



# Running on Less Fuel, Less Money and Helping the Environment

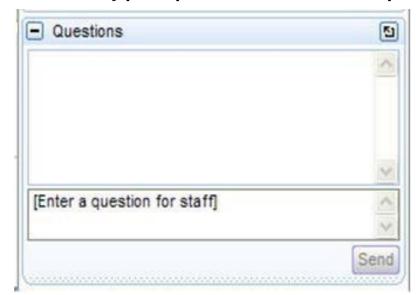
Mike Roeth, NACFE Executive Director



## Webinar Housekeeping



- The webinar is being recorded
- Participants are muted
- Please type questions in the question box



Please complete the survey at the end of today's webinar. Your feedback is important to us!

#### **SmartWay**



#### Learn about SmartWay



- Overview of SmartWay
- Why Freight Matters
- How SmartWay Advances Sustainable Transportation Supply Chains
- Sustainability Accounting & Reporting
- SmartWay Program Successes
- Trends, Indicators & Partner Statistics (TIPS)

#### Meet our Partners & Affiliates

#### Participate in SmartWay



- How to Participate in SmartWay
- How the SmartWay Partnership Works
- Become a SmartWay:
- Shipper
- Logistics Company
- Carrier
- Affiliate
- Tools & Resources for Partners & Affiliates

#### Use the SmartWay Brand

#### Search SmartWay

CONTACT US SHARE (f) (y) (M)

What are you looking for?

#### Search this Site



Upcoming Webinars

- Webinar 2020 SmartWay Multimodal Tool Demo Webinar
- 6/17/2020: Educational
  Webinar <u>Getting C-Suite</u>
  Buy-in for Your Freight
  Sustainability Efforts







The presentation will be available at:

### www.epa.gov/smartway/smartwaywebinars-events

Note: Today's webinar is being recorded.

## **Covered Today**



- Brief Overview of SmartWay
- NACFE and Run on Less
- Questions





- Market driven partnership that helps businesses:
  - Save money
  - Stay competitive
  - Demonstrate economic and environmental leadership by moving goods in the cleanest most efficient way possible
  - Exchange performance data in ways that contribute to cleaner air, and a stronger and more competitive economy.





- Companies exchange freight transportation activity data using EPA assessment and tracking tools
- Tools calculate annual carbon footprint along with emissions of other air pollutants from transporting goods
- EPA rates and ranks companies by environmental performance
- Partners use data to optimize performance, inform decision-making
- Provide recognition for top 1 2% environmental performance



Mike Roeth
NACFE Executive Director



### North American Council for Freight Efficiency



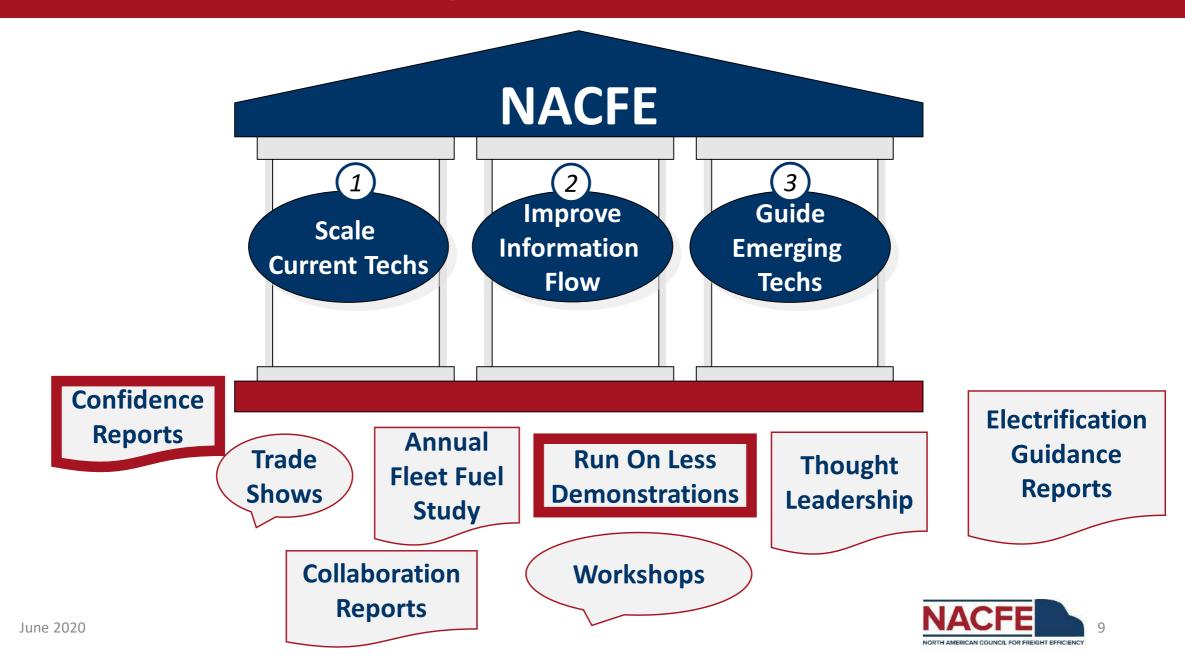
- Unbiased, non-profit
- Mission to double freight efficiency
- All stakeholders
- Scale available technologies, guide future change and Run on Less demonstrations.
- Primary focus: Tractor-trailers

