



# Rail Energy Transportation Advisory Committee

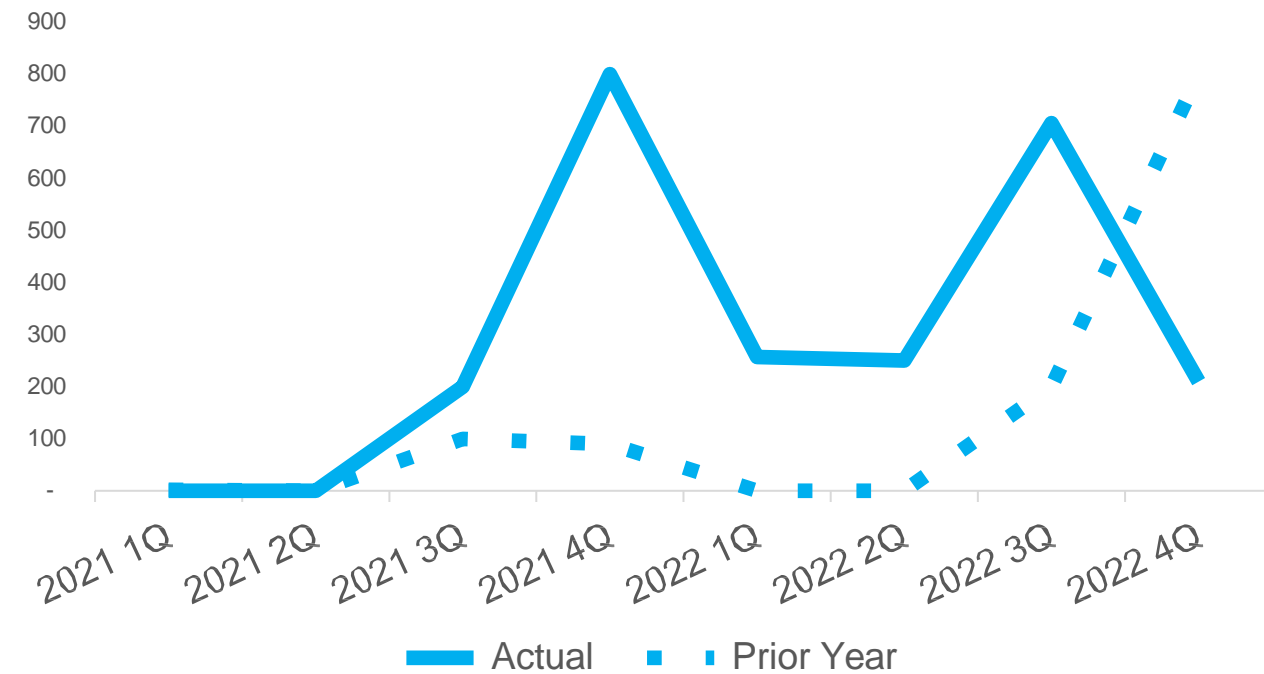
**STB RETAC Railcar Update – April 2023**



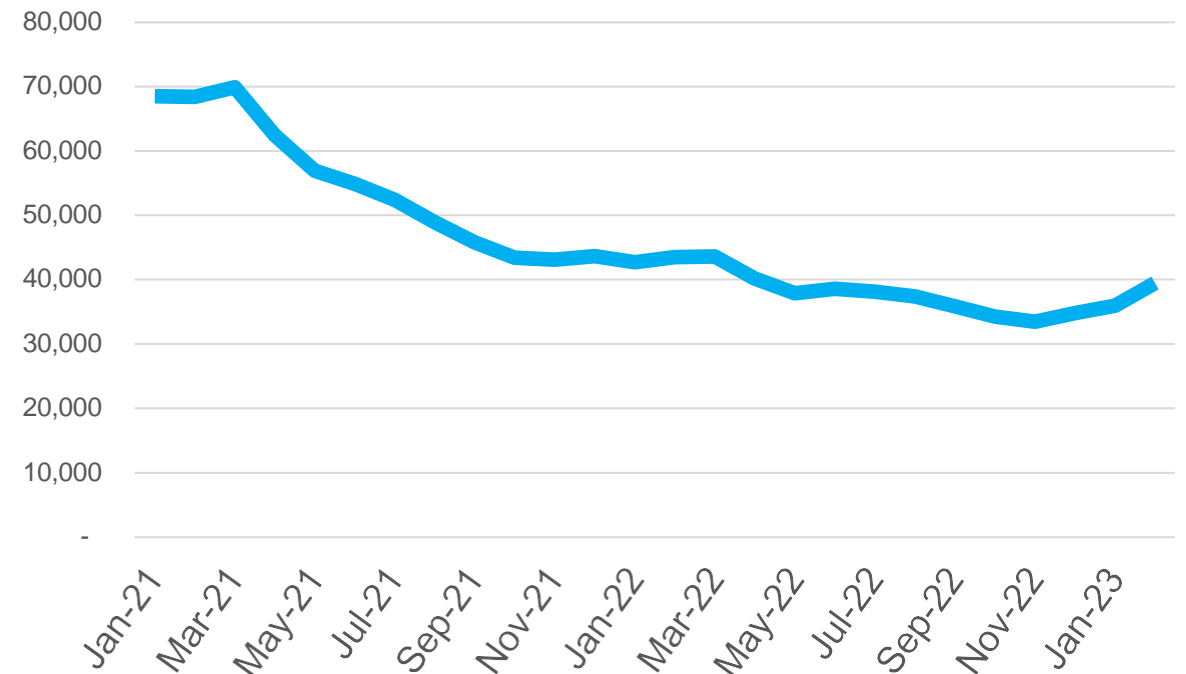
**The information in this presentation and the accompanying views and analysis are based on publicly-available industry sources and do not necessarily represent the proprietary information, analysis, or outlook of The Greenbrier Companies.**

