



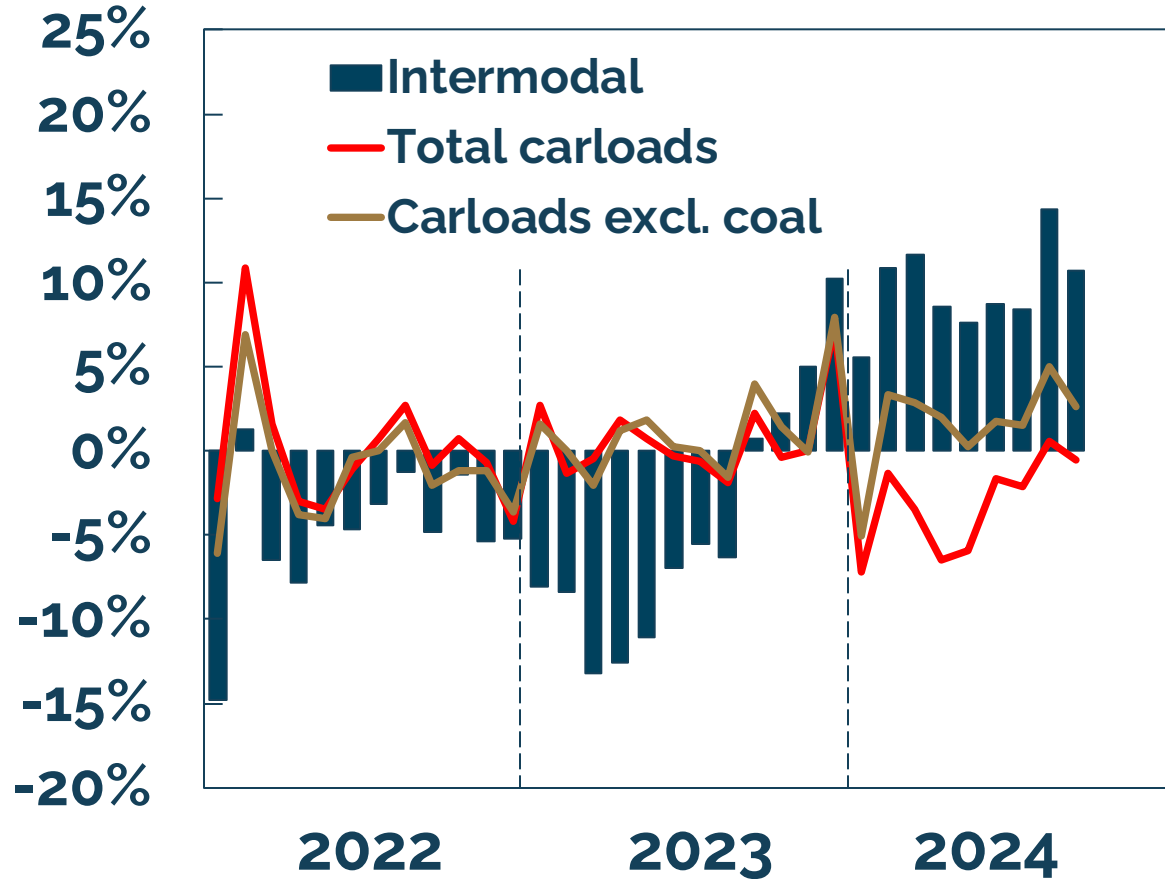
Railroad Update

Rail Energy Transportation Advisory Committee

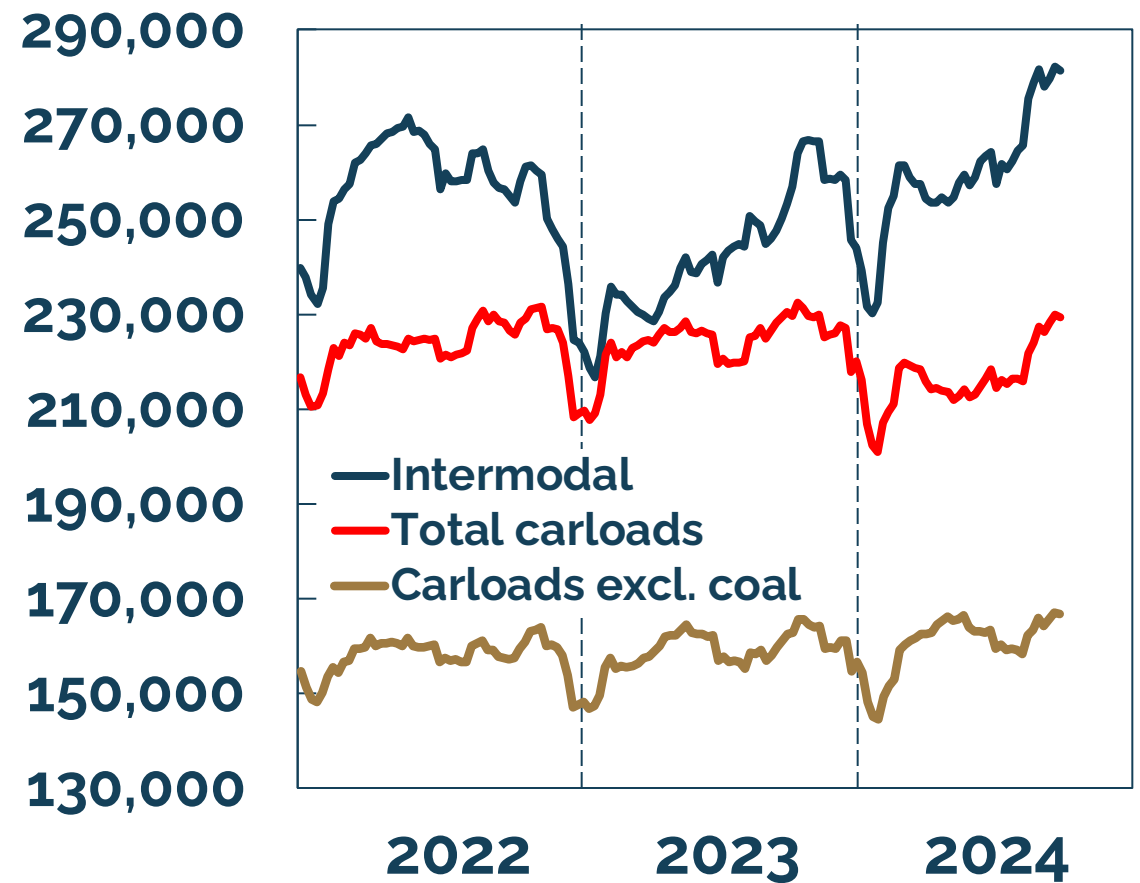
October 9, 2024

U.S. Rail Traffic: Jan. 2022-Sept. 2024

% Change Same Month Prior Year



6-Week Moving Average



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



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

Total carloads: -285,871, -3.3%

Total carloads excl. coal: 86,782, 1.4%

Intermodal: 882,064, 9.5%

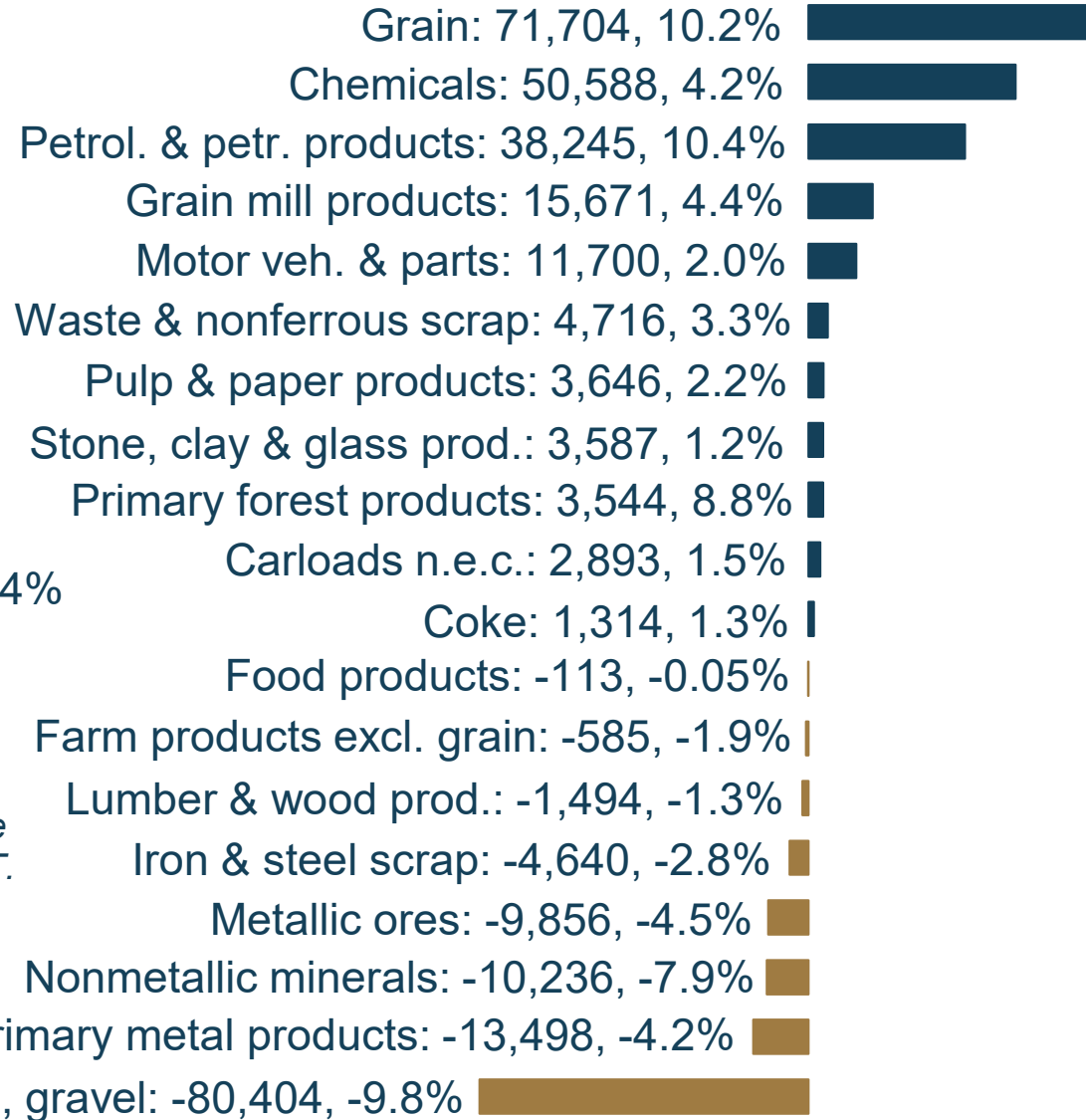
*Bars are based on originations,
do not include intermodal, and do not include
the U.S. operations of CN, CPKC, and GMXT.*

Source: AAR [Rail Time Indicators](#)