www.NACFE.org

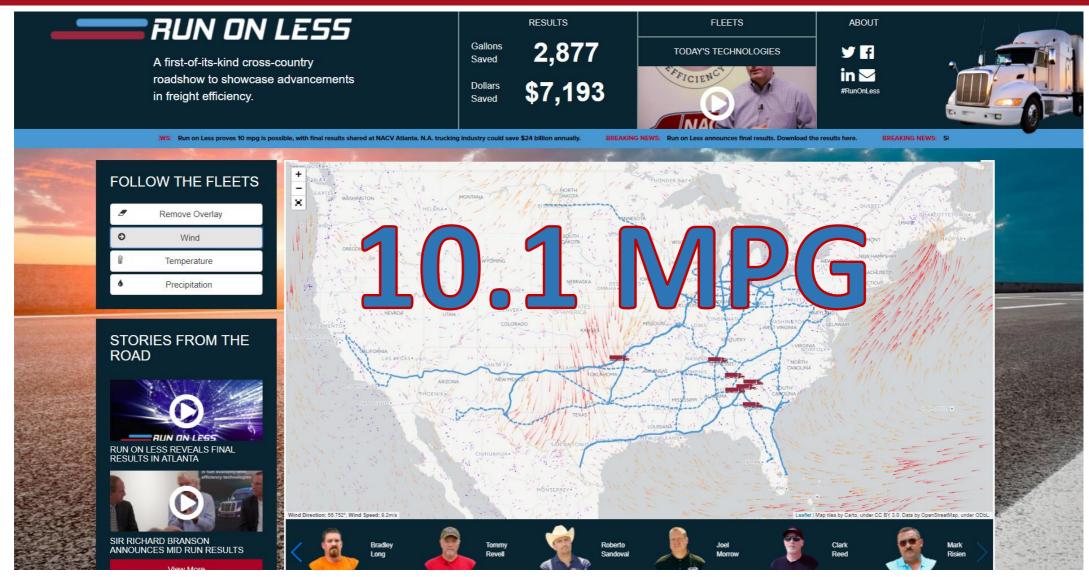


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### **Three Pillars of NACFE Work**



## Run On Less - September 2017







## Equipment (all FLEET specified)









- Many Commonalities
- Many Significant Differences











## Drivers





### Routes

 Each fleet controlled their loads and routing

 Several had to contend with hurricane traffic and one made a hurricane relief delivery

Phoenix





### Results

7 Trucks 17 Days 50,107 Miles 99 Driving Days

**10.1 MPG VS. 6.4 MPG** National Average

### **Conditions**



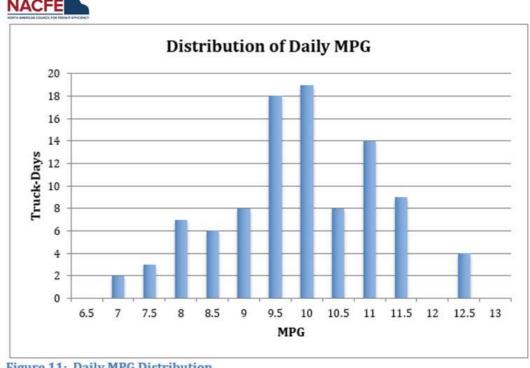


Figure 11: Daily MPG Distribution

All details available at <a href="https://nacfe.org/run-on-less-report/">https://nacfe.org/run-on-less-report/</a>





