



Behind the Wheels Podcast Transcription

Season 2 Bonus Episode 6

Current Technologies That Drive Freight Efficiency with NACFE's Mike Roeth & Friends

ANNOUNCER

You're listening to Behind the Wheels with Doug Mason, Dave Walters, and Mike Yagley. This is a show where we talk about heavy truck and medium duty axle ends. Doug, Dave, and Mike bring close to 100 years of experience and expertise in the transportation business.

Join us once a month to learn new things about axle ends. Sponsored by Alcoa® Wheels, the global leader in aluminum wheel innovation.

MIKE YAGLEY

Welcome to another episode of Behind the Wheels. I'm Mike Yagley.

DOUG MASON

I'm Doug Mason.

DAVE WALTERS

And I'm Dave Walters.

MIKE YAGLEY

Well, today, we have really looking forward to this discussion with Mike Roeth from a NACFE. I became aware of NACFE a few years ago, probably about five or six years ago when there was talk about this new outfit that had put together reliable information for truck performance in a lot of different domains, light weighting, fuel efficiency, just different things. We started watching them. Just over and over again, we kept hearing back from the fleets that this is exactly what they needed. And so, we wanted to bring Mike in and get the background of where they came from and where they're going there with NACFE. And so, really, Mike, thanks for joining us.

MIKE ROETH

Oh, it was pleasure to be here. It's good to hear fleets are saying that we're doing something right because that's... We'll get into it, I'm sure, in our time together, but end-user fleets, those that are making the decisions on technologies, I mean, they're our first audience. I mean, they're our core audience with the work we do. Of course, after that, I always say that there's just everyone else that's in trucking because after that, it becomes everybody. It takes a village to do this work and organizations, companies, non-profits, et cetera, but the fleets are really key to making this happen.



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MIKE YAGLEY

They're a tough customer. There's all sorts of legends going back, people trying to come in with a bunch of computer models and ideas on way things ought to be. The fleets aren't really interested in theory. They're looking for concrete information that they can use. And so, to break in and build that trust with the fleets is a real challenge and that's something that we have, the Alcoa Wheels and especially the three of us really feel very strongly that really focusing on the fleets and making sure that their needs are being met, that their voice is being heard. Our ability to influence the organization really is focused on that.

MIKE ROETH

Yes. I mean, first of all, it starts with the fact that these trucks are tools and it's not an emotional decision hardly at all. When we buy our cars, we like the color, we like the seats, we liked a number of things, which may or may not be functional. So, trucks are very much a tool and functional first. And then there's such diversity in use, whether it's the application and the duty cycle that trucks are operated in, even the states that they operate in. I mean, there's state regulations, not just federal ones. And so, there's just a wide different diversity.

MIKE ROETH

So, you hear a lot today about authenticity. Well, trucking has been authentic forever, and these fleets, they want it to work for them and their duty cycle on application and their own business model. Sometimes it's not even duty-cycle dependent and they don't want the BS if it's not. So, if you're talking about a Michigan dump truck to an Arkansas dump truck operator, it doesn't work. Yeah. That's why I spent my whole career in this and why I enjoy it so much. It's pragmatic decision makers and data that needs to be for their particular case, and for manufacturers like yourselves that are up for all that to be successful. If not, they go away pretty quick.

MIKE YAGLEY

Absolutely. Going into about your background, why don't you tell us a little bit about yourself? Where did you come from?

MIKE ROETH

Oh, I like this.

MIKE YAGLEY

I like to get to where you are.

MIKE ROETH

Yeah, big farmer from Ohio, that's news to maybe some people that even know me. But yeah, I grew up in Ohio around equipment and went to Ohio State Engineering and started my career at a radiator manufacturer that was actually owned by Cummins, and then later moved to Navistar. So, I had about 23 years split equally between Cummins and Navistar, doing really more jobs than I remember. I was the utility player in engineering and plant management and materials. After those 25 years or 23 years, something like that, I went off and really helped start this North American Council for Freight Efficiency. At the time, it was a scary effort because when I started running it, basically we had no money, no sponsors, just an idea. Now, 11 years plus later, I really feel like we're making a difference in a way that's meaningful for the industry.

MIKE ROETH

So, I always loved trucking and been an efficiency-minded guy. There's always a better way to do stuff, and so burning less, fuel-saving emissions. That, originally, for NACFE was around saving dollars cost per mile, and now it's grown into getting off our dependence on oil and actually a sustainability clean air effort all together, whether it's diesel trucks or even some of these alternative fuels that are emerging, including electric.

