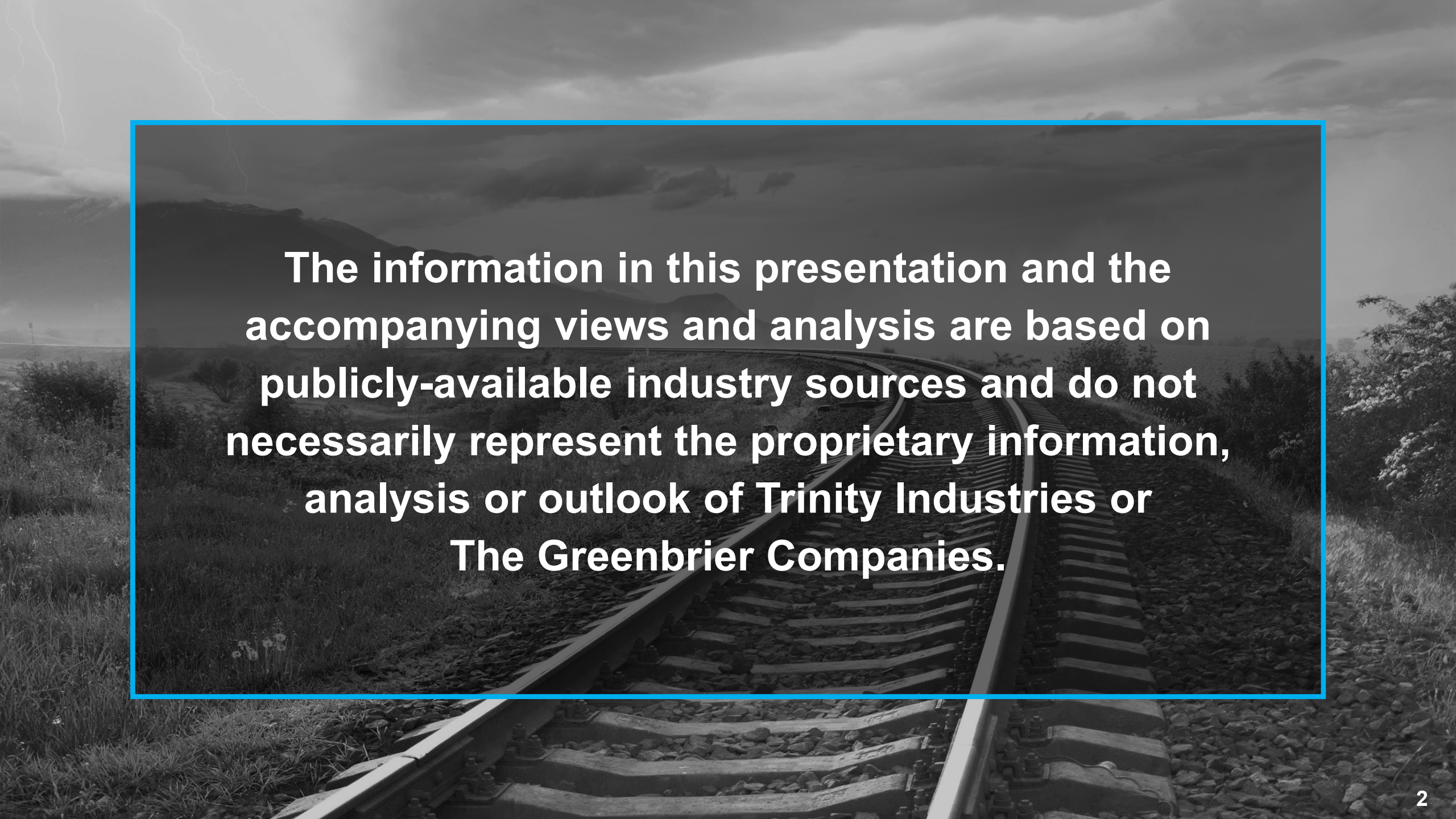




# Rail Energy Transportation Advisory Committee

STB RETAC Railcar Update – April 2022



**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 Trinity Industries or The Greenbrier Companies.**



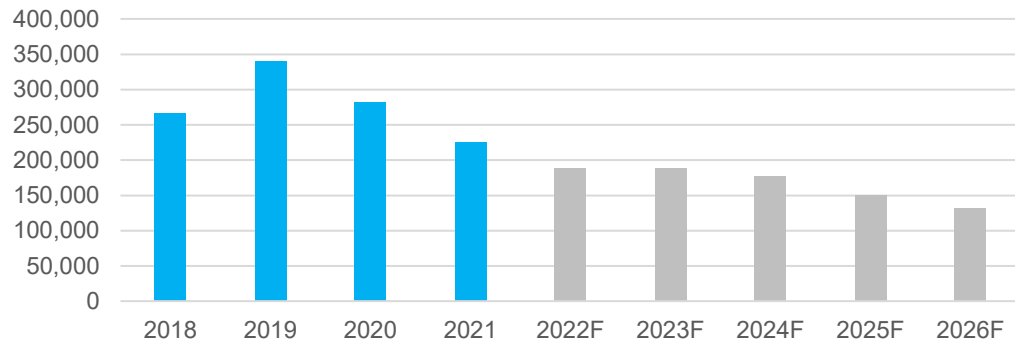


# Rail Trends in Energy

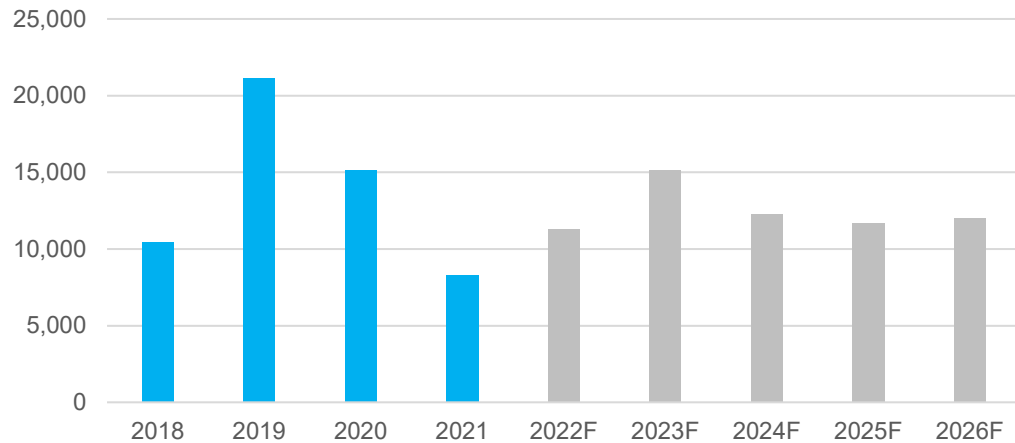
- Ukraine conflict impact on railcar demand and carloadings
- Refinery production yo-yo
- Renewal energy growth to impact covered hopper and tank segments
- Crude-by-rail slowdown
- Increase in coal demand
- Railcar orders and deliveries
- Tank car retrofit date is quickly approaching
- Suspension of LNG by rail?