## How To Achieve 10 MPG

10 **FOR** 10

10 ACTIONS TO ACHIEVE 10+ MPG LEARNING FROM NACFE'S RUN ON LESS







Provide Tools to Reduce Idle Time

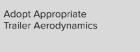


Build a Culture of Methodically Choosing Technologies



Educate and Incent Conscientious Drivers







**Embrace Low Rolling** Resistance Tires



Use Downsped Powertrains and AMTs



Optimize Cruise Control and Vehicle Speed



Buy All Available Tractor Aerodynamics









6,000 Sessions 16,485 Page Views

### **Media Coverage:**

Entire Campaign >\$3M Publicity Value >\$625k

### 10 Trends of Regional Haul Growth



## Regional Haul

## More Regional Haul: An Opportunity for Trucking?

- Drop in Length of Haul
- Warehousing
- Technology Trends
- An Opportunity
  - Drivers
  - Alternative Fuels
  - Others?

Report published April 2019.

https://nacfe.org/regional-haul/



## Run On Less Regional www.RunOnLess.com



## **Specifications for 10 Vehicles:**



Fleet	Tractor OEM	Engine	Xmsn	Axles	Tractor	Trailer	State
<b>C&amp;S Wholesale Grocers</b>	Volvo	Volvo D13	<i>i</i> -Shift	6x4	Day cab	Reefer	LA
Hirschbach	Freightliner	Detroit DD15	DT12	6x4	Sleeper	Reefer	TN
Hogan	International	Cummins X15	Eaton	6x4	Day cab		MO
J.B. Hunt	International	Cummins X15	Eaton Endr	6x4	Sleeper		TX
Meijer	Freightliner	Detroit DD13	DT12	6x4	Day cab	3 axle 90k Reefer	MI
PepsiCo	Peterbilt	PACCAR MX-11	PACCAR 12 Speed Auto	6x4	2 shifts/day Lightweight Day cab	Lightweight	CA
Ploger	Volvo	Volvo D11	<i>i-</i> Shift	6x2 lift	Sleeper		ОН
Schneider	Freightliner	Detroit DD15	DT12	6x4	Sleeper w/APU		IL
Southeastern Freight Lines	Kenworth	Cummins X15	Eaton	4x2	Day cab	Doubles	GA
UPS	Kenworth	Westport 12G	Eaton Ultra	6x4	2 Shifts/day Day cab w/Xstream	Varied	AZ

## Run on Less Regional

Technologies



Day 18 of 18

Congratulations to Our Drivers!

OCTOBER 7 - 25 2019



Videos

News & Events >

About ~



8.3

Average MPG

Results

\$8,249

Dollars saved

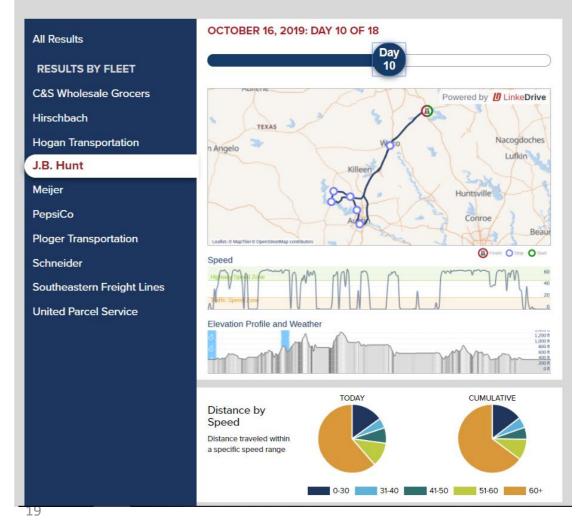
\$9,003,550,961

**Annualized Potential Savings** 

Potential savings represents the savings that are possible across the industry if all regional-haul trucks operated at this level.