Coal: -372,653, -14.6%

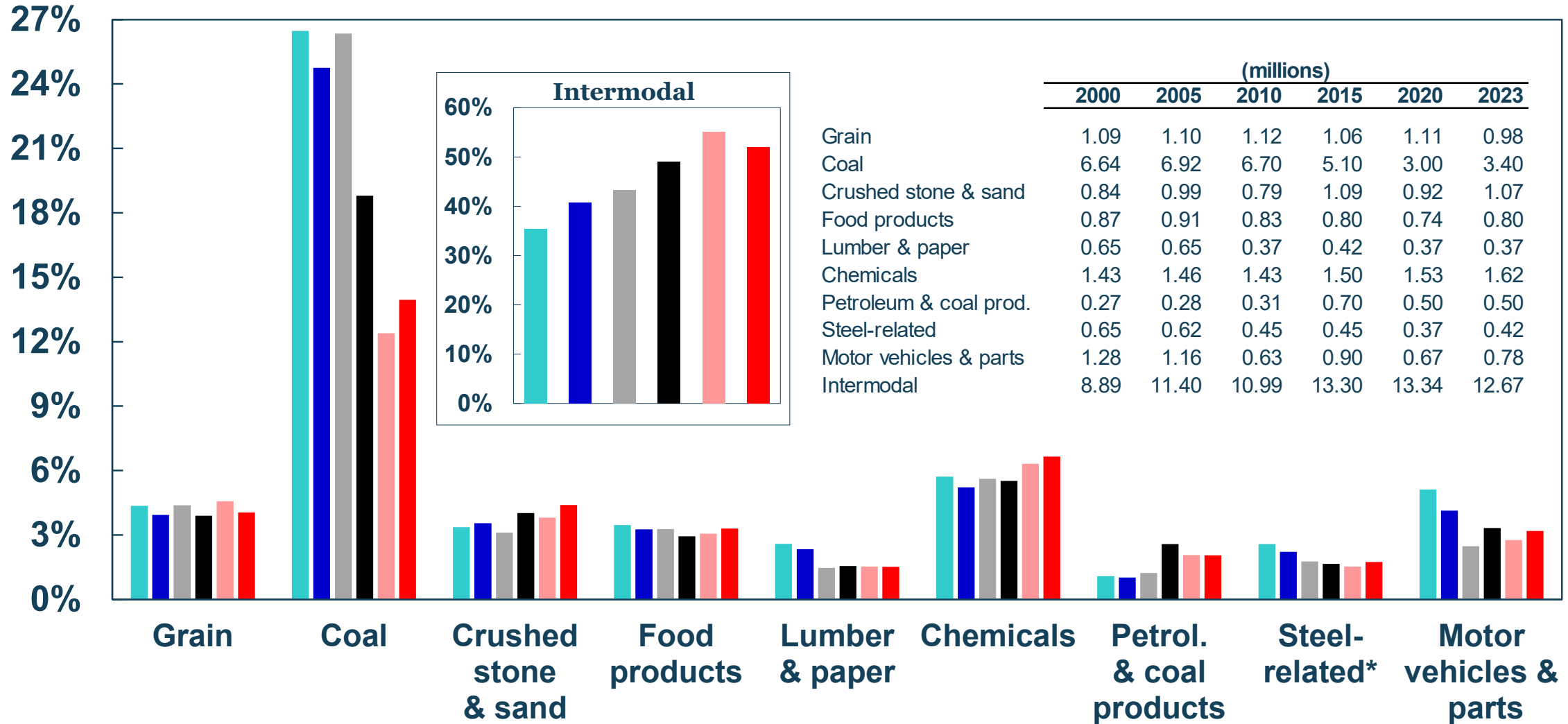


Crushed stone, sand, gravel: -80,404, -9.8%



Share of Originated Units on U.S. Railroads

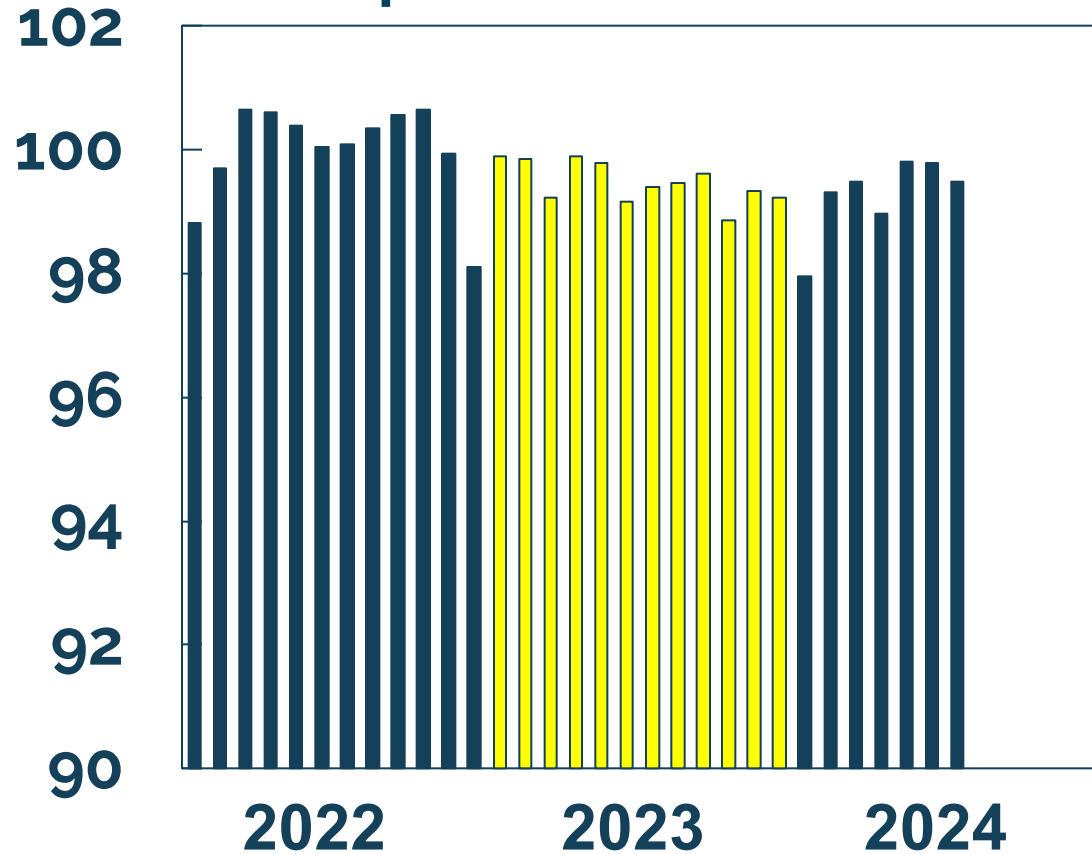
2000 2005 2010 2015 2020 2023



Figures do not include the U.S. operations of CPKC, CN, or GMXT. Source: AAR Weekly Railroad Traffic

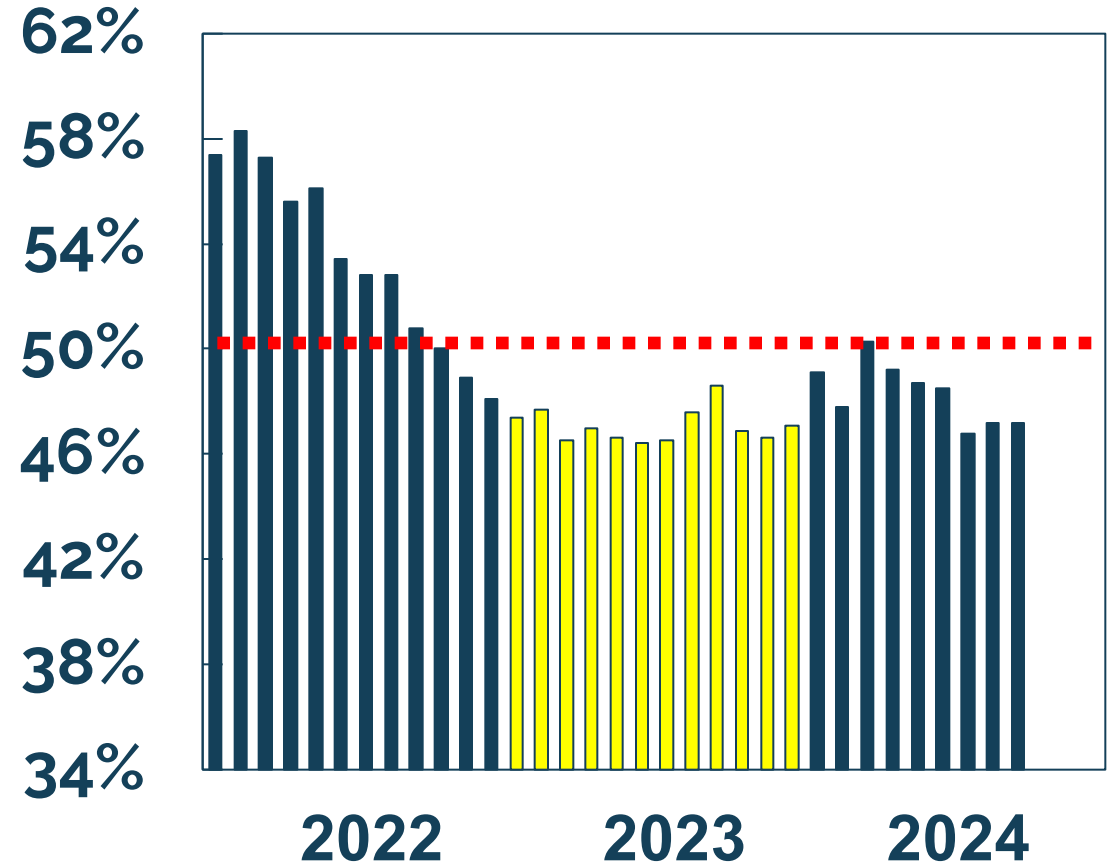
Weakness in Manufacturing

U.S. Manufacturing Output (2012 = 100)



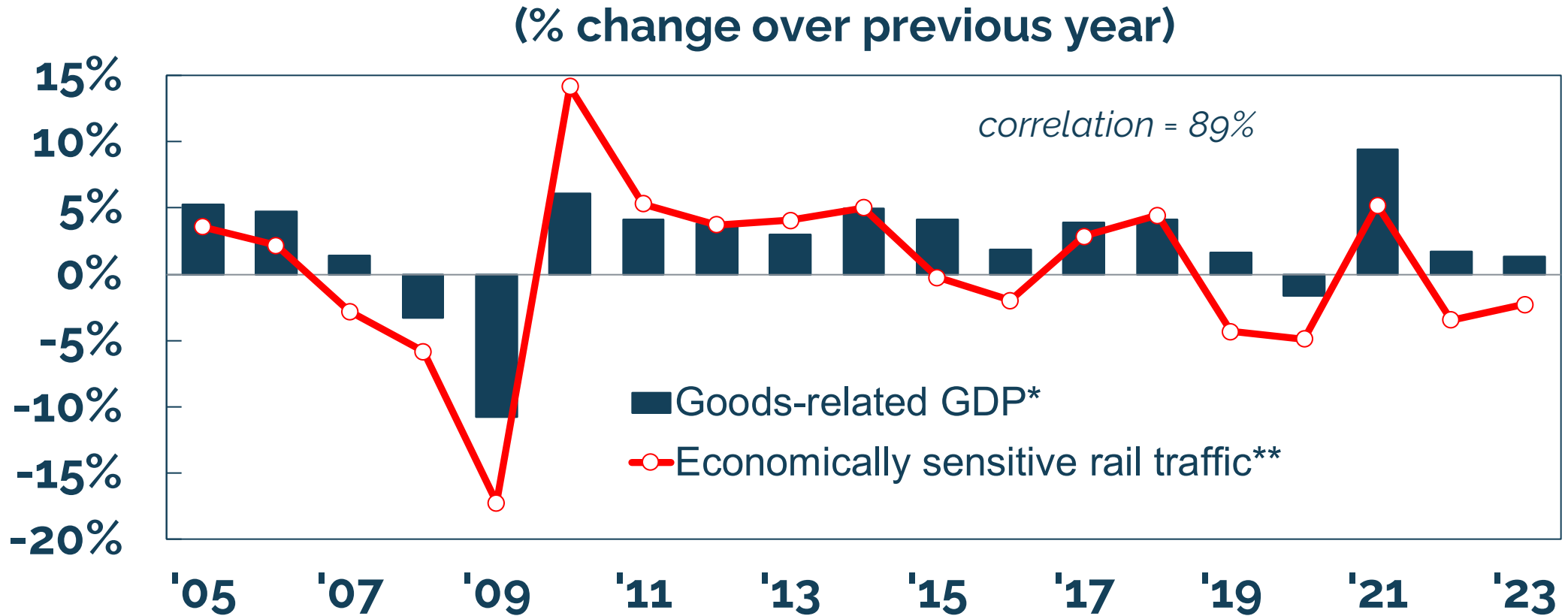
Source: Federal Reserve Board

Manufacturing PMI® (< 50% = contraction)



Source: Institute for Supply Management®

Best Correlation: Goods-Related GDP* and Economy-Sensitive Rail Traffic**



•Imports, exports, & personal consumption of goods; fixed residential investment; business investment in equipment & structures; govt. gross investment; and change in inventories.

