

Natural Gas Trucking

RNG Summit, The Transport Project – April 27, 2025



North American Council for Freight Efficiency



- Unbiased, fuel agnostic, non-profit
- Mission to double freight efficiency
- All stakeholders
- Scale available technologies, guide emerging change and Run on Less demonstrations.

www.NACFE.org

www.RunonLess.com

www.rmi.org



What is “The Messy Middle”?

PRESENT

- Technology immature
- Many unknowns & challenges



"MESSY MIDDLE"

- Many optimization solutions
- Growing infrastructure
- Multi-fuel choices
- Innovation & maturation
- Facts replacing estimates
- Learning curves

[Messy Middle Report](#)

FUTURE 2050

- Fast charging
- Hydrogen everywhere
- Long-life, low-cost batteries
- Acceptable weights & costs



- Legacy Diesels
- Natural Gas

















































- Diesel Advancements
- Natural Gas
- Hybrids
- Hydrogen ICE

- Battery Electric
- Hydrogen Fuel Cells
- Renewable Natural Gas & Diesel
- More

- CBEV & HFCEV from Clean Energy

POWERTRAIN ALTERNATIVES

Estimate of Technology Readiness by 2025

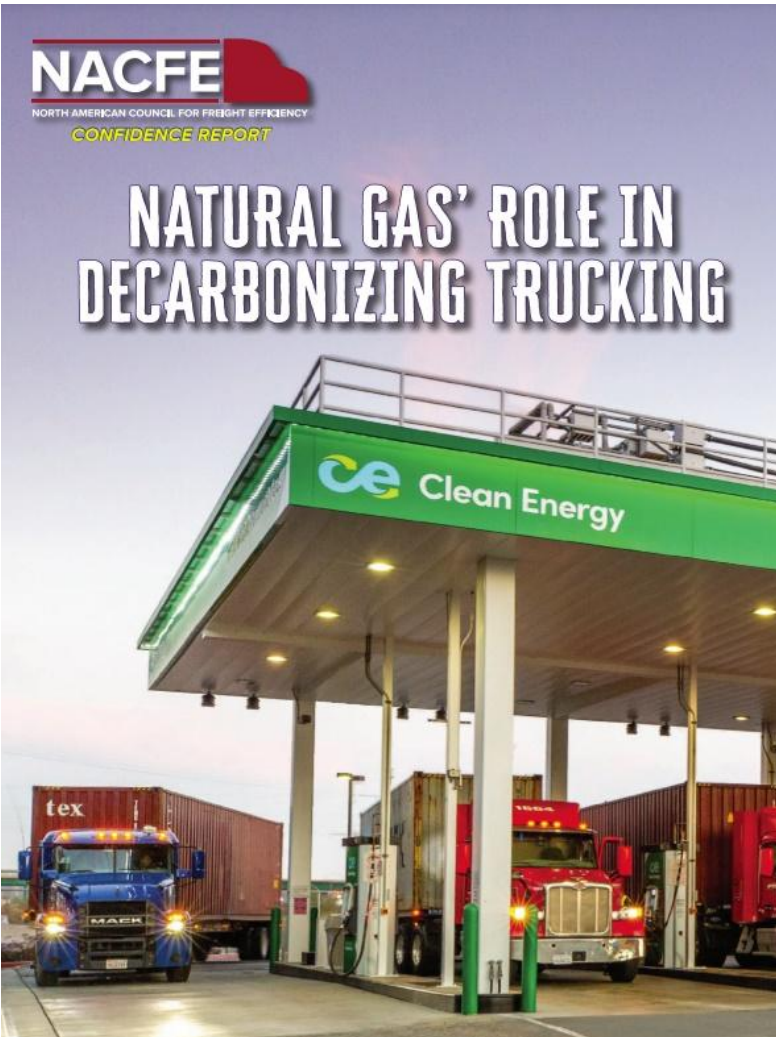
	SUSTAINABILITY			FLEET OPERATIONAL		INFRASTRUCTURE	INTEGRATION CHALLENGES	MATURITY
	ZEV	Well-to-Wheels	NOx/PM	Range	Route Flex			
DIESEL								
ICE RENEWABLE *								
NATURAL GAS								
HYDROGEN ICE								
BATTERY ELECTRIC								
HYDROGEN FUEL CELL								

* ICE Renewables = Renewable Natural Gas, Renewable Diesel, Renewable Propane, etc.

 = UNFAVORABLE

 = FAVORABLE

NACFE CNG/RNG Findings (Mar '23)



Report:
<https://nacfe.org/research/powertrain/#natural-gas-in-decarbonizing-trucking>
October 2024

BENEFITS AND CHALLENGES of Natural Gas Trucks



Benefits

- Can be near-zero sustainability
- Easier NOx solution
- Some existing fueling infrastructure
- Near diesel performance with new 15L engine
- RNG availability growing



Challenges

- Capacity and cost of RNG
- Methane leakage
- Enough time for payback until ZEVs are available
- Lower efficiency in miles per diesel equivalent
- Incentives may decrease or be eliminated
- Space onsite for fueling or access to public stations

Run on Less by NACFE

2017



Long Haul

7 Fleets
10.1 MPG

2019



Regional Haul

10 Fleets
8.3 MPG

2021



All BEVs

13 Fleets
EV Truck Pilots

2023



BEV Depots

10 Depots
Infrastructure

2025



Long Haul

Many
Solutions

Run on Less – Messy Middle

COMING SEPTEMBER 2025

RUN ON LESS — MESSY MIDDLE



Bootcamp Sessions (Feb – July)

Diesel & Natural Gas Session 1: Diesel Drop-In Alternatives: Ultra-Low Sulfur, Bio-, and Renewable

February 11, 2025 – Video Available!