Results Fleets Technologies Videos News & Events - About -



### ~30 Videos

#### **Stories From The Road**



Technologies to Help Drivers with

Tools drivers and fleets can use to increase efficiency



**Customer Service and Regional** 

Drivers forge deep customer service relationships in Regional



Drop and Hook in Regional Drop and Hook are Key to Efficiency

**Back Hauls in Regional** 

Back Haul's Place In Regional Haul Profitability



Electric Truck Technology Day How Far will Commercial Battery Electric Vehicles Go?

Return to base or overnight; daycabs, sleepers and hotels



Aerodynamics at Slower Speeds

Myth Bust - Aerodynamics Don't Work at Slower Speeds

SmartWay

Sleepers vs Daycabs in Regional Truck Technologies - Powertrain A Variety of Powertrains Gets The Job Done in Regional Haul

#### **Meet the Fleets**



Meet the Fleet: C&S Wholesale Grocers

C&S Wholesale Grocers is the largest wholesale grocery supply company in the U.S. and an industry leader in supply chain. Founded in 1918, we have a strong heritage of innovation that



Meet the Fleet: Meijer

Retailing is a fast-paced business that demand continuous improvement. Meijer is committed to keeping their competitive spirit strong and stayin mble and flexible to win in the marketplace



Meet the Fleet: Hirschbach

Hirschbach is a privately owned carrier that has delivered state-of-the-art transportation solutions for over 80 years. Their fleet is among the newest, most environmentally friendly and fuel efficient in



Meet the Fleet: Hogan

Hogan is one of the largest, fastest growing, and 100 successful years in business, we're a privately held company headquartered in St.



Meet the Fleet: J.B. Hunt

We torge long-term relationships with key most respected transportation service providers in customers that include supply chain management the US. Founded in 1918, and proudly celebrating as an integral part of their strategy. Working in concert, we drive out cost, add value and function



Meet the Fleet: PepsiCo

est possible partner, driving game-changing novation, and creating joyful moments through delicious, nourishing products and unique



Meet the Fleet: Ploger

lepsi brings smiles to our customers by being the Plager prides themselves on their fast and efficient deliveries for all of their customers. They have been a truckload carrier since 2006,



Meet the Fleet: Schneider

Schneider provides drivers and equipment assigned to your region who quickly become like an extension of your team. These well-trained and safe drivers know the lay of land, resulting in superior customer experiences



Meet the Fleet: Southeastern Freight Lines

When Southeastern Freight Lines made its first delivery 69 years ago, the mission of that driver was exactly the same as it is for each associate. today, to meet or exceed the needs of every customer - every single time.



Meet the Fleet: United Parcel Service

Founded in 1907 as a messenger company in the United States, UPS has grown into a multi-billion dollar corporation by clearly focusing on the goal of enabling commerce around the globe. Every day, we manage the flow of goods, funds, and information in more than 200 countries and territories worldwide.