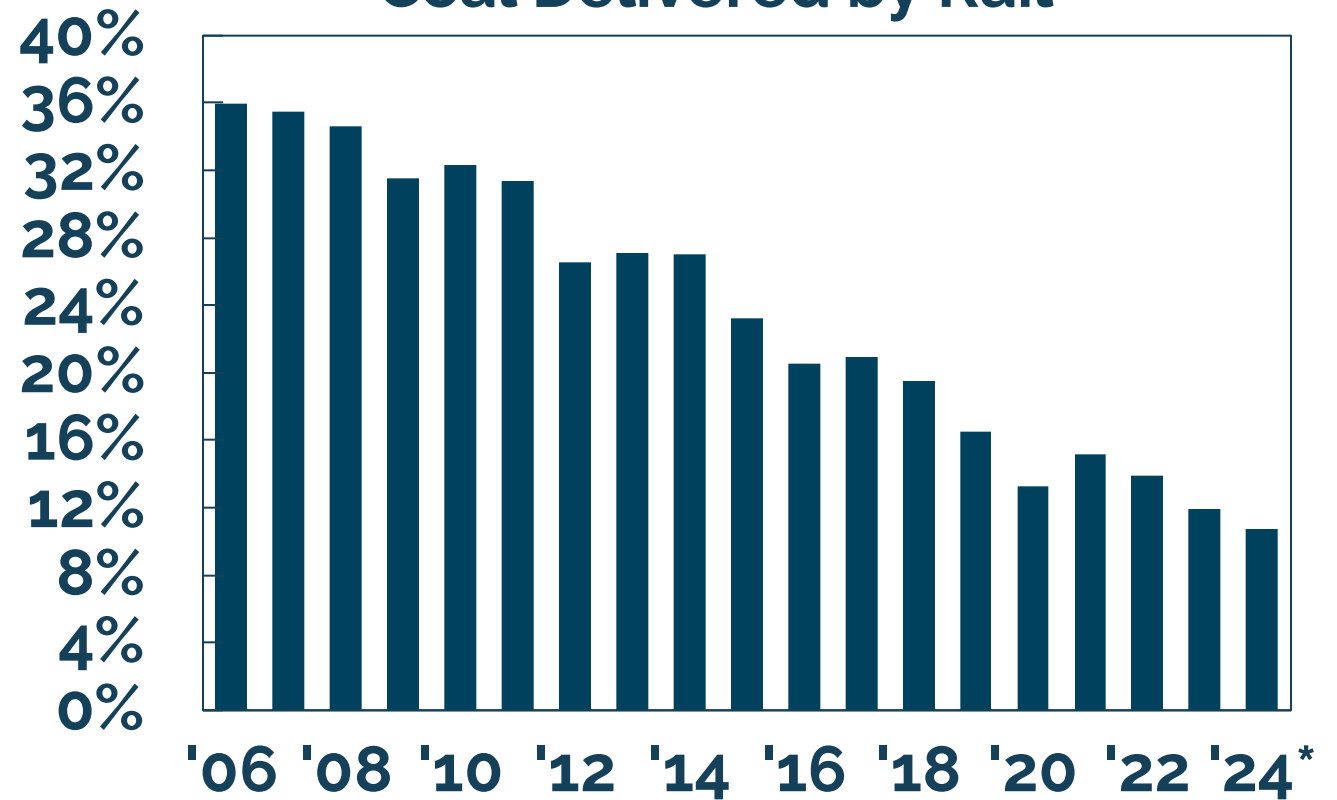
**Originated U.S. intermodal units plus U.S. carloads excluding coal and grain. Rail traffic excludes the U.S. operations of Canadian and Mexican railroads. Source: BEA, AAR

Continued Decline for Coal: Carloads Down 55% 2008-2023

| % U.S. Electricity Generation | | | | |
|-------------------------------|------------|------------|------------|------------|
| | 2000 | 2010 | 2020 | 2024* |
| Coal | 52% | 45% | 19% | 15% |
| Natural gas | 16% | 24% | 41% | 43% |
| Nuclear | 20% | 20% | 20% | 18% |
| Renewables | 2% | 4% | 12% | 18% |
| Hydro | 7% | 6% | 7% | 6% |

*Through July Source: EIA

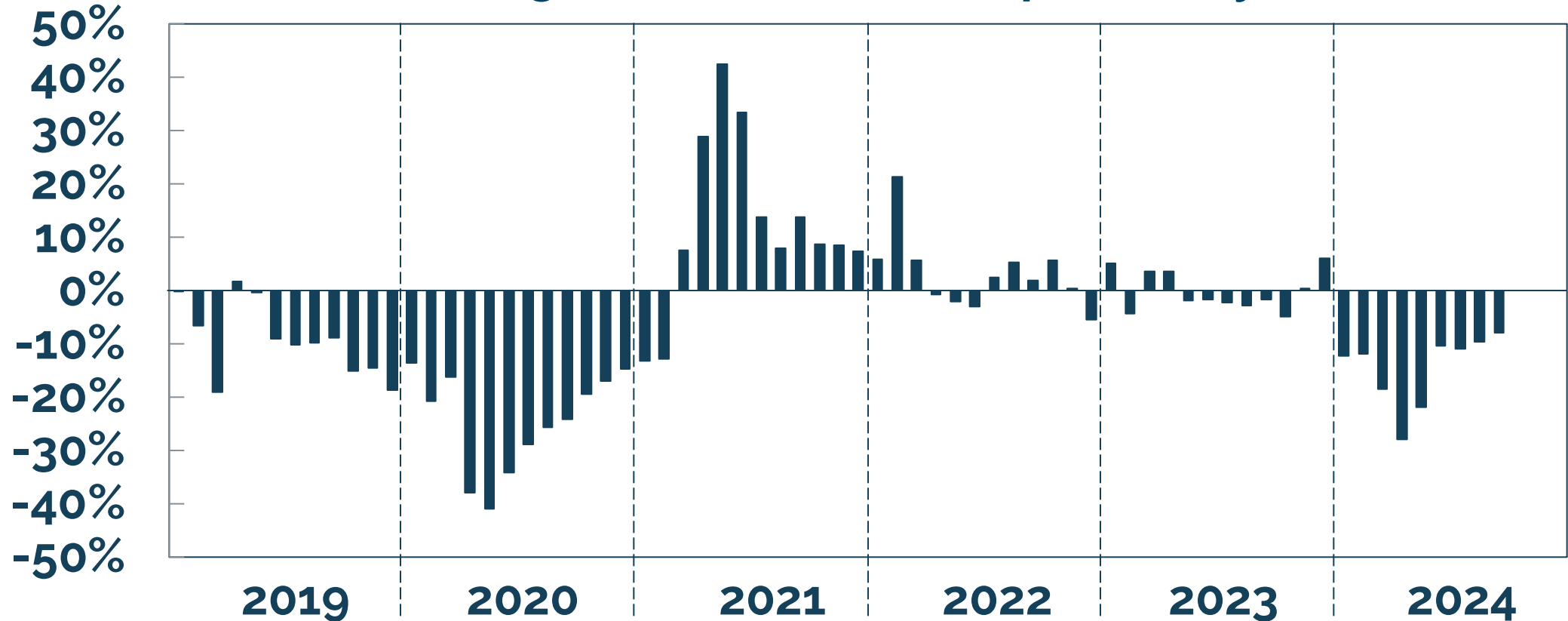
Share of U.S. Electricity Generated by Coal Delivered by Rail



*Based on Jan.-July. Figures are estimates based on AAR analysis of EIA data.

U.S. Rail Carloads of Coal

(% change from same month previous year)



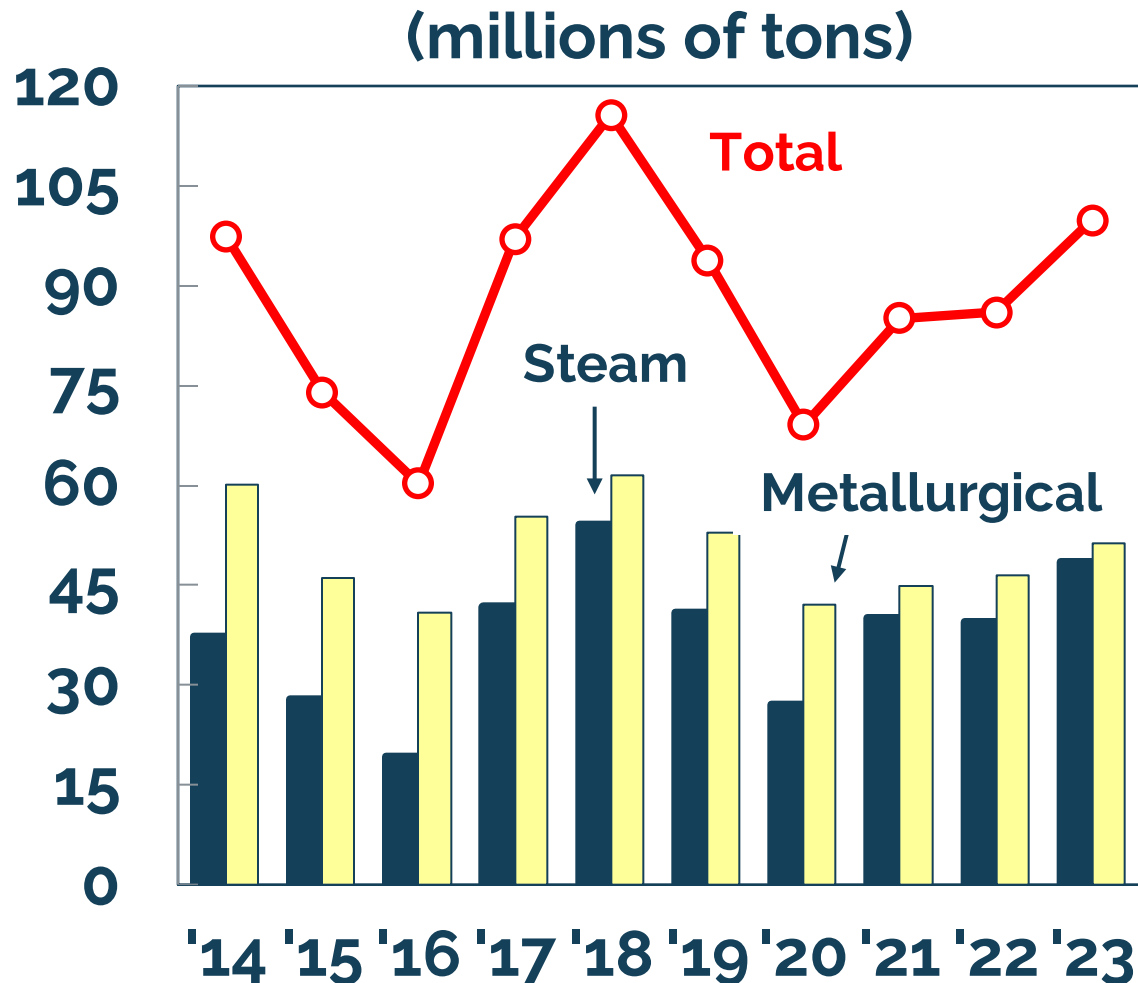
Data are based on originations, are not seasonally adjusted, don't include intermodal, and don't include the U.S. operations of CN, CPKC, and GMXT. Source: AAR *Rail Time Indicators*

Consequences of Coal's Decline

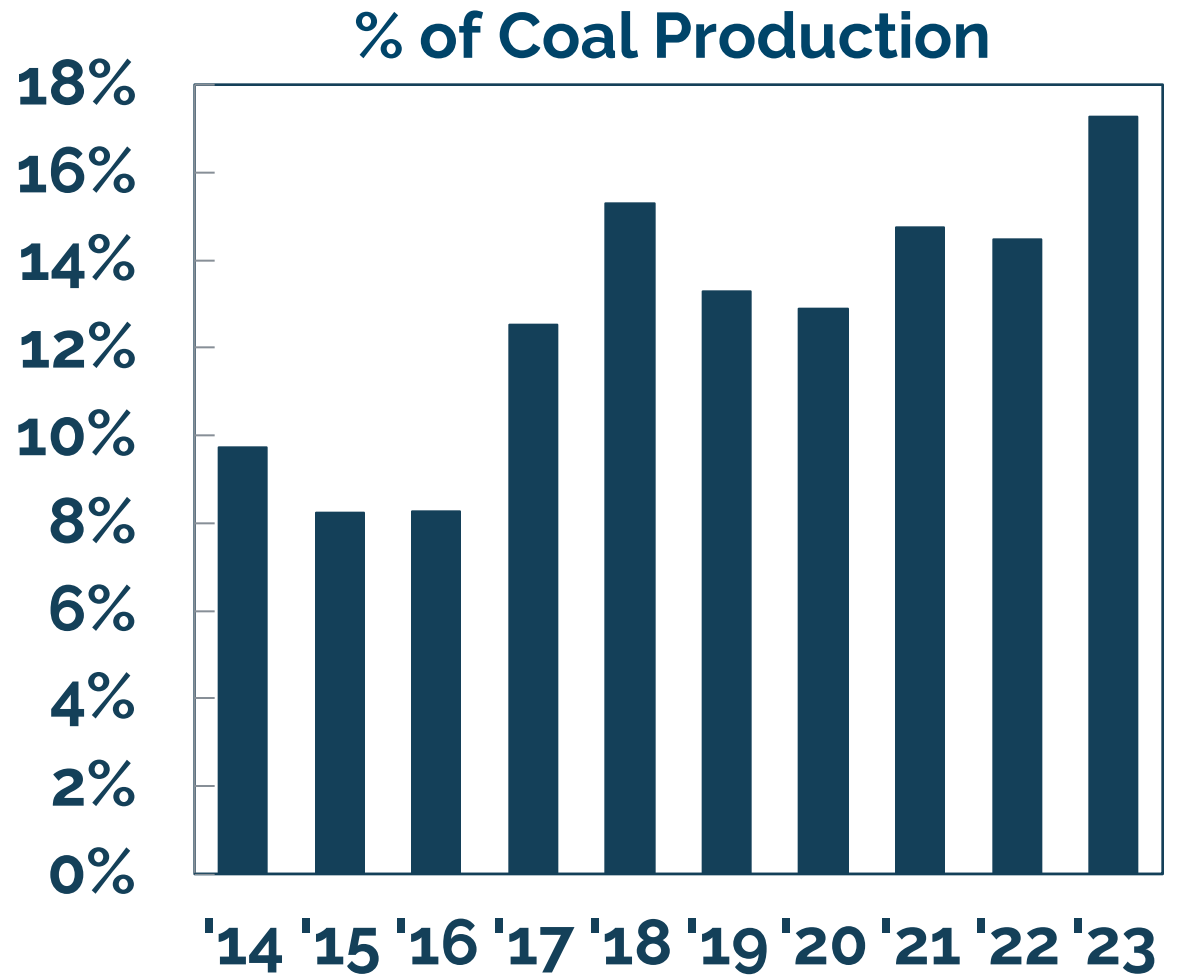
- Reduced resources and assets across coal supply chain
- Less stable energy markets
- Coal volumes more volatile
- Stranded rail assets continue to incur expenses