# Recent weakness in natural gas pricing is a risk, as seen by the increase in stored cars

Open Hopper + GT Gondola Orders  
(North America, units, ARCI)



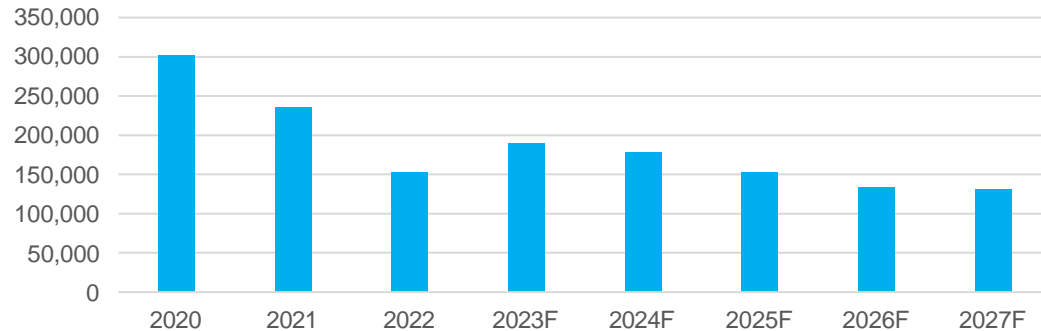
Coal  
Cars in Storage



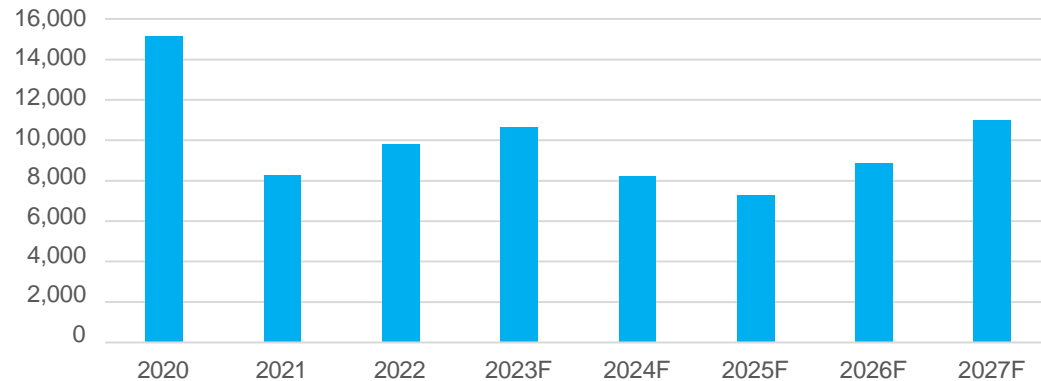


# Industry Impacts on Tank Cars

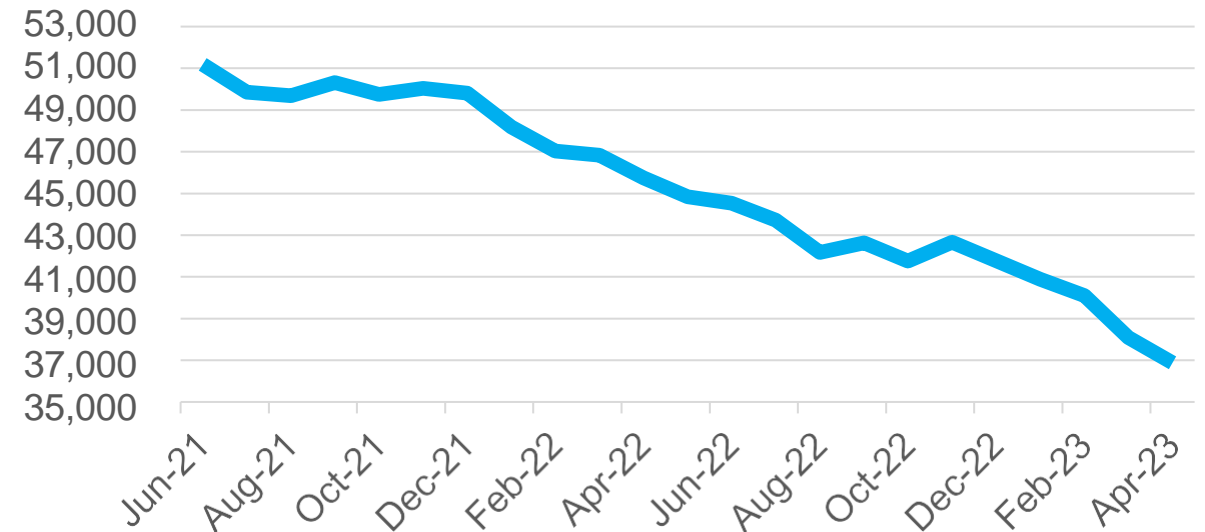
**Tank Car & Energy Loadings**  
(Crude Petroleum, Natural Gas and Natural Gasoline)