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At the same time, maintaining that view on cost per mile, because as we were talking a moment ago, that pressure hasn't gone away, right? So, you really are just like the rest of the industry, fighting a two-front war, aren't you?

MIKE ROETH

Yeah, it's absolutely true. There may be a small amount of patience. Or not. There's a big amount of patience, but also a small amount of knowing that some of this movement to zero-emission vehicles and so forth, which we've definitely started we believe at NACFE, that the early days are going to cost us some money. That's why incentives by governments and other entities, like utilities, et cetera, are really important. The fleets are seeing that, "Hey, if we're going to really get to a world where we have little emissions from trucks, it's going to take a while, for one, and two, in the early days, it's going to cost us some money, either in upfront costs, maybe in some operating costs until we begin to scale." So yeah, you're definitely right, but we all know we need to do something that... I call it the big transformation. It started and we'll see how far and how fast it goes.

MIKE YAGLEY

So, what are the technologies you see in the big transformation? What are these huge trends that are going on that you're seeing at least?

MIKE ROETH

Well, let me first state, so NACFE's first five or six years was all about tractor trailers and burning less diesel. So, we got in the weeds. You mentioned fleets in our reports. So we did confidence reports on everything, from aerodynamics to tires, to lightweighting, to powertrain technologies. I mean, we've been following 85 technologies on tractor trailers that are yet to really saturate, meaning a truck or a trailer. It's standard and only technology, so a lot of technologies. That's gotten us from six to eight, 10-plus mile per gallon on some of these tractors, so huge fuel savings there and that continues. It's really important for all those diesel trucks that are built today. I mean, we a thousand diesel heavy tractors today, right? So, if they're more capable of 10 mile per gallon at six mile per gallon in their basic spec, and then we help drivers and we help with maintenance and all those things as well, we can burn one heck of a lot less fuel. I think this week we're at 340 a gallon. And so, every gallon is expensive, so we need to save as much as we can.

MIKE ROETH

And then what's really caught NACFE moving forward is battery electric trucks, hydrogen fuel cell trucks, hybrid trucks. The industry won't have as many fuels as is being discussed. I mean, if you open everything from... Yesterday or last week, I got a call on renewable propane, and it wasn't even on our list of a couple of dozen fuels that might power trucks going forward. So not all of those will be a part of the future, but we're pretty sure battery electric and hydrogen will be. And so, getting prepared for that and ready for that. The last thing I would say about this transformation is that it takes all of it. It's not an either/or. It's not lightweighting and low-rolling resistance tires and fine-tuning your powertrain for the duty cycle. Most all of those things will also help the range of these alternative fuel vehicles and save on the electricity that we need for battery electric trucks. So, efficiency is critical in being successful with these alternative fuel trucks.

MIKE YAGLEY

Yeah, there's certainly a lot of bleed over. When it comes to efficiency, that serves everybody, that helps the electric vehicles. It helps the hydrogen vehicles and of course it'll help the diesel vehicles and technologies like aerodynamics, for example, that at least in my mind, that's sort of a no brainer for everybody.

MIKE ROETH

Yeah. But if you don't mind, let's go down that rabbit hole a little bit or rabbit trail, I think it is.

MIKE YAGLEY

Yeah.

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MIKE ROETH

Down that rabbit trail. So, part of what we're interested in is we saw natural gas, especially compressed natural gas, scale a bit last decade, and then fall off a bit. Some of the same companies that looked at compressed natural gas, so Ryder, Penske, Frito-Lay, I could go on and on, but they are also the ones that are first in line, it seems, for battery electric trucks. Part of that is because they return to base. They don't always have long range, et cetera, et cetera, and that helped compress natural gas trucks. But as my team, as we looked at what happened with natural gas trucks, sort of like who killed the electric car, so when we look back at what happened, one of the things that happened is exactly your point. We worked so hard back about 15 years ago to get a compressed natural gas engine into a truck and the fuel tanks needed for that compressed natural gas. We, as an industry, seemed to forget all of the efficiency work we were doing.

MIKE ROETH

So, the early tractors or the early CNG tractors had these huge cabinets behind the cab. They stuck out past the cab. The trucks had no aerodynamics on it. They had no skirts. They had bad tires. We found instances where idle reduction wasn't at all considered. We really found that out after we looked at the fuel efficiency of the compressed natural gas. It was like tractors in the early days, it was horrific. Everybody said, "Well, that's just because you're burning natural gas." Well, to an extent it was, but to a bigger extent, it was the fact that we could not get or did not buy these efficiency technologies on those early natural gas tractors. And so, as we look at battery electric trucks, we just... I mean, if you just step back and think six to 10 mile per gallon on a diesel truck because of efficiency measures and because of the way the truck drivers drive in the truck, et cetera, et cetera, that's ginormous.