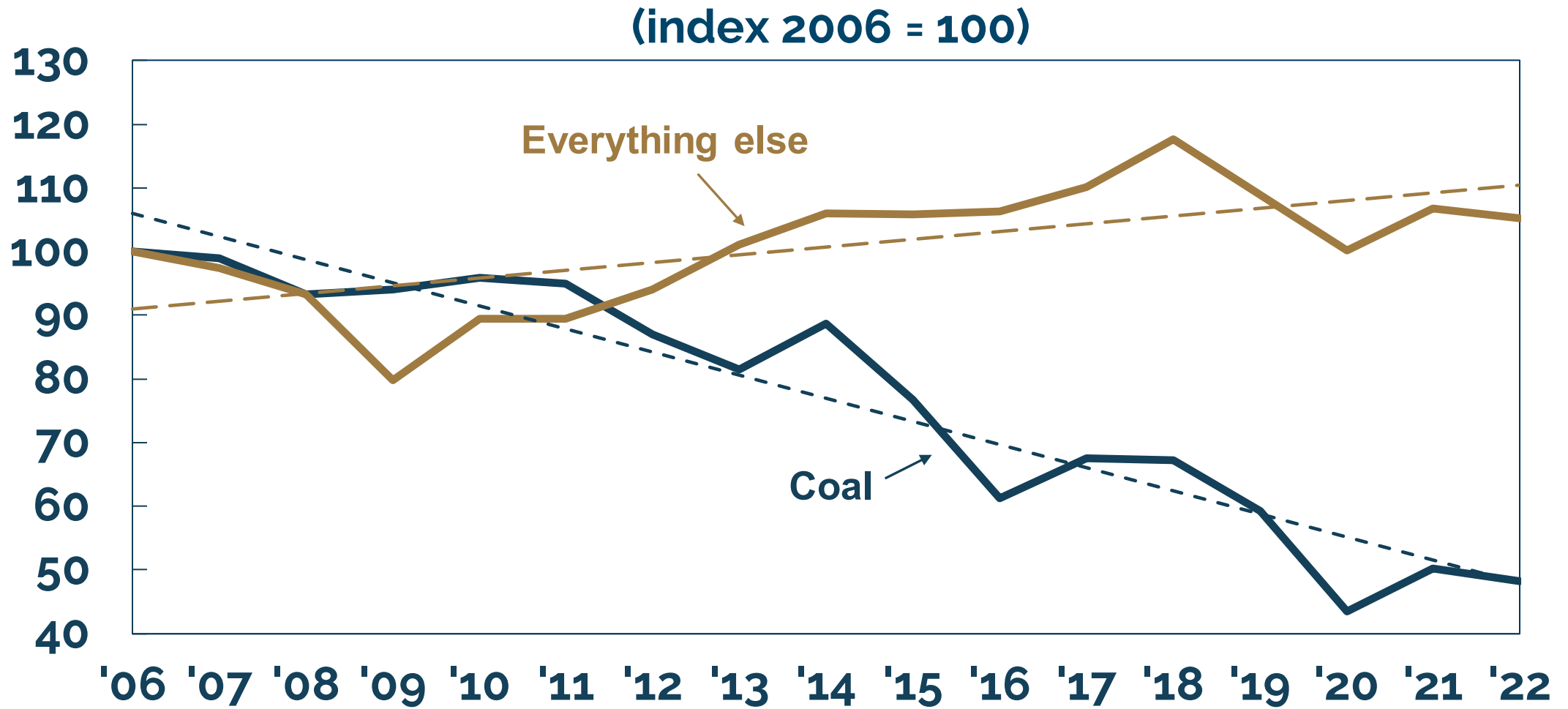
U.S. Coal Exports



Source: EIA



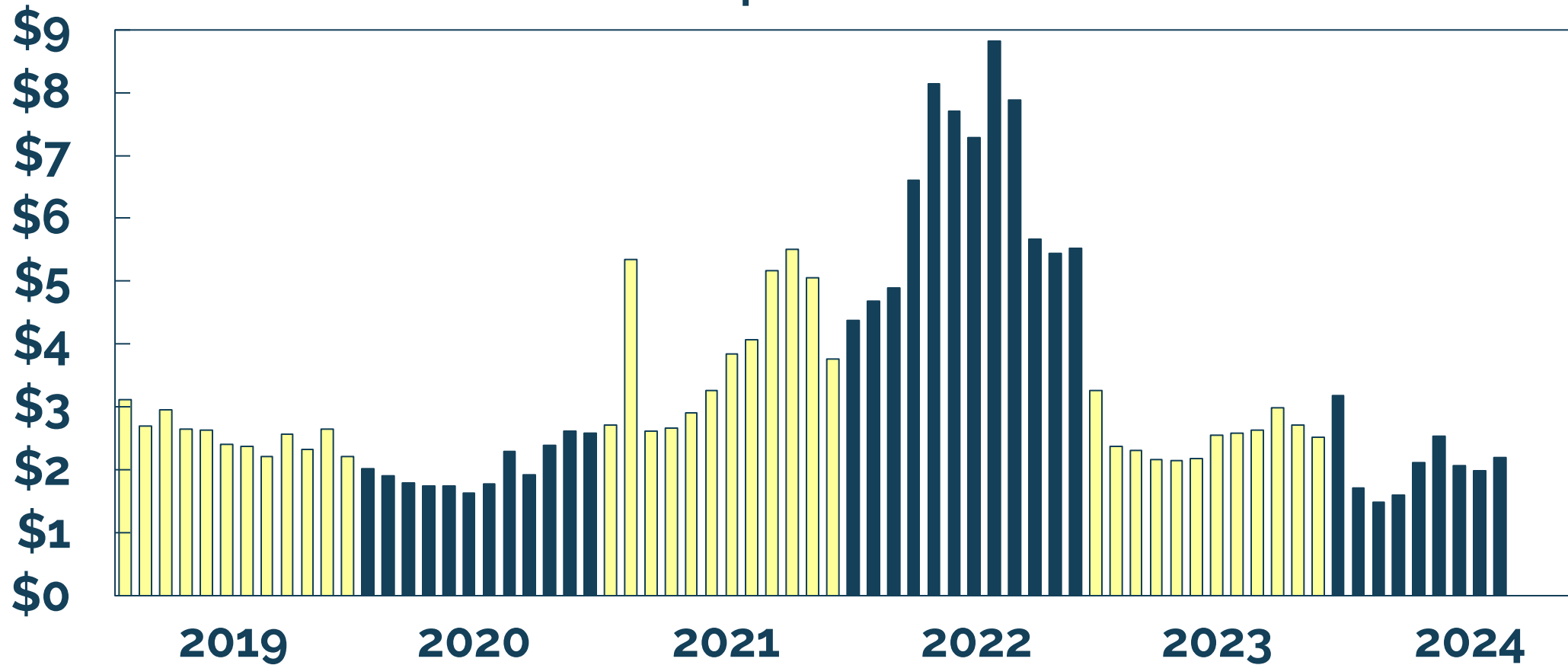
U.S. Rail Ton-Miles



Dashed lines = trend lines. Source: STB

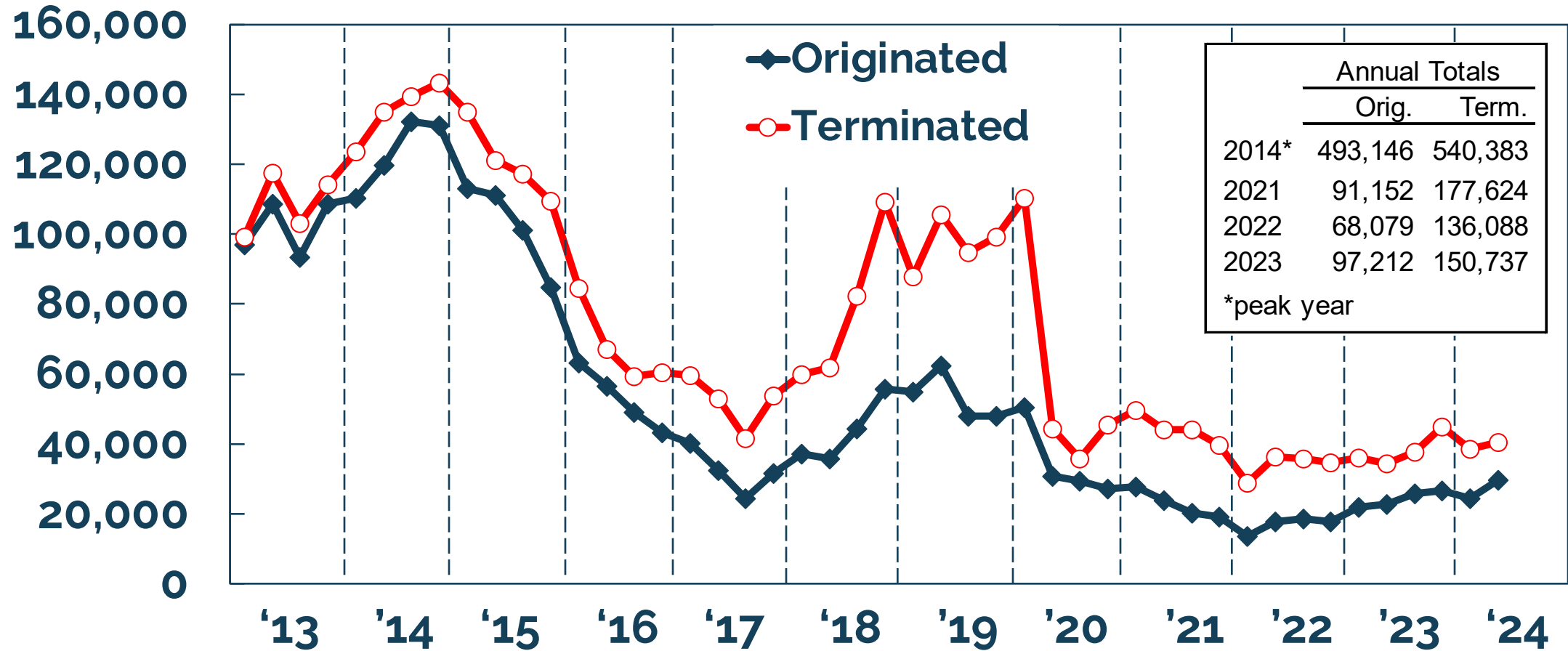
Extremely Low Recent Natural Gas Prices

(dollars per million BTU*)