### Day Cabs vs Sleepers in Run On Less

### **HOME EVERY DAY**

### **SLEEP ON THE ROAD**











**DAY CABS** 









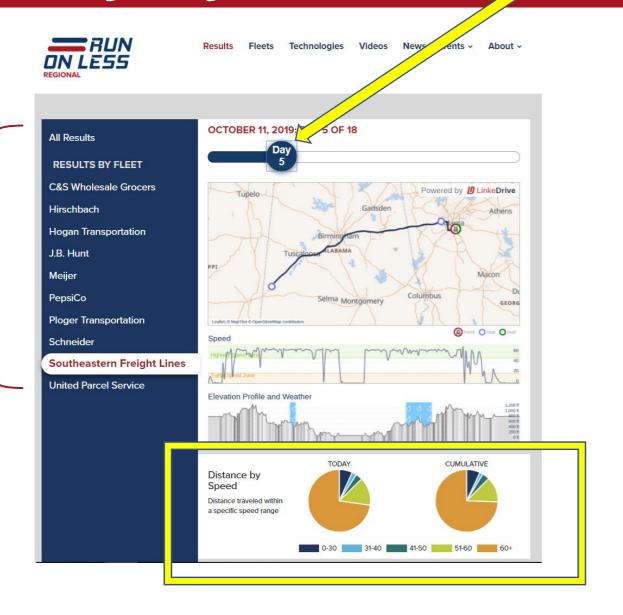
**SLEEPERS** 

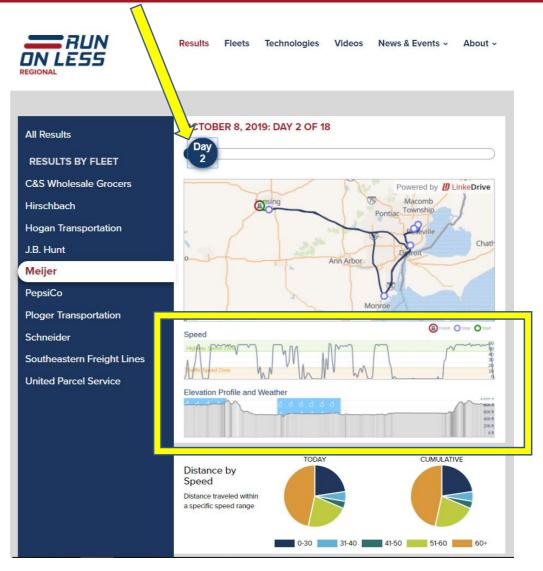




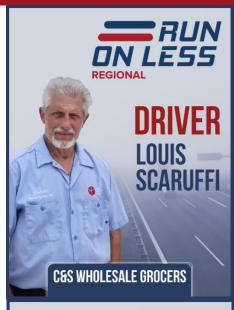
## **Duty Cycles**

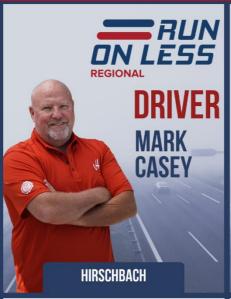
### Adjustable Day-by-Day

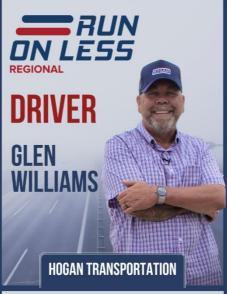




### **Drivers and Fleets**

















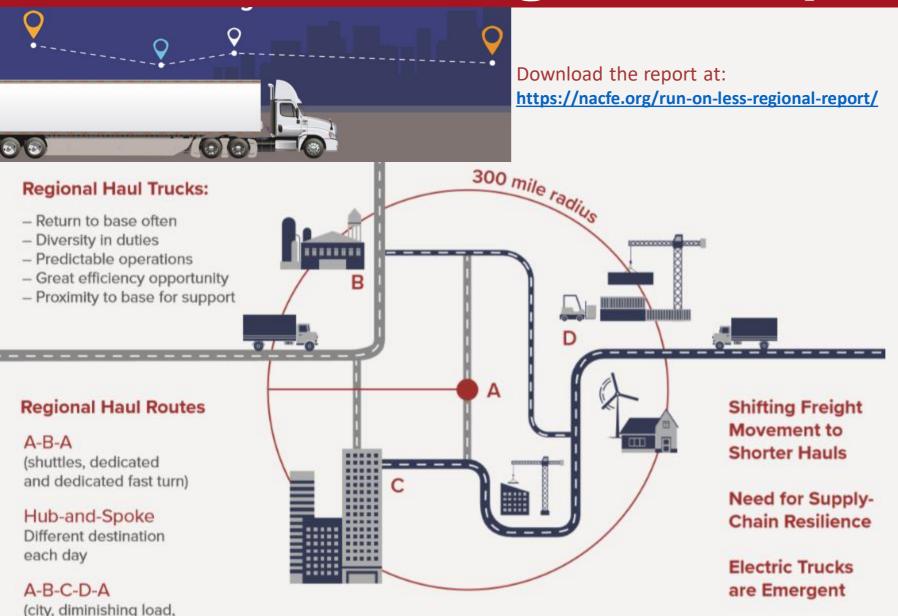




### Results

- 10 fleets, 10 trucks and 10 drivers 18 days
- 135 days of driving, 58,633 total miles
- 8.3 mpg (28 L/100km), 8.7 mpg for nine diesels (national Ave =6.0)
- These ten; saved 2,750 gallons of fuel, \$8,249, and 27.9 tons of carbon dioxide
- \$9B would be saved if all N.A. regional trucks were at this efficiency
- Average payload was 24,679 lbs. yielding 103 ton-miles per gallon
- Average speed of 55 mph
- More urban driving, multiple stops, varying payloads, utilitarian design of equipment

## Run on Less Regional Report



and milk runs)

### **Efficiency Opportunity**

Run On Less Regional confirmed that the 800k trucks in North America could use much less fuel.