# Industry Impacts on Tank Cars

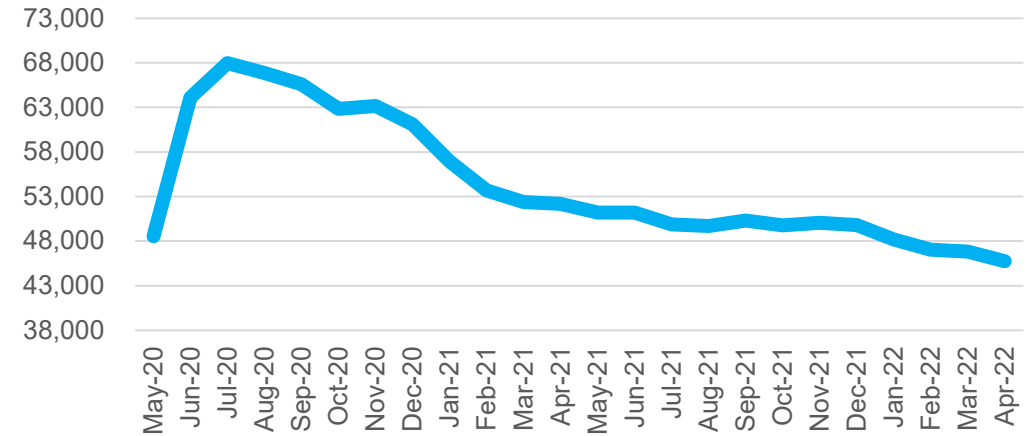
**Tank Car Energy Loadings**  
(Crude Petroleum, Natural Gas and Natural Gasoline)