MIKE ROETH

And so, if you have, let's call it a 200-mile range electric truck, but you're putting bad tires, you're putting batter dynamics, you've got a driver that's not paying attention to driving and on and on, that 200-mile truck will be 200 miles. But if you do put all of those things in place, a 200-mile truck might be 300-mile truck. Well, that's ginormous and saves a lot of battery, et cetera. So, we feel like we're onto something and we're encouraging all the battery electric truck companies to do everything can to make that truck efficient, including lightweighting. I'm not saying they're not doing that, guys, but it's something... We all have only so much we can focus on and they're working on getting the battery electric powertrain in first and worrying about efficiency later, and we really need to do them both, to your earlier point.

MIKE YAGLEY

Yeah. And then taking it down another level, as soon as I said aerodynamics works for every everybody, I almost choked on my own words because there are plenty of customers out there who don't get any benefit from aerodynamics if you're doing city driving or anything like that.

MIKE ROETH

Yeah, I would disagree with you. There's some benefit, but it doesn't pay for it.

MIKE YAGLEY

Okay. Okay.

MIKE ROETH

It doesn't pay for it.

MIKE YAGLEY

Yeah. Okay.

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MIKE ROETH

So, you're right, I'm right, right? We're both right. But we do see that there is a big myth out there that aerodynamics doesn't work under 50-mile an hour. It does work, but just may not pay for it. Really what we're seeing is a lot of box trucks and even some what a lot of people call Baby Class 8 tractors, maybe in beverage and other things, where they do get on the freeway and get 60, 65-mile an hour for more time than they think. So, if you're just looking at average mph, sometimes you're lulled to sleep that it's a city tractor when it really does get some highway miles, so important to look at aerodynamics. Aerodynamics has become much cheaper and available with skirts on day cabs, cab extenders on day cabs, all that kind of thing to make them more pragmatic and a better choice for some of those city tractors even.

MIKE YAGLEY

That's fascinating to me that aerodynamics are useful in those market segments that have historically been thought of as city trucks. Like you said, beverage is a perfect example. I guess it makes a lot of sense that they probably do spend a good amount of time at higher speeds, where aerodynamics are going to start kicking in. I'm going to look forward to seeing the reports that back all that up because that's fascinating to me.

MIKE ROETH

Definitely. Every fleet has to look at it with their manufacturers in the detail.

MIKE YAGLEY

Sure. Sure. Sure.

MIKE ROETH

There's a reason why these newer vans are much more aerodynamic, even in e-commerce delivery than the trucks of old, so to some extent

MIKE YAGLEY

Aerodynamics are always one of our favorite things to talk about, only because it's a technology that at least we see as being pretty consistently valuable. It's also we're a lightweighting company and we have something to say to that. You're adding weight to your vehicle, and we can help balance that out. Are there any other technologies that are really jumping out at you right now for the big trends out there?

MIKE ROETH

Well, definitely, on diesel and engine trucks, continuing to work on customizing the powertrain for what the truck is going to do. So we've got down-speeding and we've got engine rightsizing, and we have engine parameters setting. You had all the driver ADAS, which assisted driver or driver-assisted systems, which become fuel-efficiency savings, as well as safety savings, because they're getting following distances and lane keeping. And those things have a fuel efficiency benefit. So, there's a lot of them and they're not insignificant even by themselves, but when you start to spec them together, that's how we're seeing some of these new trucks and fleets talking about, "Hey, my 2022 model year trucks are doing nine, nine and a half, 10-mile per gallon across multiple different drivers." So yeah, it's a lot of things and I'm glad we're talking about it because many times when I and my team starts talking about things, whether it's a reporter or different people, they want to race to the battery electric trucks because of all the things that are going on. There's a lot to do yet on diesel.

MIKE YAGLEY

Oh, absolutely. Absolutely. You know what's funny, you're talking about nine, 10 miles per gallon. That would have been mind-blowing not that long ago.

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11 years ago, there was a workshop that created NACFE. They basically came out of that saying, "We're going to create an organization that's going to help the industry double its freight efficiency." When I took the job, I got to tell you, I mean, I was like, "Ooh, man, that's a... Do I rather really take on that?" Here we are now, we're not declaring victory, but we know we're getting more freight in trailers with different technologies. And so, that's a freight efficiency increase by moving more tonnage at whatever MPG we're doing. Yeah, we're seeing MPG. If you even take the IFTA government mileage and diesel consumed by all trucks out there, in the last five years, it's jumped around six mile per gallon to 6.2, 6.3. When you're talking about billions of gallons of fuel consumed, that all adds up really fast. So, it is happening.