✓ Quiz available!



Diesel & Natural Gas Session 2: Decarbonizing with Natural Gas

February 25, 2025 – Video Available!

✓ Quiz available!



Diesel & Natural Gas Session 3: Future Prices & Availability of Existing Infrastructure: What's Next?

March 11, 2025 – Video Available!

✓ Quiz available!



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America



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Global Sector Marketing
Manager Fleet & Global
Brand Manager Shell
Rimula
Shell



Colin Huwyler
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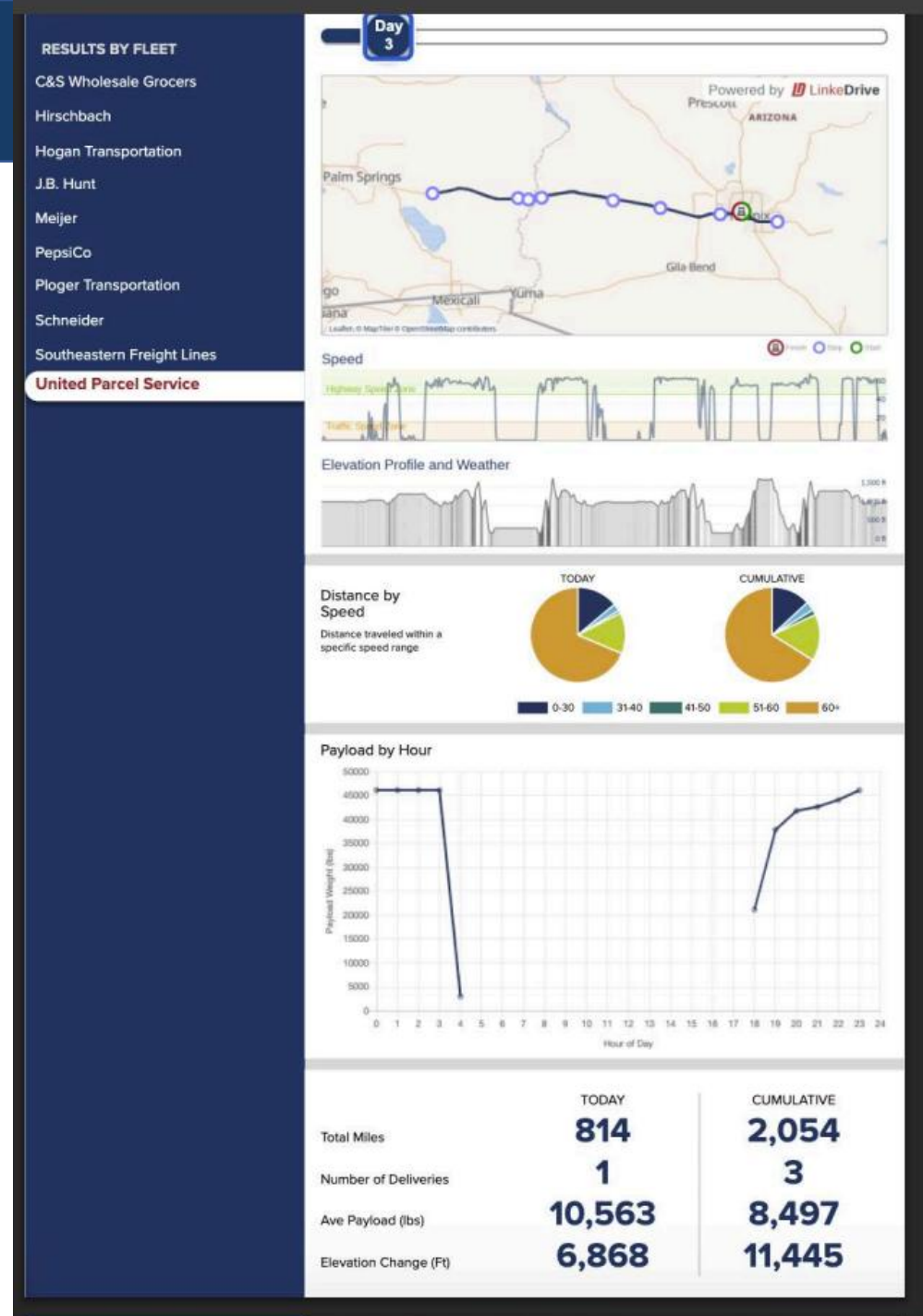


Marty Tufte
Corporate Fleet Director
WM

<https://runonless.com/bootcamp/>

Run Metrics - Dashboard

- 18 days, September 8 through the 25th.
- Four different but similar dashboards
 - Diesel
 - Natural Gas
 - Battery Electric
 - Hydrogen Fuel Cells
- Similar in nature to Run on Less – Regional in 2019.
 - Route
 - Weather conditions
 - Elevation
 - Payload
 - Speed
 - Diesel gallon equivalent MPG



Natural Gas Trucks



NATURAL GAS
Kenworth

Salt Lake City, UT



Natural Gas Trucks

Wegmans

NATURAL GAS
Peterbilt

Rochester, NY



Natural Gas Trucks



NATURAL GAS
Kenworth

Edmonton, AB



The logo features the acronym 'NACFE' in a bold, white, sans-serif font. It is flanked by two horizontal red lines. To the right of the text is a large, solid red shape that resembles a stylized map of North America or a folded piece of paper.

NACFE

NORTH AMERICAN COUNCIL FOR FREIGHT EFFICIENCY

THANK YOU