Renewable Diesel and Its Impact on Rail Shipping

National Grain Car Council Paul Nees

Vice President, Global Supply & Trading



OUR PEOPLE

Passionate experts making positive change

We produce lower carbon fuels that power our planet—now and in the future.

- + 1,300 global team members
- + Embracing diverse voices and ideas
- + Creating collaborative and innovative workplaces
- + Powering a cleaner world

WHAT WE DO

Transform renewable resources

Transform fats, greases, oils, etc. into cleaner burning biodiesel and renewable diesel to reduce carbon emissions



A winning combination



See Appendix for reconciliation of non-GAAP measures and slide notes providing definitions, source information, calculations, and other information.

Chevron has a differentiated energy transition strategy to advance a lower carbon future by growing lower carbon businesses



Our renewable fuel products and solutions serve a variety of industries who keep the world moving cleanly.





Retail



Chemicals

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Power Generators

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Agriculture

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Emergency Services

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Institutional Bus

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Data Centers

Bio-based diesel can help railroad companies meet their climate commitments

Company	Science Based Target	News Releases		
PROFILE	26% by 2030	Environment Wabtec and Union Pacific Railroad Partner to Reduce Emissions with Higher Biodiesel Blends OMAHA, NEB. AND PITTSBURGH, PA., MARCH 8, 2022 "Increasing the use of renewable diesels and biofuels currently		
RAILWAY	30% by 2030			
	43% by 2030			
CP	38.3% by 2030			
NORFOLK SOUTHERN	42% by 2034	represents the most promising avenue to help Union Pacific meets its environmental goals," said Beth Whited, Union		
CSX	37% by 2029	Pacific 's Executive Vice President – Sustainability and Strategy. "We want to drive emissions down as quickly as possible, and we believe this new project with Wabtec will make a difference."		
KANSAS SUTTI / RES SUTTIERN LINES	42% by 2034			

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Biofuel pilot

- + Canadian National and Union Pacific both trialing 100% renewable fuel from REG in locomotives
- + Trials both started earlier this year
- + CN trial in Pennsylvania; UP trial in California
- + Other pilots with Class 1 railroads are in development



WHERE WE ARE

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Produced in the Heartland. Making positive change around the world.



Chevron Renewable Energy Group logistics



Owned/leased tank cars in REG fleet



Railcar shipments executed in 2021



Executed on REG fleet equipment

Renewable diesel and biodiesel



U.S. Senate Deal Would Extend Blenders Tax Credit And Adds Sustainable Aviation Fuel Incentive

- Inflation Reduction Act of 2022 would:
 - Extend Blender's Tax Credit (BTC) at full \$1/gallon through December 31, 2024
 - Introduce Sustainable Aviation Fuel (SAF) incentive for 2023-24 of \$1.25-1.75/gallon based on GHG reductions
- Then in 2025, all renewable fuel credits would transition to 'Clean Fuel Production Credit'
 - Single-credit model based on GHG reduction of fuel
 - DOMESTIC PRODUCTION credit, not a blenders incentive
 - SAF still provided additional incentive
 - Credits would end after December 31, 2027 unless extended by future Congress

Biodiesel and Renewable Diesel Value Drivers



Current RD/SAF Production in North America as of 2021



*Stand alone SAF plants may also produce RD

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Announced New RD/SAF Production in North America by 2027



*Stand alone SAF plants may also produce RD

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North America RD Capacity by Year



Note: Projected capacities in graph above include projects classified as 'operational' and 'announced', does not include 'speculative' or 'closed'

Soy Crush Capacity Expansion

- + Current U.S. soybean crush capacity is 2.25 bil bu/yr
- + Announcements on new projects and expansion projects total over 0.55 bil bu/yr
- + More planted acres of soybeans in western corn belt
- + Lowered soybean exports
- + Increased soymeal production for domestic and export channels
- + Increase in oilseed cover crop acres
- + Additional canola crush capacity expansion planned



Summary

- + Lower carbon fuels are needed now
- + Renewable diesel volumes are set to increase substantially over next 5 years
- + Renewable feedstock supply lanes will be impacted by RD production growth
- + Transportation of the feedstocks needed and finished fuel to end markets will require efficient supply chains

THANK YOU

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