

TRUCKING & ELECTRIFICATION

NACFE focuses on the opportunity for electric commercial trucks to move goods across North America. Our findings and other trucking research are available for free on the [NACFE website](#).

NACFE has published five electric trucking guidance reports:

1. [Electric Trucks: Where They Make Sense \(2018\)](#)
2. [Medium-Duty Electric Trucks: Cost of Ownership \(2018\)](#)
3. [Charging Infrastructure For Electric Trucks \(2019\)](#)
4. [Viable Class 7 & 8 Electric, Hybrid & Alternative Fuel Tractors \(2019\)](#)
5. [High-Potential Regions for Electric Truck Deployments \(2020\)](#)

After the initial adoption in last mile delivery with medium-duty trucks, we see the next electrification step in regional haul operations. NACFE published a report on this growing market sector: [More Regional Haul: An Opportunity for Trucking](#) and augmented it with a real world “Run On Less” demonstration with ten fleets in late 2019. In 2020, we identified [U.S. regions that have the best conditions for deploying regional haul electric trucking](#), in terms of factors like weather and government support.

Also in 2020, NACFE [published a detailed report focused on the data](#) collected during Run on Less Regional. Additionally, the National Renewable Energy Laboratory (NREL) worked with NACFE to evaluate the duty cycles of these ten trucks and project them into battery electric vehicle applications with this report: [Battery Electric Powertrains for Class 8 Regional Haul Freight Based on NACFE Run-On-Less](#). Similarly, Ballard Power Systems worked with NACFE to study these as hydrogen fuel cell trucks: [Fuel Cell Electric Trucks](#). Finally, for those interested in the duty cycles and metrics from the trucks, [see the accompanying data sets](#).

Given a large number of new truck manufacturers and commitments to production availability for electric trucks, there is this report on what it means to be in production: [Defining Production \(What Does “In Production” Mean\)](#)

The most commonly downloaded report published by NACFE is an annual look at adoption of numerous efficiency technologies: [Annual Fleet Fuel Study \(Adoption Trends\)](#). For those wondering why all technologies are not adopted immediately, we offer a look at that as well: [Barriers to Adoption of Fuel Efficiency Technologies](#).

To start the conversations on electrification, NACFE has published two primer documents, one focused on initial thoughts for [utility companies](#) and the other focused on initial thoughts for [truck fleets](#).

Growth in Regional Haul is Good



Regional Haul Trucks:

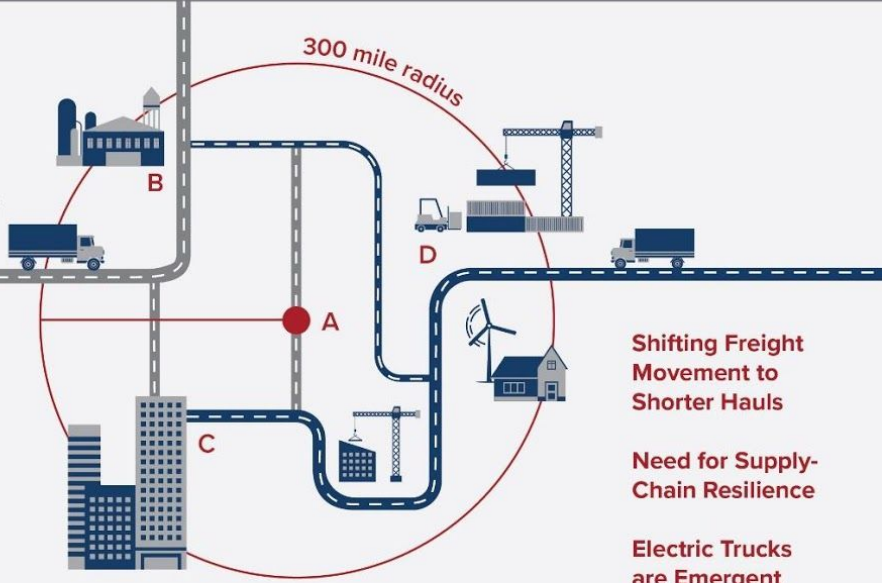
- Return to base often
- Diversity in duties
- Predictable operations
- Great efficiency opportunity
- Proximity to base for support

Regional Haul Routes

A-B-A
(shuttles, dedicated and dedicated fast turn)

Hub-and-Spoke
Different destination each day

A-B-C-D-A
(city, diminishing load, and milk runs)



Shifting Freight Movement to Shorter Hauls

Need for Supply-Chain Resilience

Electric Trucks are Emergent

Efficiency Opportunity

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

*measured in billion gallons diesel

Annual Consumption



ROL Regional Possible



Future Potential