**Tank Car Deliveries**  
(All Tank Cars)

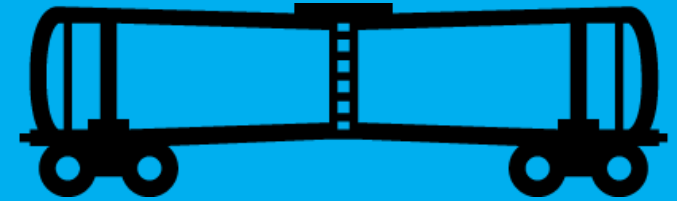


**Crude Cars In Storage**



# Safety Advisories from PHMSA

- As an outcome of the East Palestine, Ohio train derailment:
  - March 2, 2023, Safety Advisory: PHMSA request to shippers of tank cars with aluminum protective housing covers to replace such covers with carbon steel covers.
  - March 22, 2023, Safety Advisory: PHMSA request to shippers of flammable liquids in DOT-111 tank cars to voluntarily upgrade their tank cars prior to the FAST Act phase-out period. Upgrades including the use of a DOT 105, 112, 114, 115, 117J, 117R, or 120 specification.
  - These two advisories are non-binding.



# DOT-111, CPC-1232, DOT-115, and AAR-211 Tank Cars Used to Transport Flammable Liquids in 2022

Tank Car Type	Petroleum Crude Oil	Ethanol	Other Flammable Liquids
<b>DOT-111</b>			
DOT-111 Non-Jacketed	Prohibited	4,183	12,131
DOT-111 Jacketed	Prohibited	70	3,933
<b>CPC-1232</b>			
CPC-1232 Non-Jacketed	Prohibited	1,159	7,130
CPC-1232 Jacketed	751	24	4,233
<b>Others</b>			
DOT-115	0	5	1
AAR-211	Prohibited	Prohibited	380

(1) Shipment and tank car specification data derived from AAR Railinc TRAIN II waybill and Umler data, respectively

(2) Data shown here reflect traffic and tank cars used in 2022, which may differ from the situation when this report is issued

# DOT-117, DOT-105, DOT-112, DOT-114, & DOT-120 Tank Cars Used to Transport Flammable Liquids in 2022

Tank Car Type	Petroleum Crude Oil	Ethanol	Other Flammable Liquids
<b>DOT-117</b>			
DOT-117J	8,517	17,115	11,260
DOT-117R	2,236	16,961	11,571
DOT-117P	1	0	2
<b>Pressure Cars</b>			
DOT-105	0	0	2,488
DOT-112	0	1	3,618
DOT-114	0	0	3
DOT-120	307	41	164

(1) Shipment and tank car specification data derived from AAR Railinc TRAIN II waybill and Umler data, respectively

(2) Data shown here reflect traffic and tank cars used in 2022, which may differ from the situation when this report is issued



# Upcoming Tank Car Regulation Deadlines

## ETHANOL

*Retrofit to DOT 117R or replaced with DOT 105, 112, 114, 115, 117, or 120.*

**MAY 1, 2023**

**DOT 111**

**JULY 1, 2023**

**Non-jacketed CPC  
1232**

**May 1, 2025**

**Jacketed CPC 1232**

## CRUDE OIL, ETHANOL OR PACKING GROUP I

*Retrofit to DOT 117R or replaced with DOT 105, 112, 114, 115, 117, or 120.*

**MAY 1, 2025**

**DOT 111**

**Jacketed CPC 1232**

## FLAMMABLE LIQUIDS PACKING GROUP II OR III

*Retrofit to DOT 117R or replaced with DOT 105, 112, 114, 115, 117, or 120.*

**MAY 1, 2025**

**Canada**

**May 1, 2029**

**U.S.**

## MATERIALS POISONOUS BY INHALATION ("PIH" / "TIH")

*Meet HM-246 / 219 C  
"H" standard*

**DECEMBER 31, 2027**