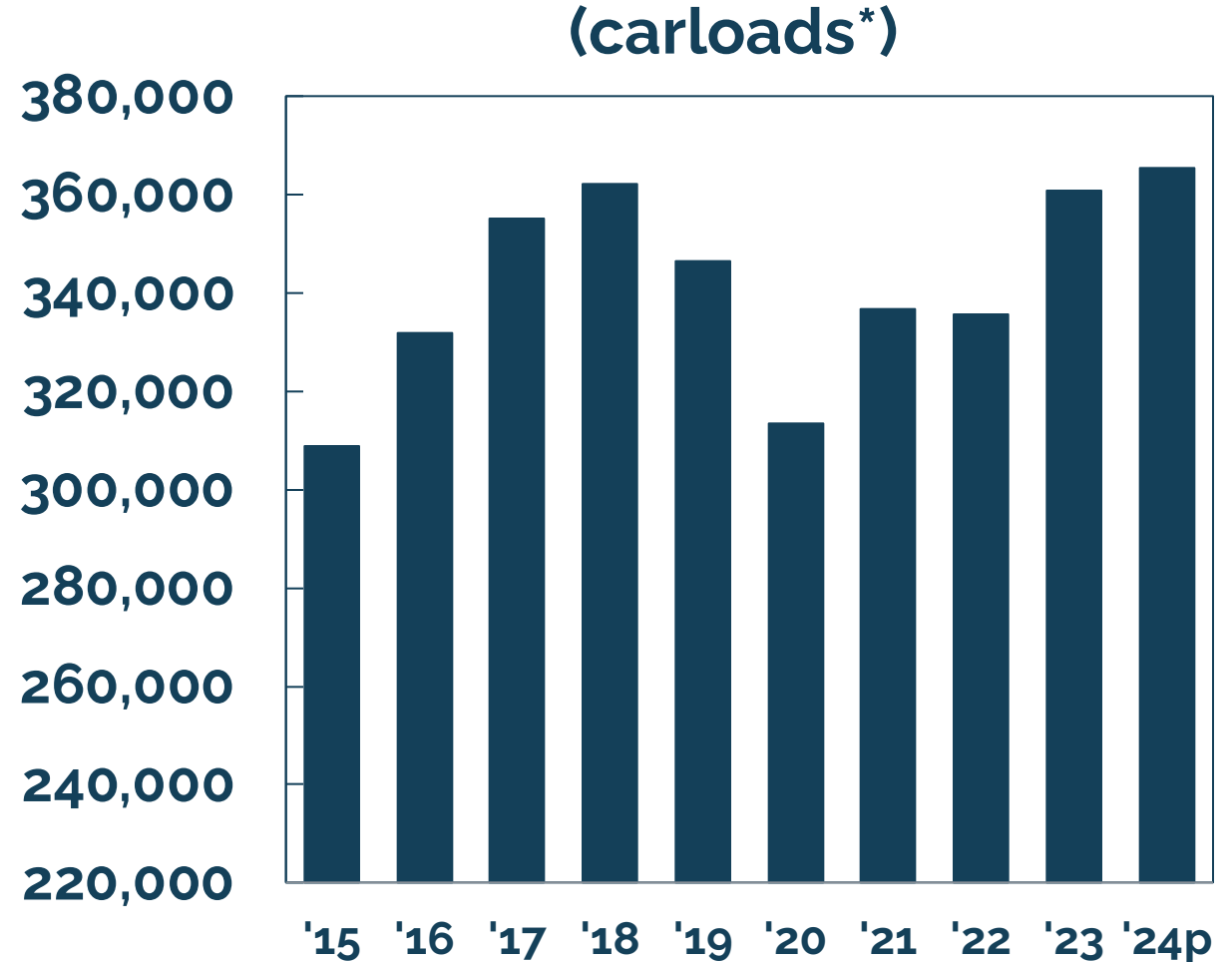
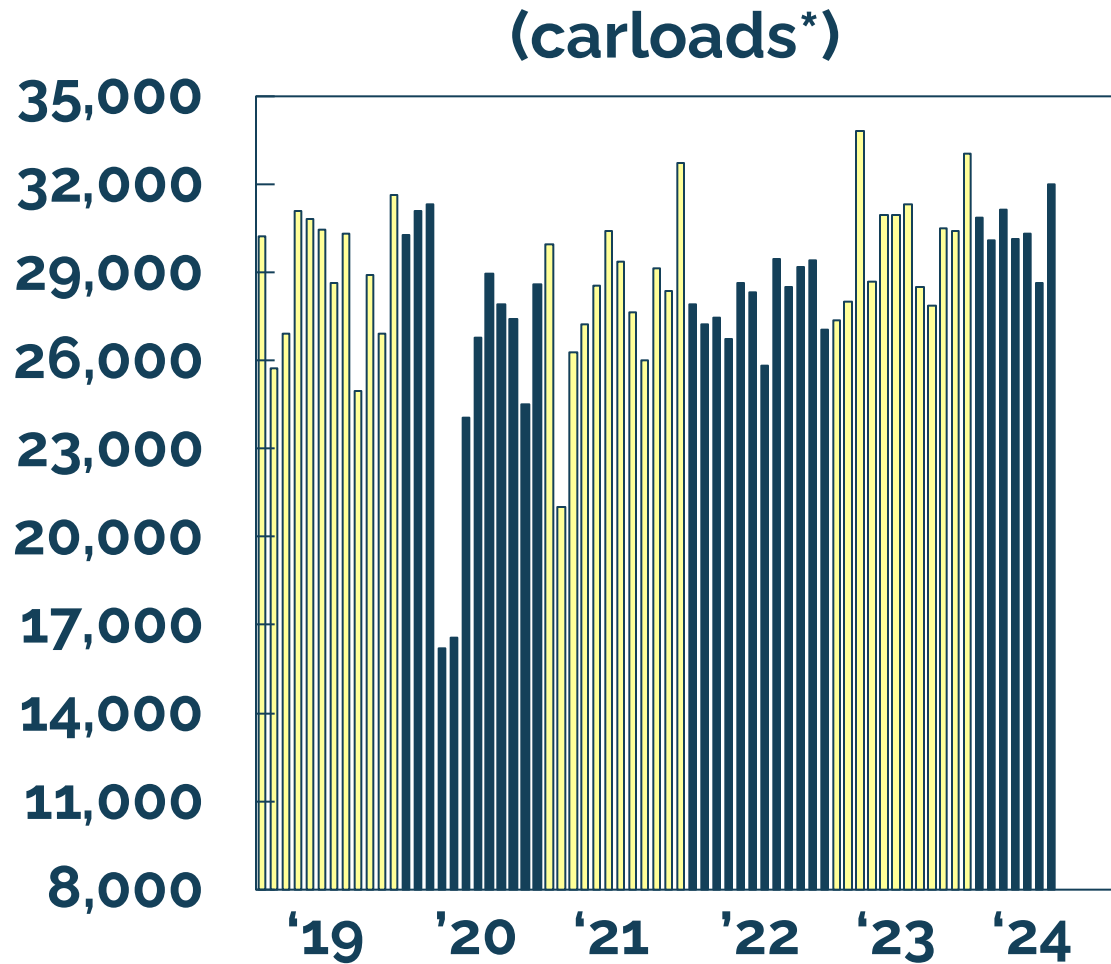
*Henry Hub spot price. Source: Energy Information Administration

U.S. Rail Carloads of Crude Oil by Quarter



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

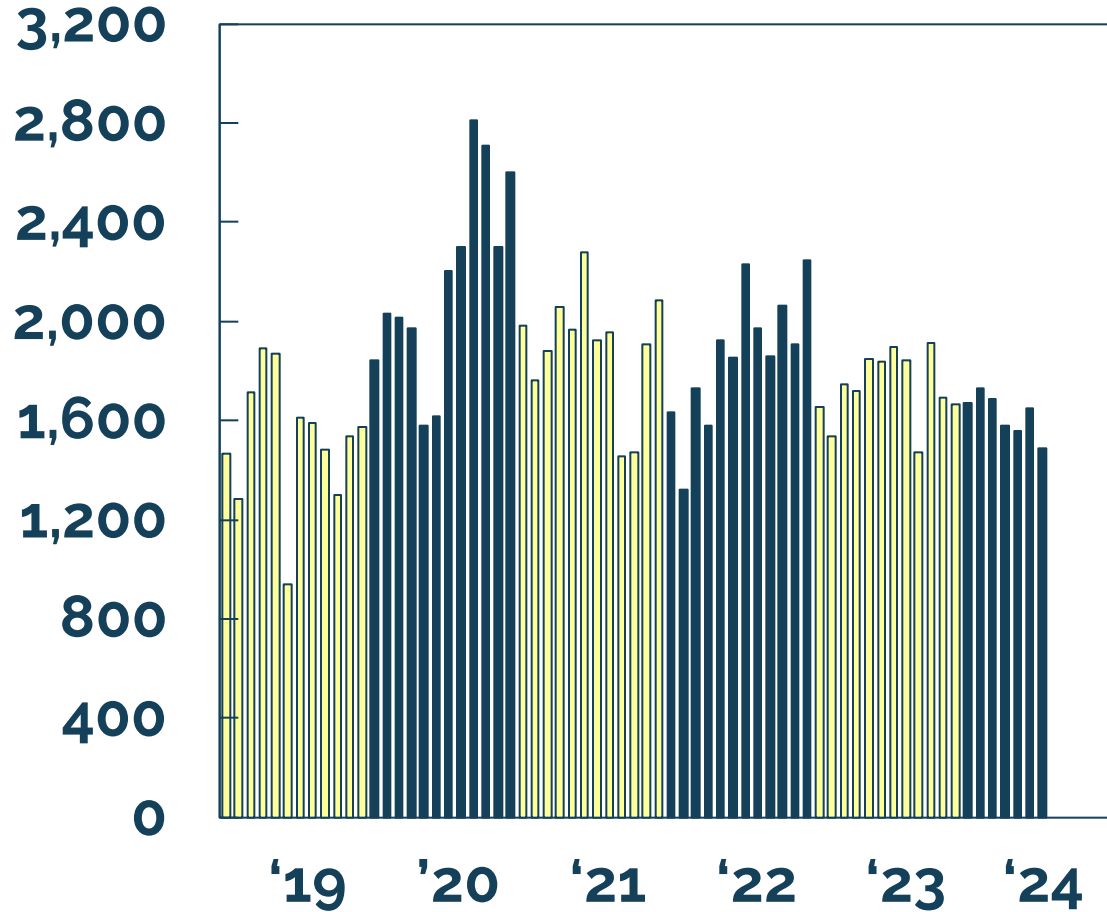
U.S. Ethanol Shipments by Rail



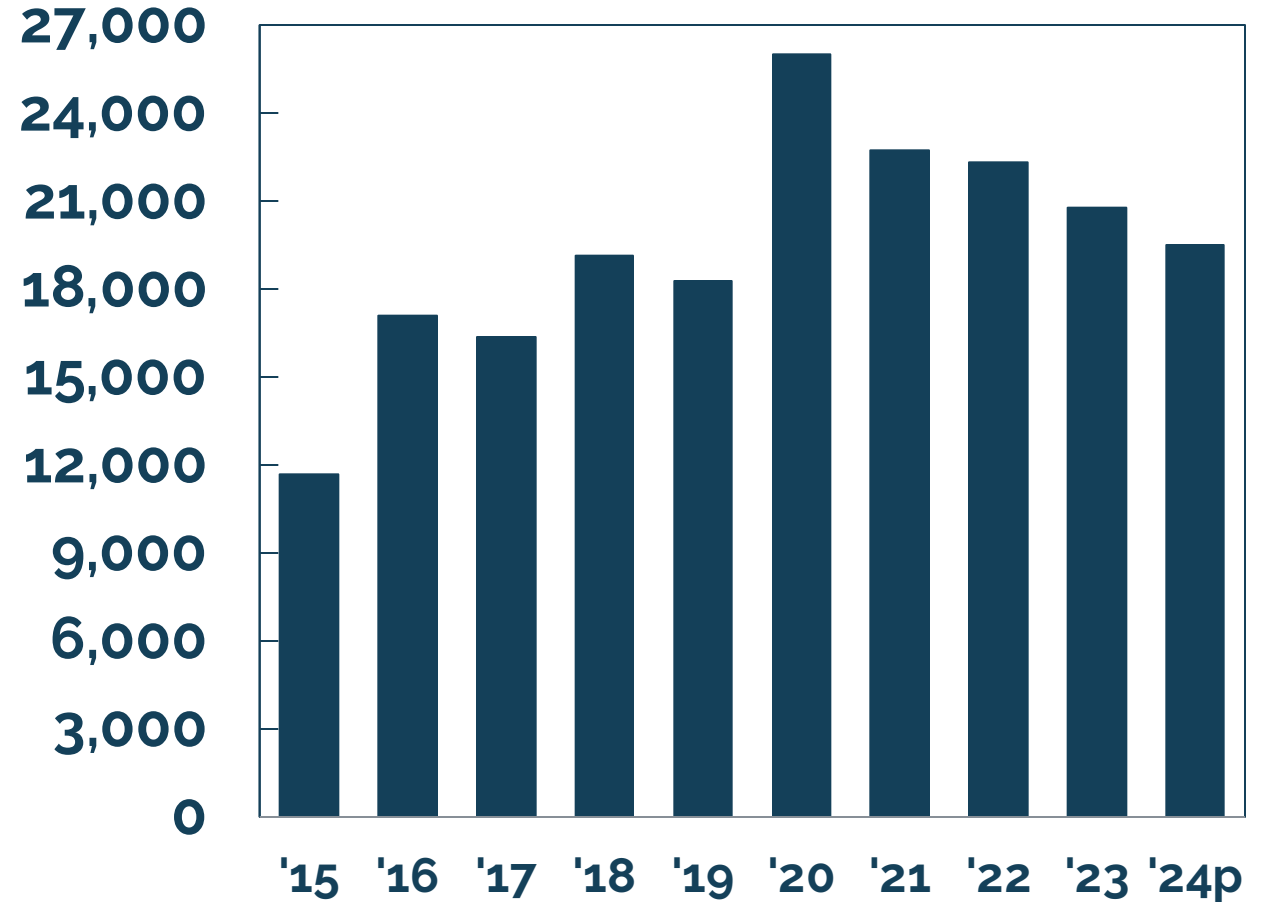
*Assumes 715 barrels (30,030 gallons) per carload. Figures in these charts might differ from figures from different rail traffic sources. p - Jan.-July annualized. Source: EIA

U.S. Biodiesel Shipments by Rail

(carloads*)