\*measured in billion gallons of diesel



25

## Run on Less Regional Report

### **Conclusions**

- 1. High efficiency requires commitment
- 2. Optimize performance using big data and connectivity
- 3. Understand and act on the variety in duty cycles
- 4. Drivers are attracted to regional haul
- Return to base is ideal for electric trucks
- 6. Growth in Regional Haul is Good

### **Run On Less Data Benefits**

- Run on Less Regional data analysis:
   RoLR final report
- NREL/NACFE Report: <u>Battery</u> <u>Electric Powertrains</u>
- Ballard/NACFE Report: <u>Hydrogen</u> <u>Fuel Cell Trucks in Regional Haul</u>
- Free downloadable data set



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### Run on Less Websites

#### **RUN ON LESS REGIONAL**

In October 2019, NACFE worked with 10 fleets and numerous supporting suppliers to stage a demonstration of great drivers with specified production level tractors and trailers. Throughout the Run, NACFE monitored these vehicles via a dedicated telematics link and a datalogger to determine a benchmark for best-in-class fuel economy in regional haul applications. The results surprised many in the industry and proved that there are improvements that most all fleets can implement if they adopt the right technologies.

The event had two other goals: to better define the growing segment of regional haul and to look into the future to see how new technologies such as electrification, hydrogen and connectivity might shape trucking's future.

#### A VIDEO RECAP OF RUN ON LESS

The second NACFE roadshow to showcase advancements in freight efficiency, this time in regional haul.



To download the Run on Less report click here

View the Run on Less Regional results here

View the Run on Less Regional Fleet Profiles here

View the Run on Less Regional Stories from the Road here

View Hydrogen Technology Day content here

View Connectivity Technology Day Content here

View Commercial Battery Electric Vehicle Technology Day content here

View technologies used here

### **Content**

- Final Report
- 2. Results
- 3. Fleet Profiles
  - Videos
  - Specs
- 4. Stories from the Road
- 5. Tech Days
- 6. TechnologiesUsed

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## SmartWay & Run on Less

### **2017 SmartWay Fleets**

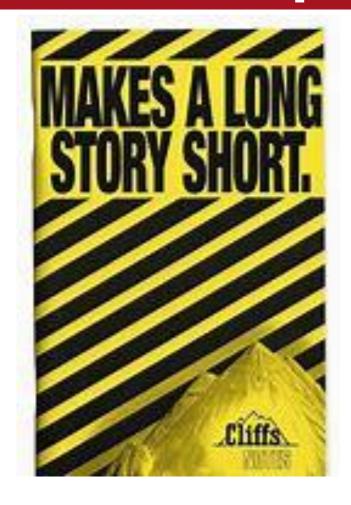
- 1. Hirschbach Motor Lines
- 2. Nussbaum
- 3. Pepsico Frito-Lay
- 4. Messila Valley
- 5. US Xpress

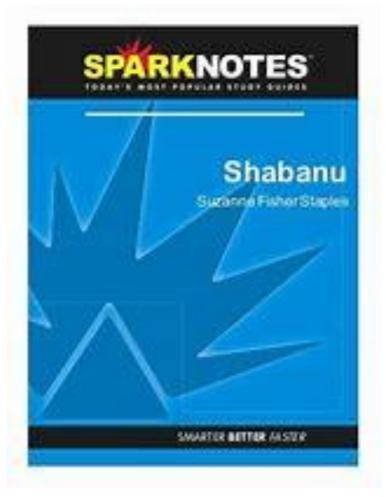
### **2019 SmartWay Fleets**

- 1. Hirschbach Motor Lines
- 2. Hogan Transportation
- 3. J. B. Hunt
- 4. Meijer
- 5. Schneider
- 6. Southeastern Freight Lines
- 7. UPS



