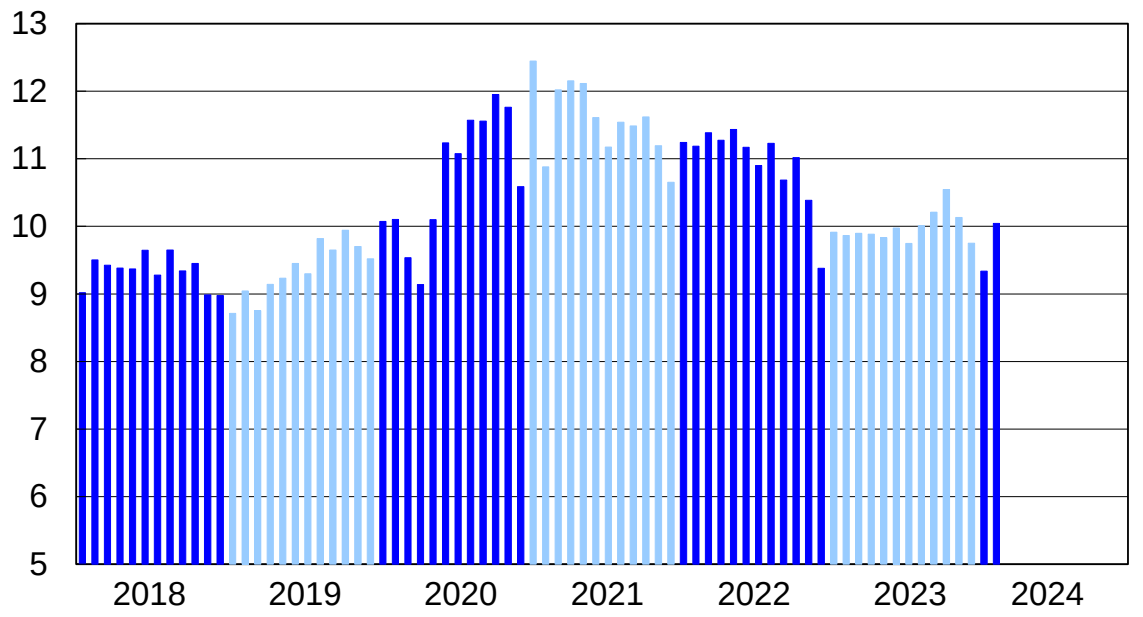
Each line is a Class I railroad. Dashed lines are trend lines. Absolute values are not comparable across railroads due to operational and other differences in the respective rail systems. Source: STB

Weekly Originated U.S. Rail Traffic Units Per Employee: Jan. 2018 - Feb. 2024



*Traffic is based on weekly average total carloads + intermodal units for each month. Data are for BNSF, CSX, NS, and UP combined; CN and CPKC and non-Class I railroads are not included for data availability reasons. Data are not seasonally adjusted. Source: AAR, STB

Weekly Originated U.S. Rail Traffic Units Per Train & Engine Employee: Jan. 2018 - Feb. 2024



Traffic based on weekly average originated total carloads + intermodal units. Data are for BNSF, CSX, NS, and UP combined; CN, CPKC, and non-Class I railroads are not included. Data are not seasonally adjusted. Source: AAR, STB