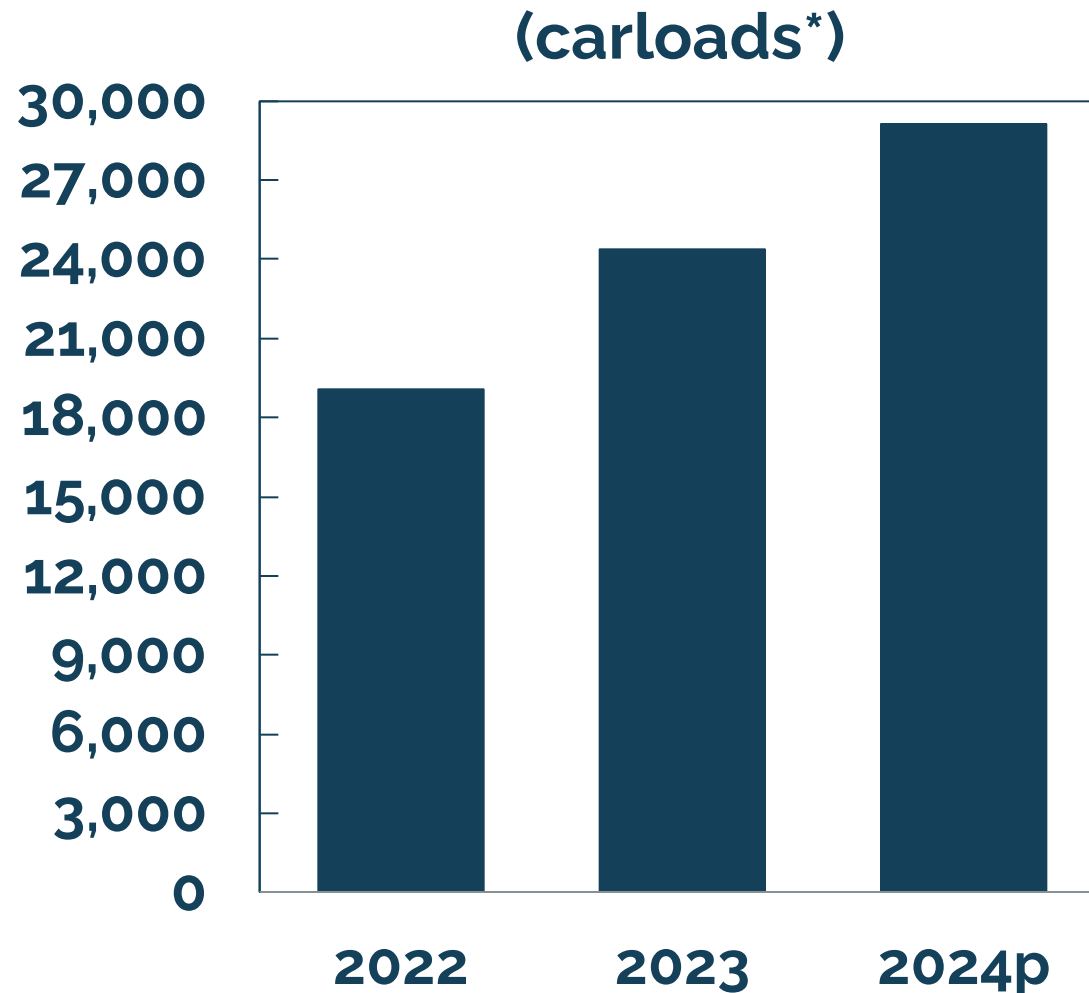
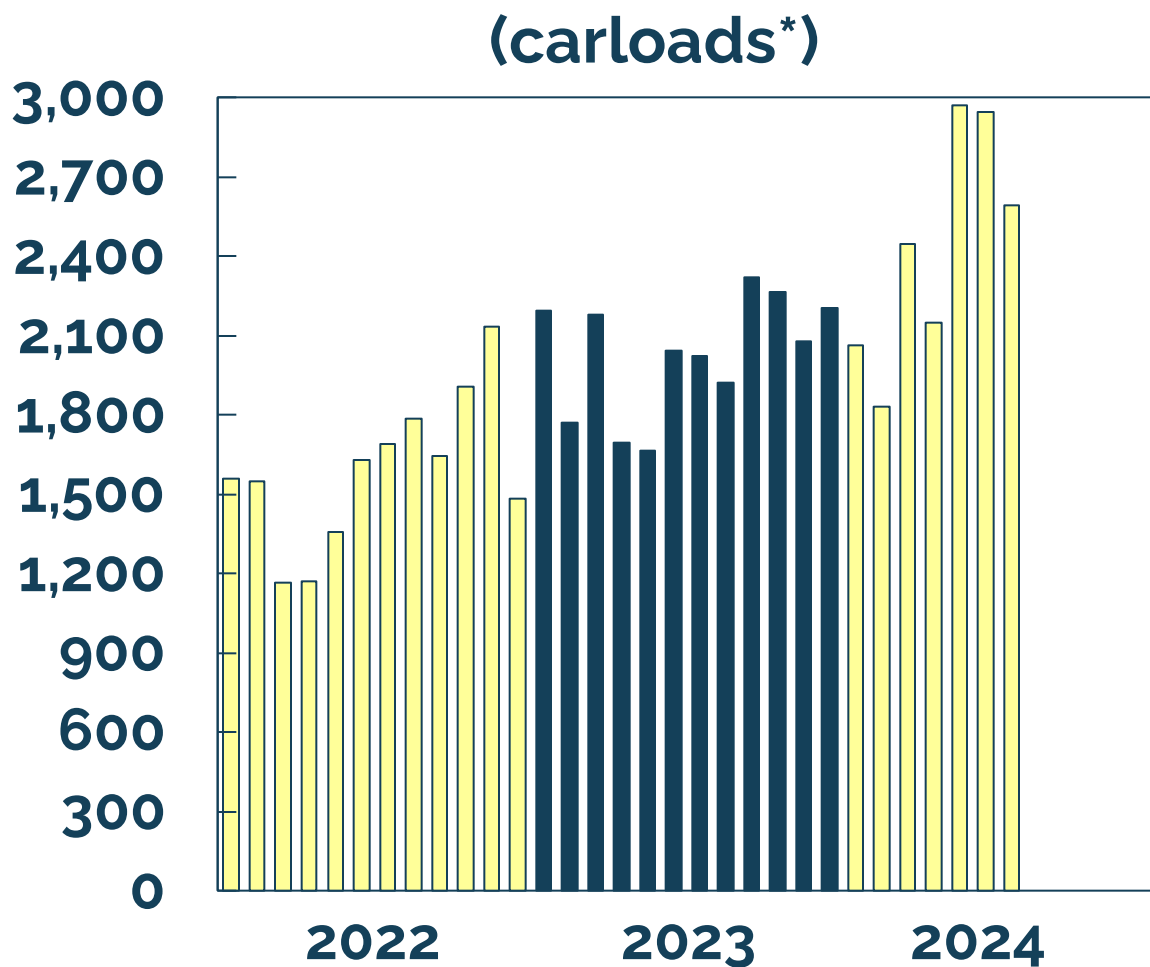


(carloads*)



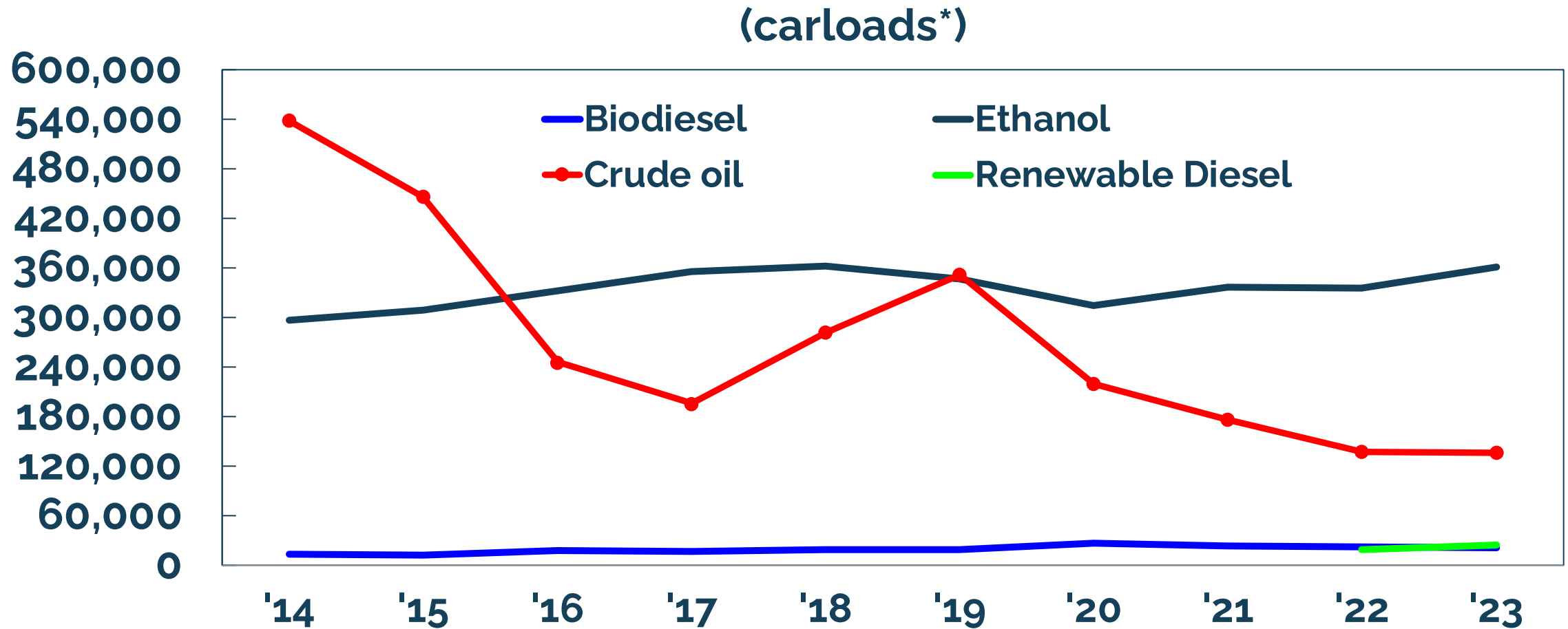
*Assumes 715 barrels (30,030 gallons) per carload. p - Jan.-July annualized Source: EIA

U.S. Renewable Diesel Shipments by Rail



*Assumes 715 barrels (30,030 gallons) per carload. **Jan.-July annualized Source: EIA

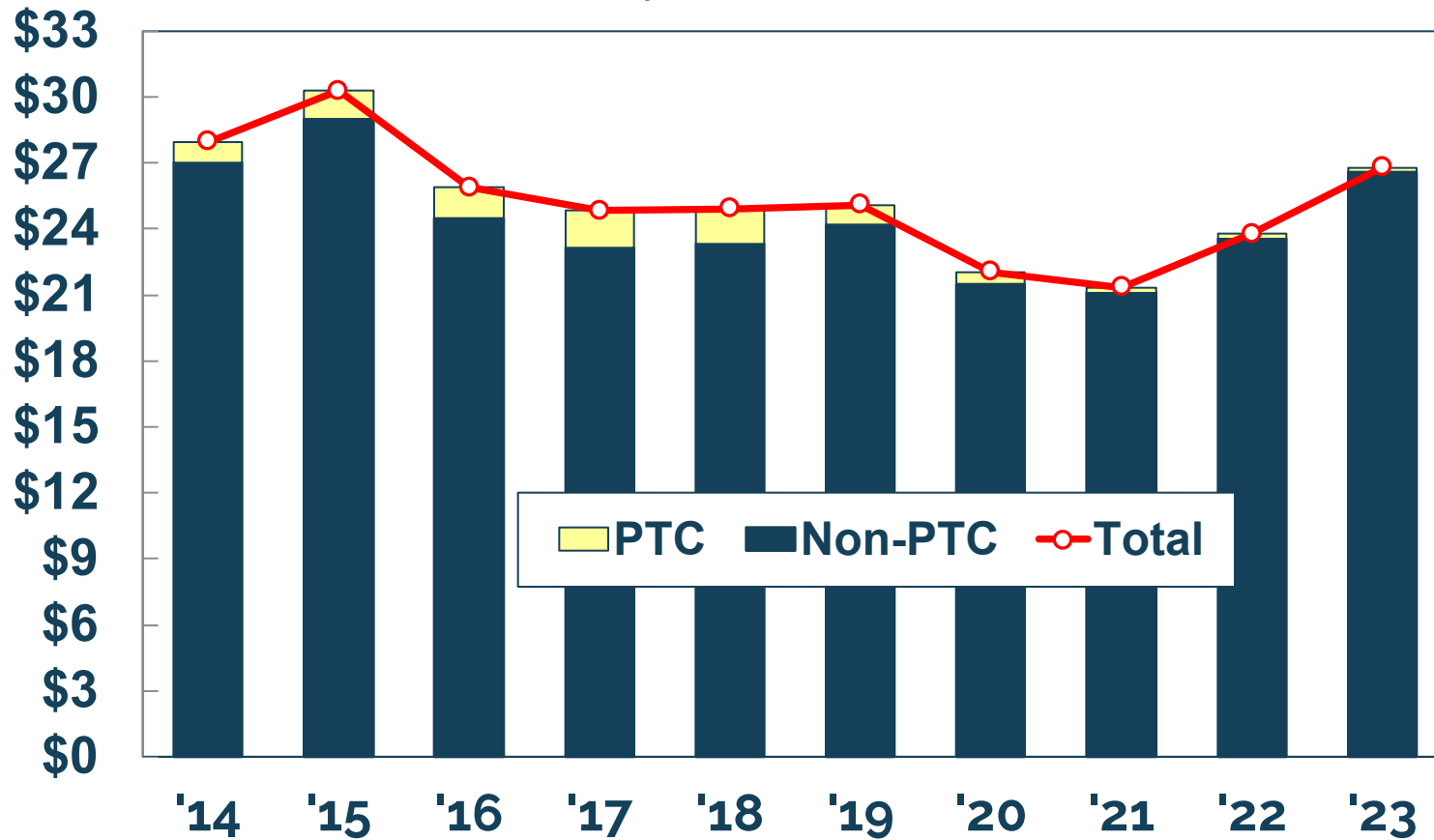
U.S. Shipments of Energy Products by Rail: 2014-2023