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

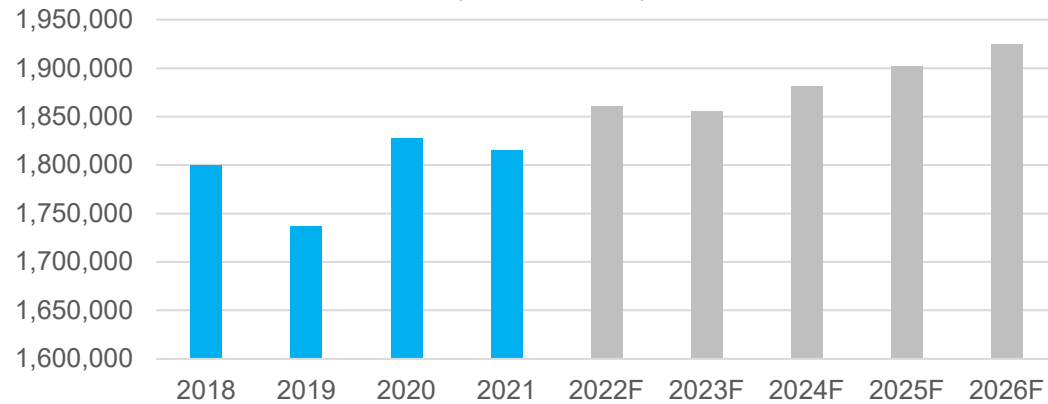


**Crude Oil / Ethanol Cars in Storage**

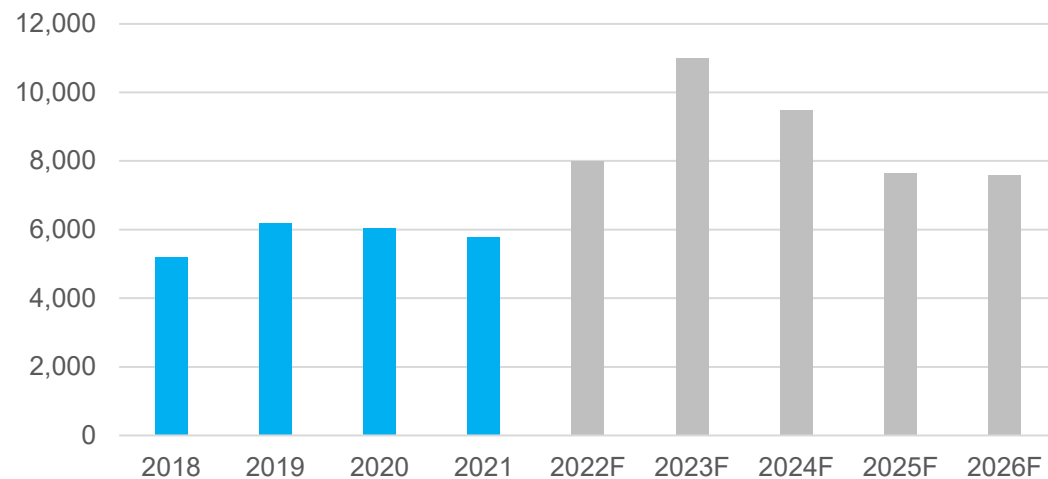


# Food vs. Fuel - Renewal Energy Impact on Covered Hoppers

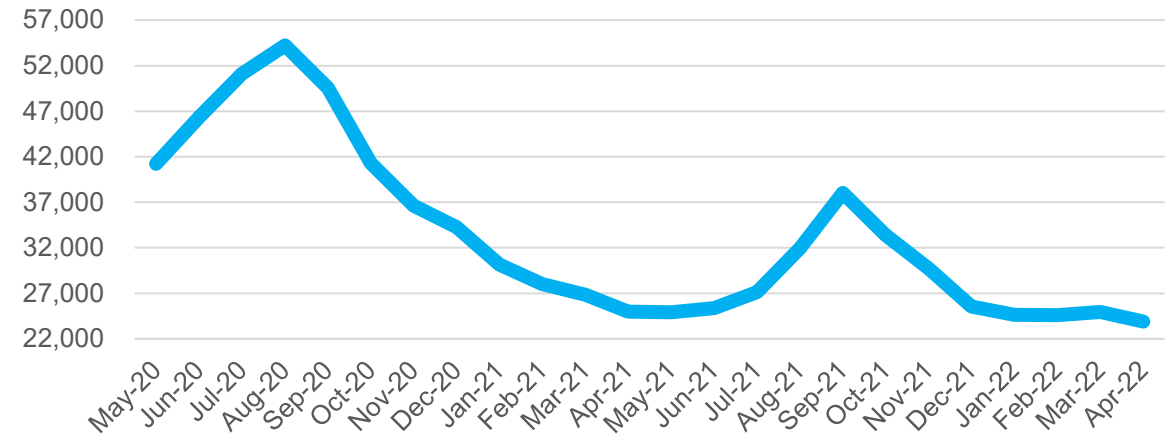
**Farm Products Loadings**  
(All Tank Cars)