## Confidence Reports





NACFE has made the job of finding the right information much easier



## Confidence Reports

### Complete, unbiased review of available technologies for fleet confidence to adopt.



Tire Pressure Systems



6x2 Axles



**Idle Reduction** 



**Transmissions** 



Engine Parameters



**LRR Tires** 



Lightweighting



Downspeeding



Maintenance for FE



Trailer Aerodynamics



Tractor Aerodynamics



Lubricants



**Platooning** 



Engine Accessories



Solar

### Can be viewed as either:

- Diesel fuel savings
- Range extenders for alternative fuels



### Announcing Run on Less – Electric in 2021



#### **RUN ON LESS ELECTRIC**

Support the Real-World Demonstration of Zero-Emissions Goods Movement

#### **OVERVIEW**

New technologies are emerging to help trucks deliver goods more cleanly and efficiently, and electric trucks are key to trucking's green future. To keep pace with the ever-changing industry, the North American Council for Freight Efficiency (NACFE) and Rocky Mountain Institute (RMI) are planning Run on Less Electric (ROL-E), a zero-emissions demonstration for trucks that will showcase these technologies and help accelerate the growth of zero-emissions goods movement for the fall of 2021.

In order to ensure the long-term success of these vehicles, we need to begin learning from early deployments and sharing best practices. NACFE knows it's early for these trucks, but continuous improvement starts by knowing where we are. Help us showcase the benefits of electric trucks while also having frank conversations about existing challenges and what will be needed to further scale their adoption in line with recent industry developments.

California's Advanced Clean Trucks (ACT) rule requires truck manufacturers to sell an increasing percentage of zero-emissions vehicles in the state, starting in 2024.

#### ABOUT RUN ON LESS ELECTRIC September 2021

The three-week roadshow showcasing electric trucks delivering real freight on real routes will:

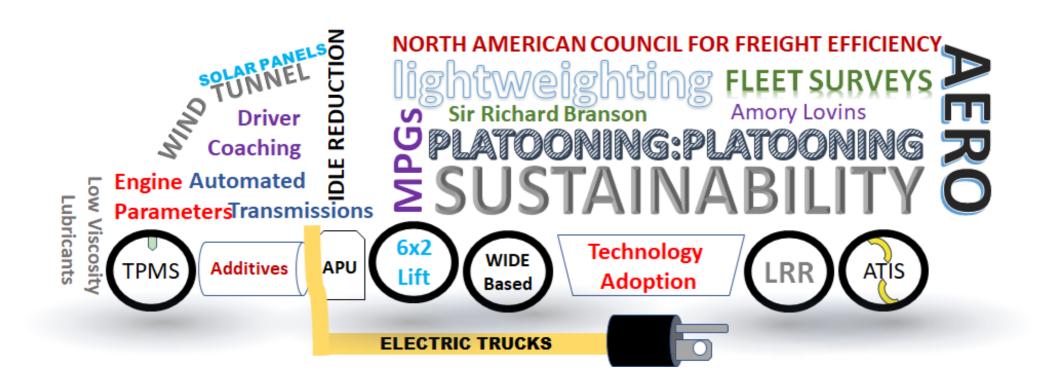
- Involve 10 dedicated trucks and drivers across the United States and Canada, supported by their fleets and truck OEM partners
- Explain fleet implementation considerations such as charging infrastructure, engagement with utilities, total cost of ownership management, driver and technician training, etc.
- Highlight effective partnerships between fleets, OEMs, and utilities
- Facilitate industry conversations around the necessary supporting actions
- Conclude with two finales—one at a major trucking conference and one at a major clean energy event.

Detailed results and findings will be published in a focused report in mid-2022.

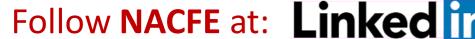
"A real-world electric truck demonstration with actionable data and discussions. Real freight, real routes, real trucks & drivers. Includes data from trucks, storytelling via videos with drivers, fleets and OEMs. An engaging electrification education series building the key actions for accelerated adoption."



## Many Smart Ways to Save Fuel Expenses



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### THANK YOU