*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*

(\$ billions)*



Capital Spending as % of Revenue*

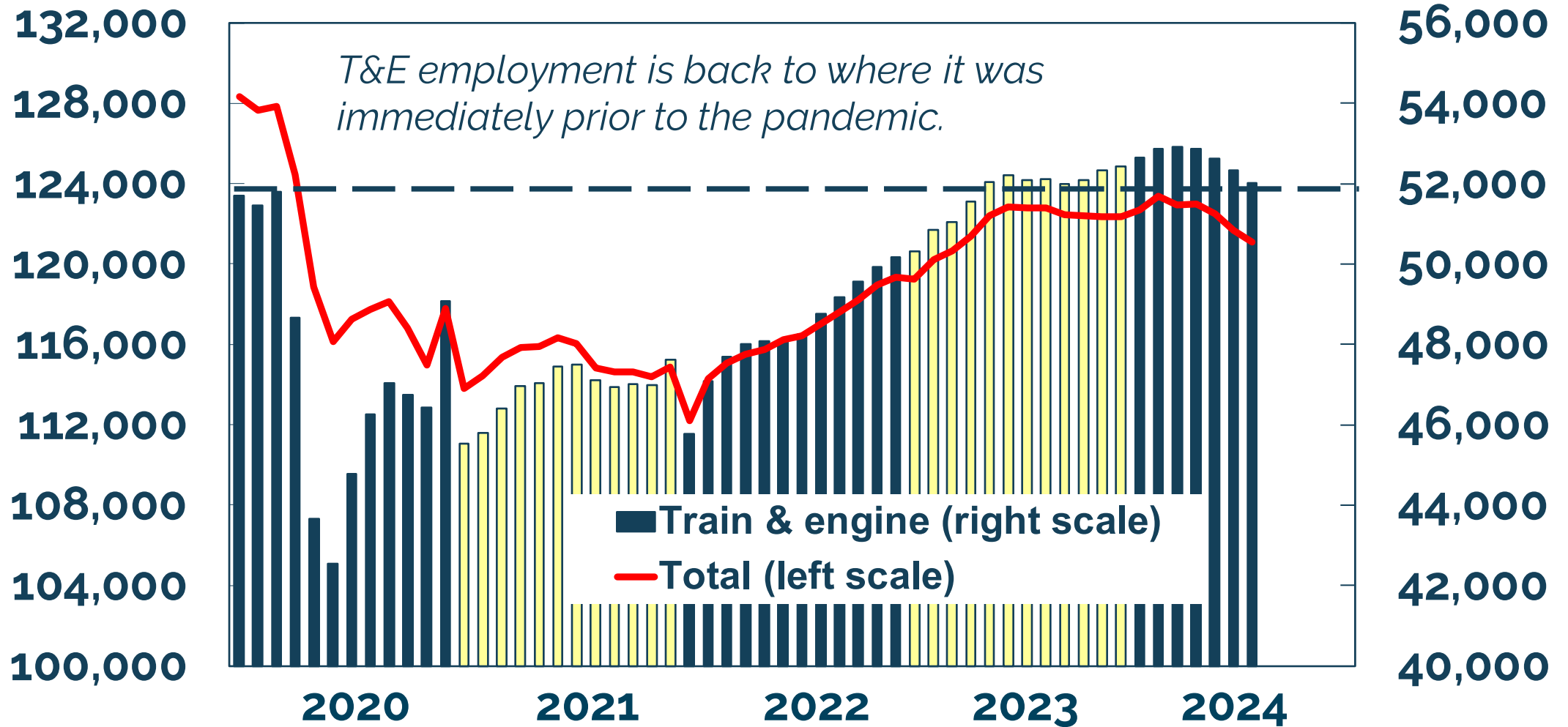
| | |
|-------------------------------|--------------|
| Avg. all manufacturing | 3.0% |
| Petroleum & coal products | 2.3% |
| Food | 2.3% |
| Machinery | 2.6% |
| Motor vehicles & parts | 2.8% |
| Fabricated metal products | 3.2% |
| Primary metal products | 3.2% |
| Wood products | 3.4% |
| Plastics & 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

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

Railroads Continue to Invest in Human Capital to Serve Their Customers



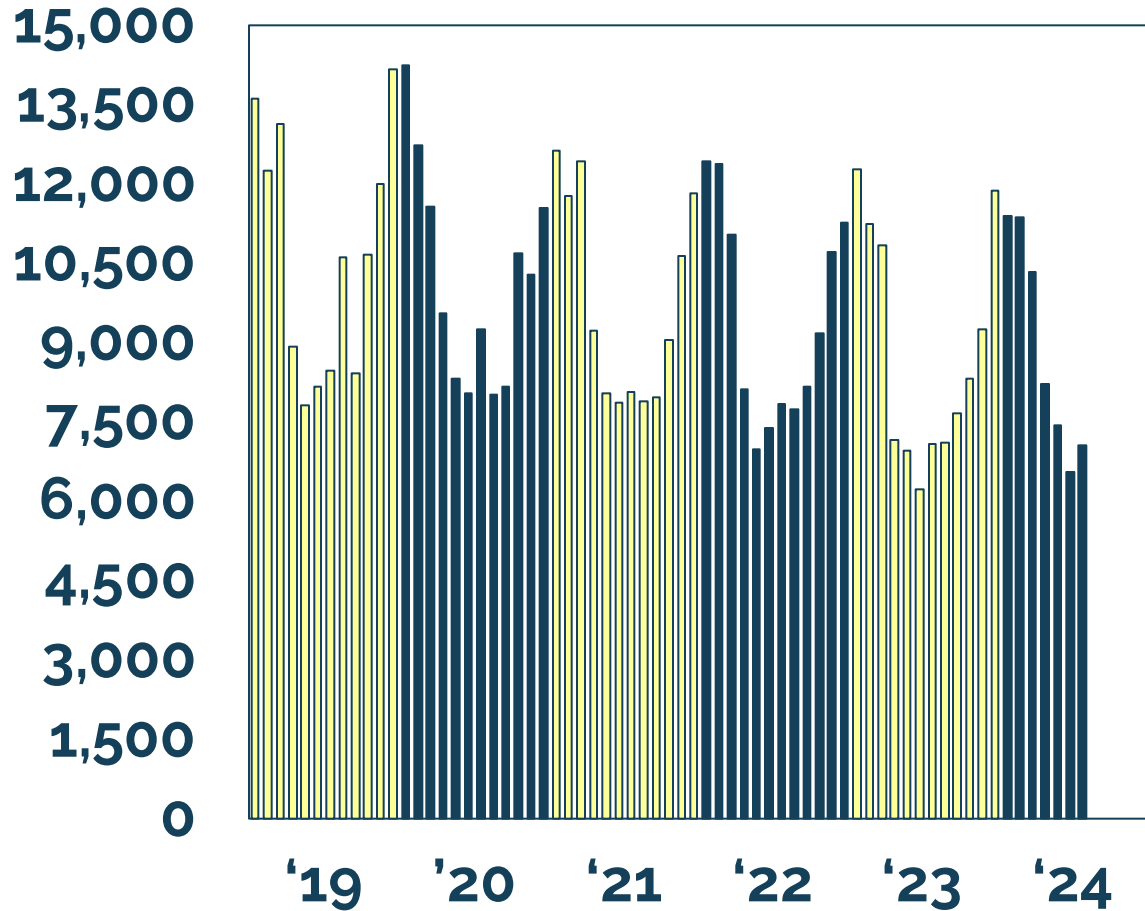
Source: STB



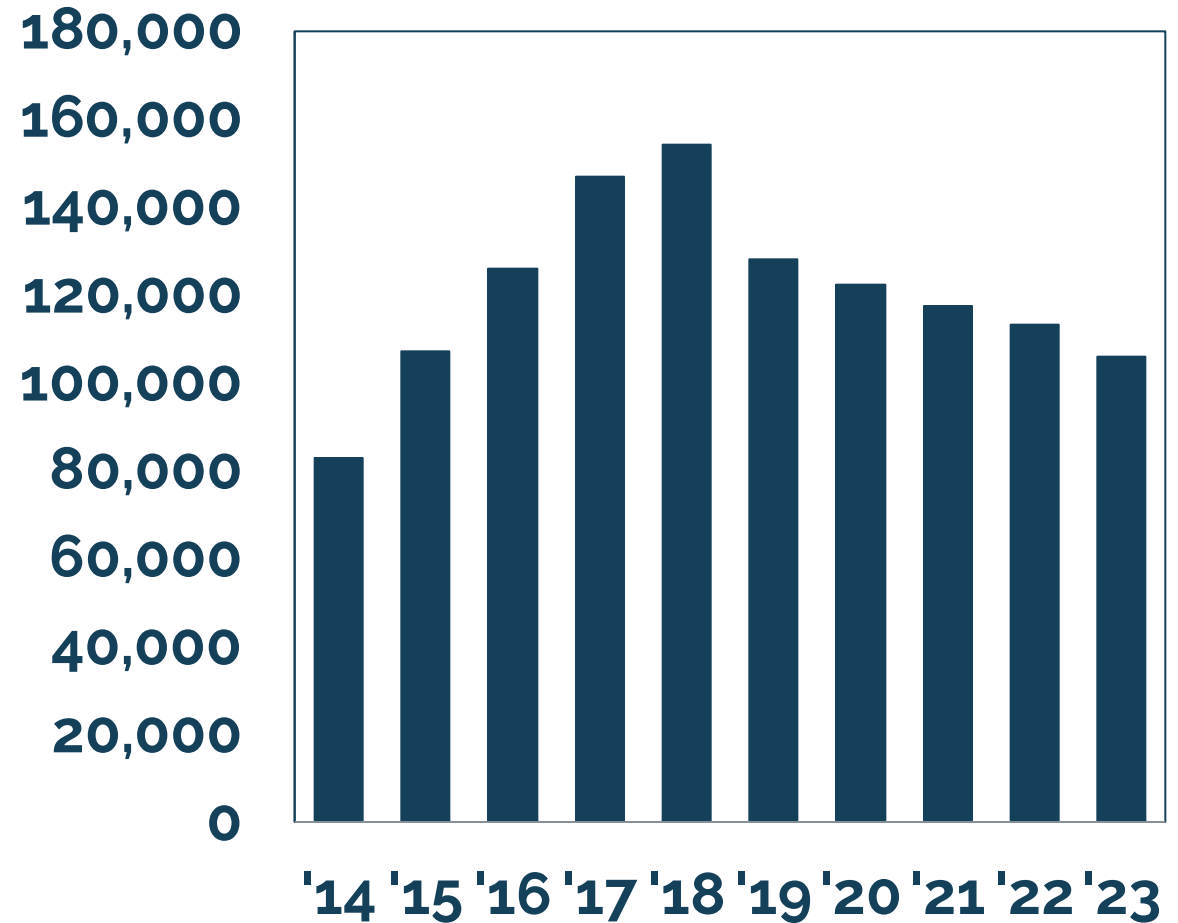
Other slides

U.S. Propane Shipments by Rail

(carloads*)