**Grain Car Deliveries**

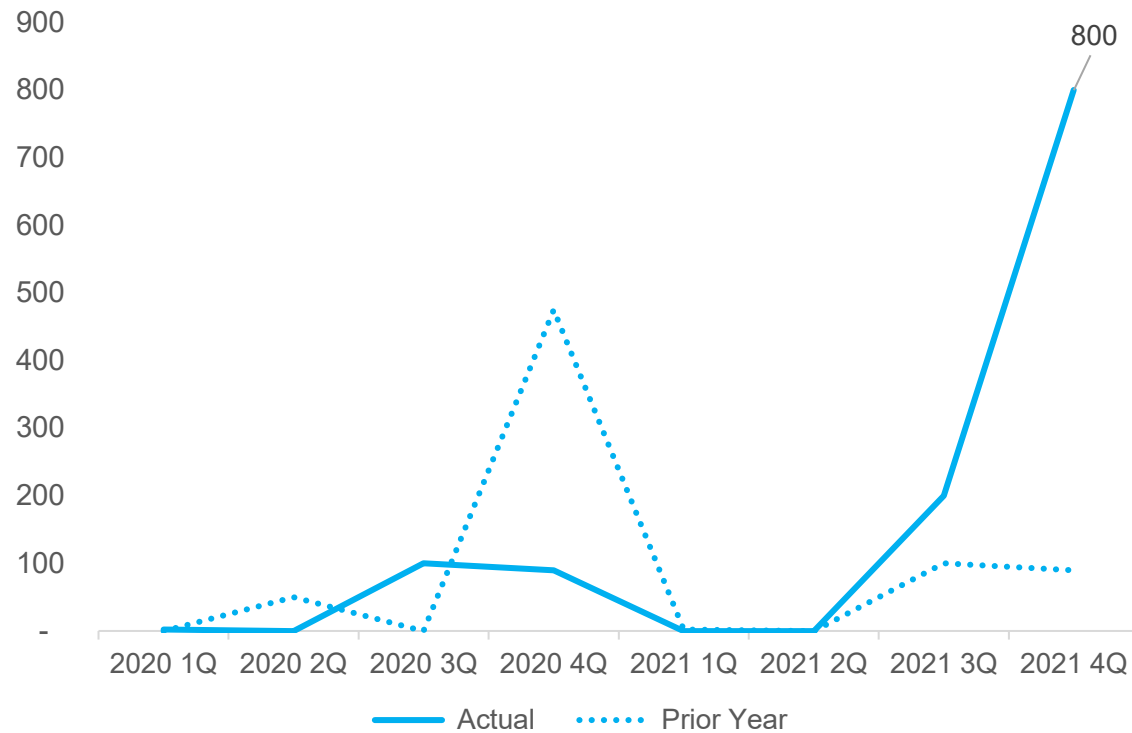


**Grain / Fertilizer Railcars in Storage**

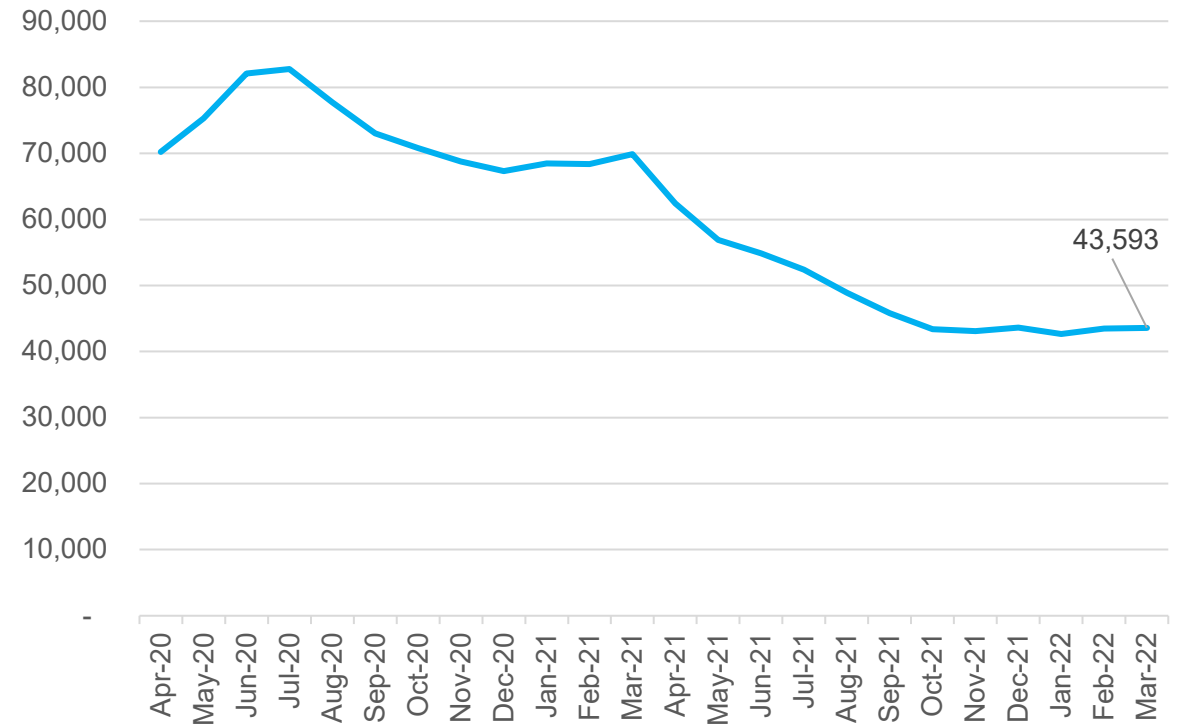


# Increase in Coal Demand

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



Coal Railcars in Storage





# Tank Cars Impacted by Compliance Date

## US & Canada

<b>2023</b>	<b>Ethanol Class 111 &amp; Non-Jacketed CPC-1232</b>	<b>8,902<sup>1</sup></b>
<b>2025</b>	<b>Crude Oil, Ethanol Jacketed CPC-1232</b>	<b>1,866</b>
<b>2025</b>	<b>Other Flammable Liquids</b>	<b>33,150<sup>2</sup></b>

<sup>1</sup> Ethanol transported in jacketed CPC-1232 tank cars are not authorized after 5/1/2025

<sup>2</sup> In the United States, flammable liquids, Packing Groups II and III, transported in Class 111 tank cars are not authorized after 5/1/2029.

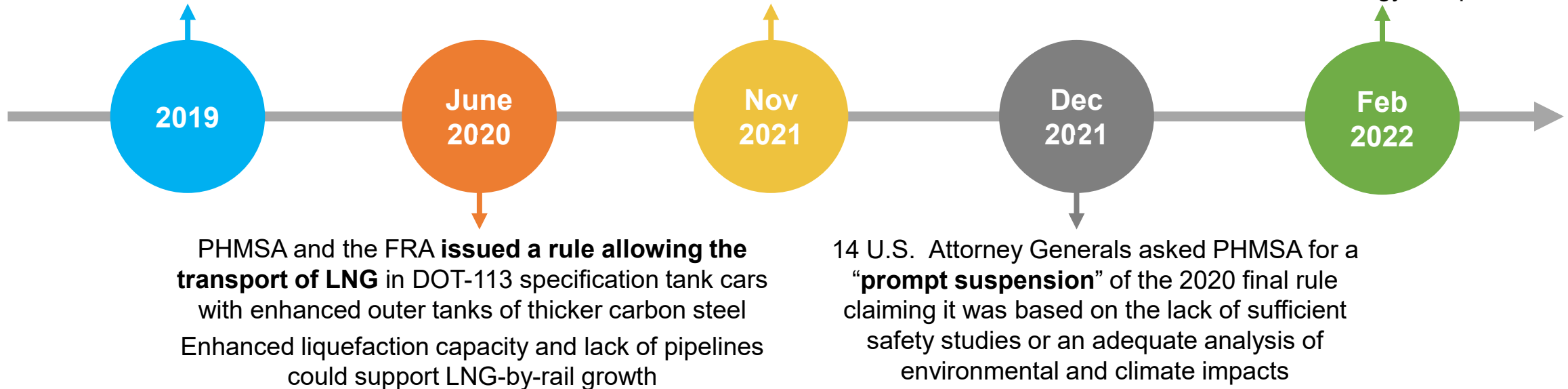
- Based on 4<sup>th</sup> Quarter 2021 numbers, the number of tank cars that require replacement to DOT-117J, or retrofitted to DOT-117R, or removed from flammable liquid service by Service/Date
- 43,918 tank cars require replacement, retrofitting, or removal from flammable liquid service in the North American fleet based on commodity movements in Q4 2021

# Suspension of Liquefied Natural Gas-by-Rail?

Executive order by the Trump administration for DOT to regulate LNG the same “as other cryogenic liquids and permit LNG to be transported in approved rail tank cars”

PHMSA and the FRA **proposed to amend** the Hazardous Materials Regulations to **suspend the authorization of LNG-by-rail** pending either the completion of separate rulemaking or June 30, 2024, whichever comes first

25 U.S. Attorney Generals asked PHMSA **not to proceed** with the suspension or withdrawal of the 2020 final rule because it creates regulatory uncertainty, the rule was subject to extensive notice and comment rulemaking, and current geopolitical events involving Ukraine show painful clarity the need for United States energy independence



Over 7,000 comments received under Docket HM-264A as of 04/13/2020