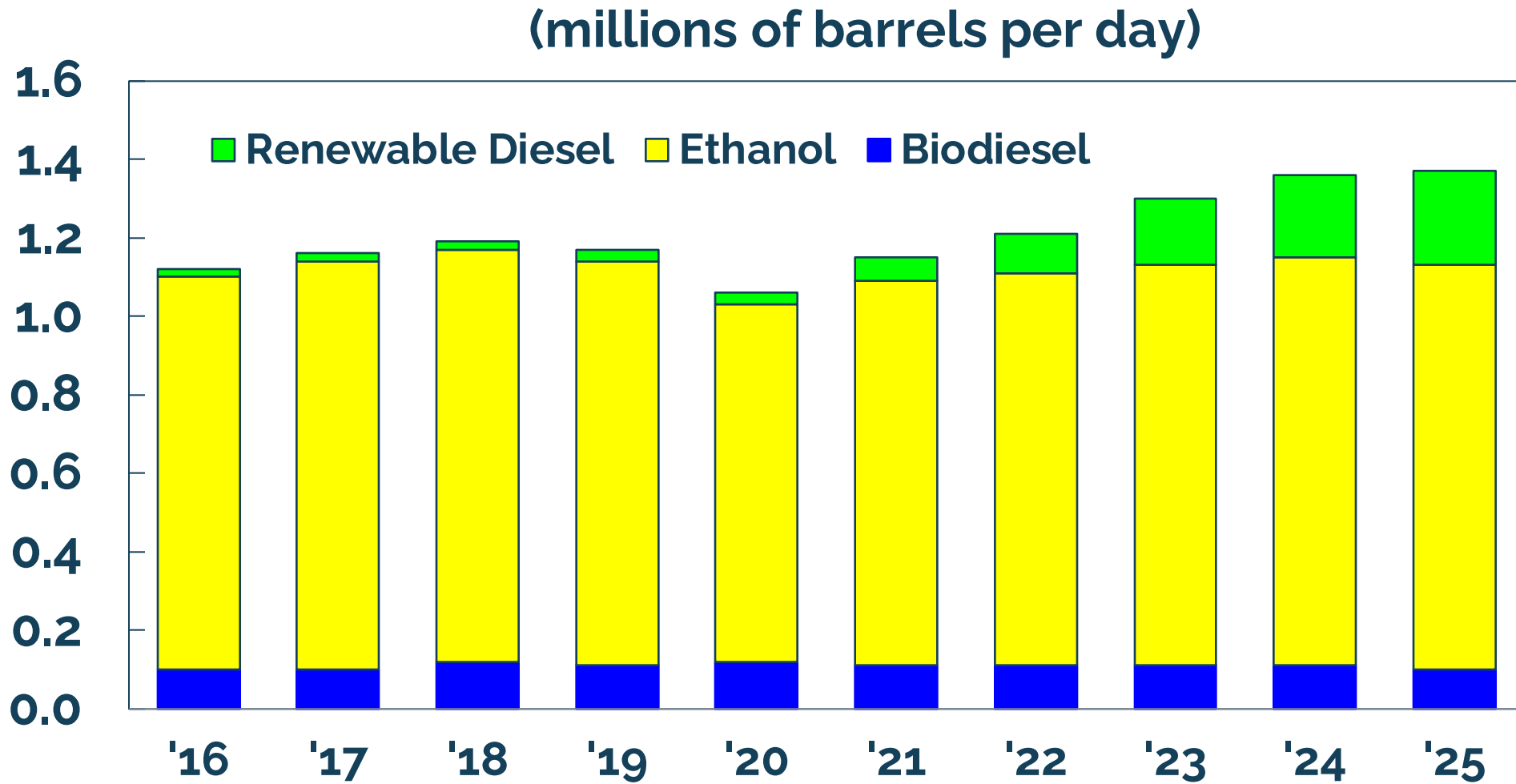


(carloads*)



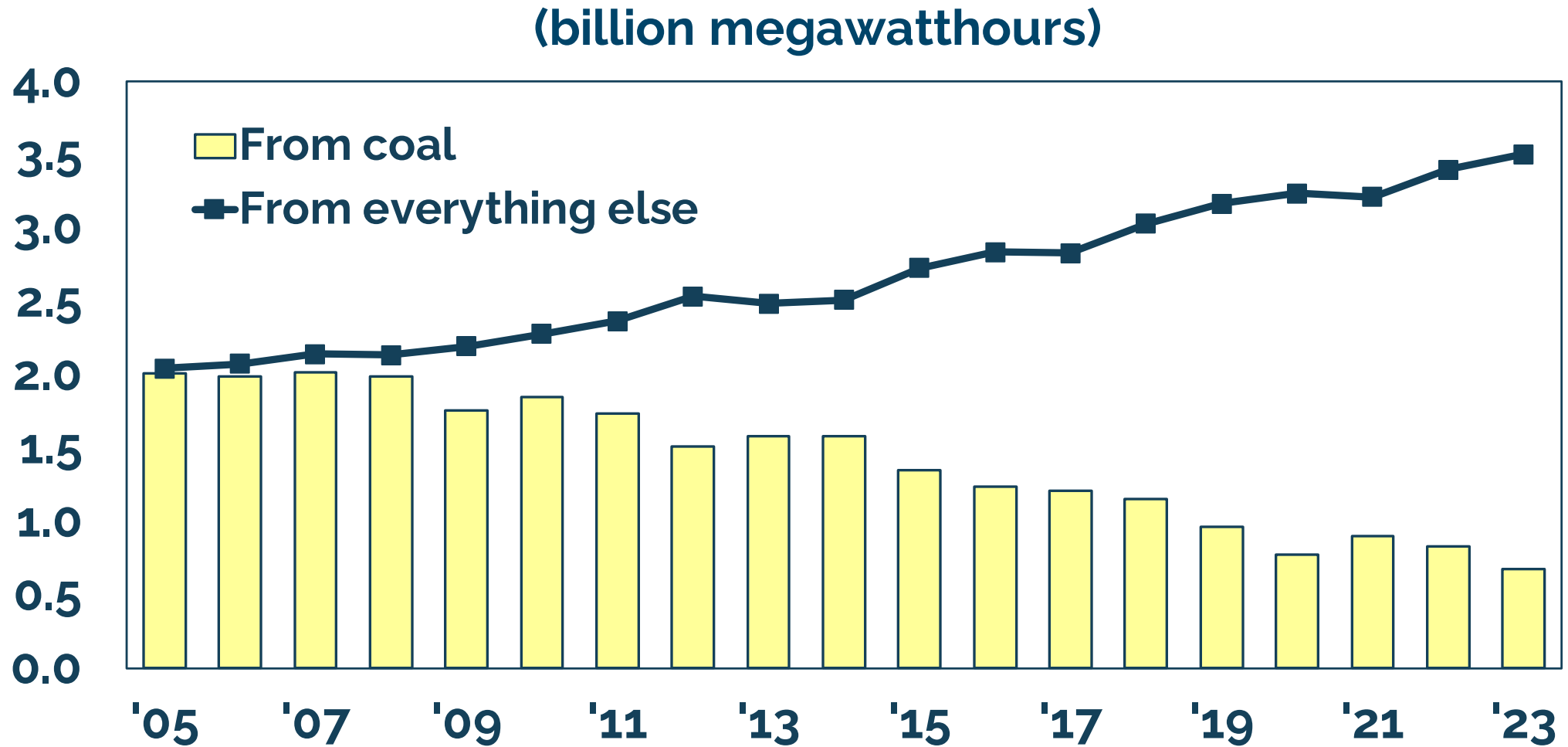
*Assumes 715 barrels (30,030 gallons) per carload. Source: Energy Information Administration

U.S. Production of Biofuels



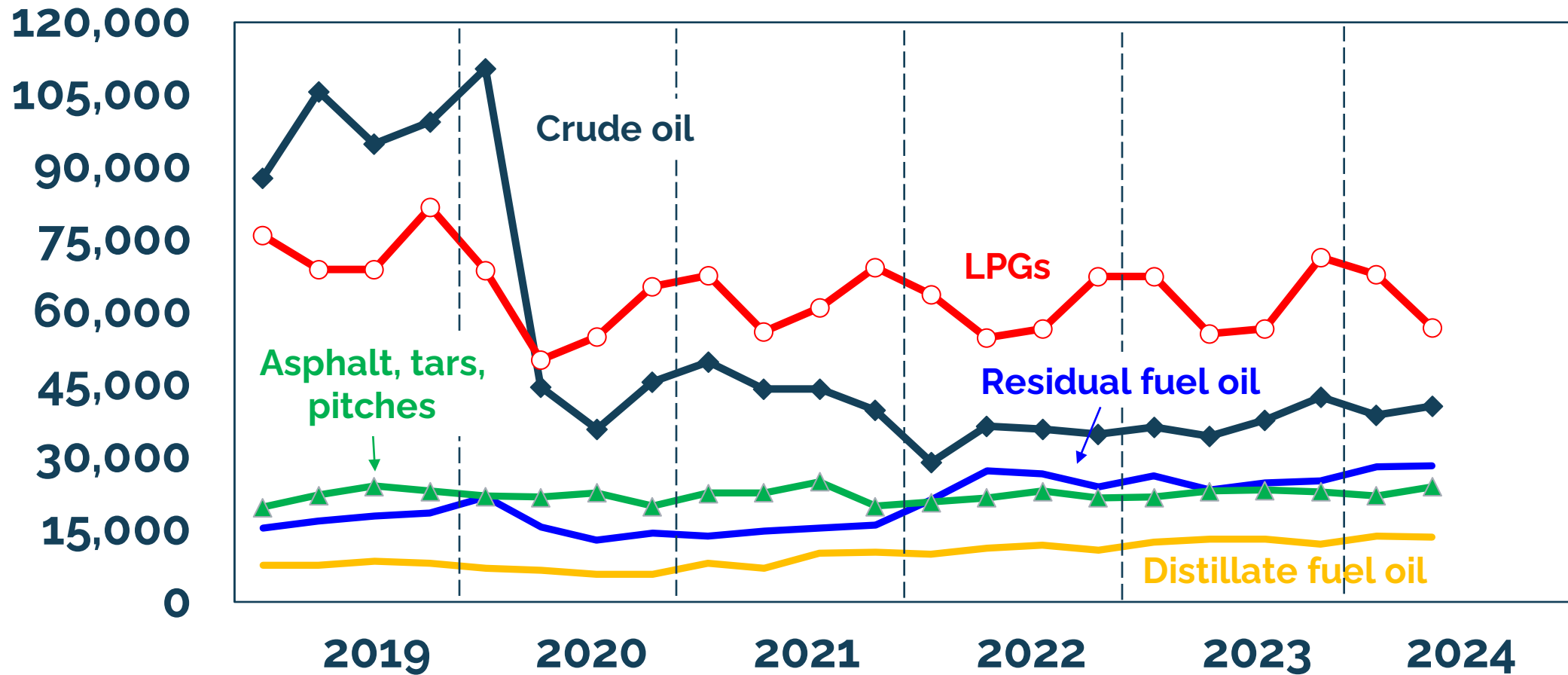
Source: Energy Information Administration

U.S. Electricity Generation



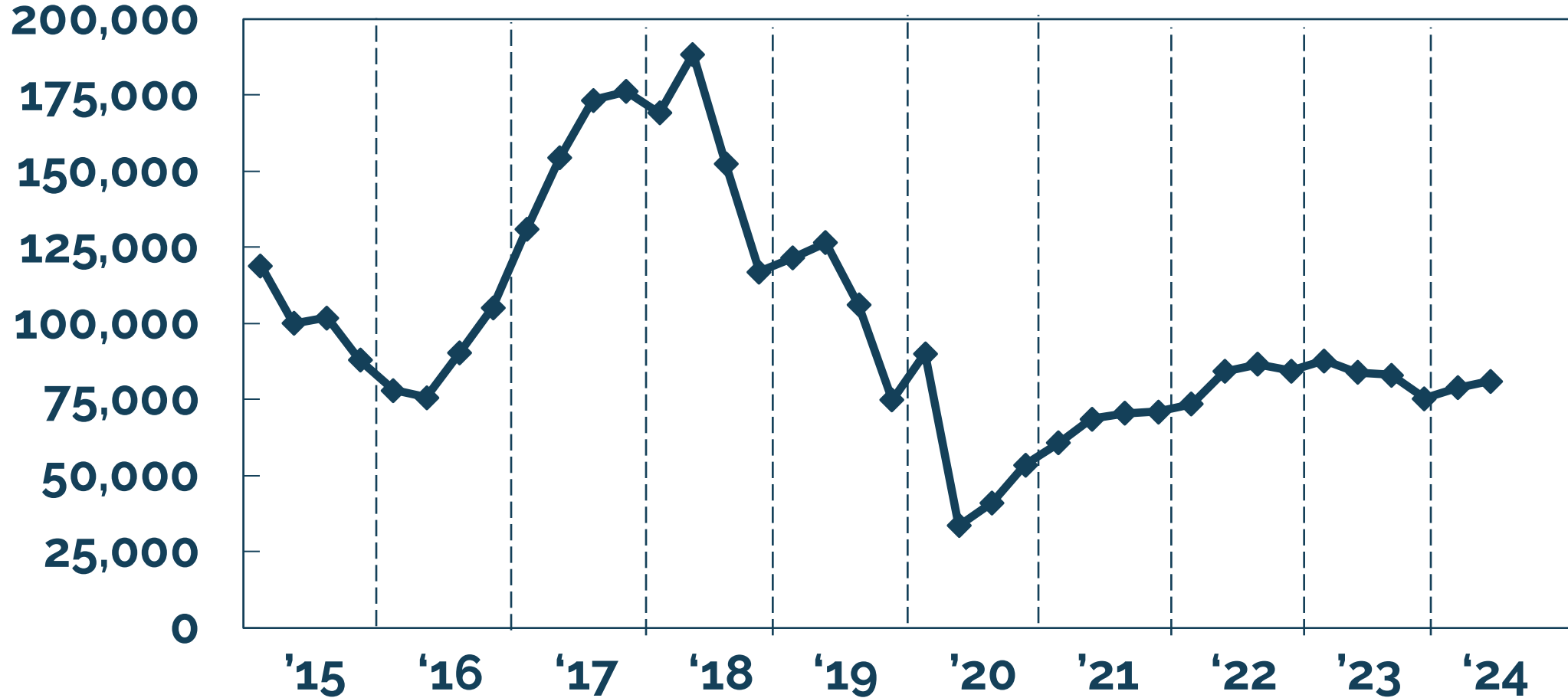
Source: Energy Information Administration

U.S. Rail Carloads of Refined Petroleum Products - Terminations



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

U.S. Rail Carloads of Industrial Sand by Quarter



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