MIKE YAGLEY

That's just like I said. I remember attending some meetings with some of our OEM customers and dreaming about the day we hit nine miles per gallon. At that time, we all looked at each other, "Yeah, that ain't going to happen." Here we are, here we are, amazing. Where do you see regulatory trends? Where do you see that going? I mean, CARB is obviously a huge part of the regulatory discussion, and they seem to be setting... At least, historically, they've settled off a lot of trends just by themselves. Where do you see things?

MIKE ROETH

Well, if we take a little quick history lesson, we went through two decades of lower NOx and particulate matter. How extraordinary was that in getting these trucks to, as the proverbial say, clean the air in some parts of North America? And then now we've gone through about 10 years with the Greenhouse Gas Phase 1. Now, you start a Greenhouse Gas Phase 2, where we're working on carbon. So, we also have CARB and others talking about a lower NOx rule. We got the ACT electric and hydrogen California rule. When I just stepped back from it, and NACFE is not a... We're not an advocacy regulatory group, but when I do step completely back from it and look at it, I'm really pretty proud of the government and the industry collaboration on NOx and PM for a couple of decades, carbon for a couple of decades, now looking at the opportunity with zero emission and what might occur post Greenhouse Gas Phase 2.

MIKE ROETH

Greenhouse Gas Phase 2 put a kicker in, that's probably not the right term, for electric trucks, new technologies. That's actually helping spur some of the development with some of these startup manufacturers, Nikola Tesla arrival, et cetera, and also supports and helps the current manufacturer. So, government doesn't always get it right with the regulatory. If you look at it from a 30,000-foot level, it makes sense. Now, of course, we can debate all kinds of things, right? Too much, too fast. Did they do the emissions too fast and cause EGR downtime? Blah, blah, blah. We can certainly poke at things, but I think...

MIKE ROETH

And even globally, you've got an interesting piece here. You mentioned that we do have California driving some of these things, but also a federal government that is acting easily in a way that's supportive of industry and industry of it. So, that's sort of the high level. I think going forward, the mix of how we encourage zero-emission battery electric, which has really proven to be successful in some applications now and getting better in the future as this new electric truck continues to get improved. So yeah, we'll see, but those are our views on the regulatory situation.

MIKE YAGLEY

Okay. I'd like to move into lightweighting a little bit. Now, you guys have done a lot of work with lightweighting, studying lightweighting. What are the major trends, the major findings you've got for lightweighting? I mean, I saw the studies you did a few years ago. What are your thoughts on that?

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MIKE ROETH

We did our first big lightweighting confidence report, I think, in 2016, maybe. We updated it last year. So, it's got some good updates, including a chapter on lightweighting electric trucks. A couple of the big key findings, one, these trucks are huge and they're heavy, right? You save a small amount when you lightweight at the weight the truck is. So, the fuel savings in lightweighting is small, but definitely when you think about lightweighting a car, so we're limited in how much weight we can also... Lightweighting is really important for those who max out at either 80,000 pounds or the 82,000 pounds for an electric truck. That payload is really important. Also, you mentioned it earlier, some of these technologies that we've been adopting, whether we're saving fuel or safety or just driver amenities, and then we talk about this quite a bit in both reports, add weight.

MIKE ROETH

So you just think about a big old sleeper to satisfy the driver, and then you put a refrigerator in there and a TV in there and on and on and on, better seats for driver acceptance. I mean, all that adds a fair amount of weight. We've added emissions equipment. We're adding skirts and aerodynamics. So, truck builders have been challenged to lightweight because the trucks have gotten heavier. So that's a couple of thoughts on what we found in trends and so forth. But to react to that, there's not just material replacement to lightweight. In many cases, some of the things on the truck, there's just too much, right? Do you really need a 15-liter when a 11 or 12-liter will work? What about one wheel instead of two, one tire instead of two? Just right-size your truck and that will bring fuel savings there. So, there's a lot of trends, but also strategies that can be employed to save weight.

MIKE YAGLEY

Yeah. We've always looked at our wheels. I would say, let's just talk about our wheels, Alcoa Wheels, as being a technology enabling. We're an enabling technology, I guess I should say, where take a couple of hundred pounds off, or depending on the situation when you switched to aluminum wheels, it opens up possibilities for somebody without having to impact their carrying capacity. It also is the other benefits of the... We talk a lot about that on the show here, all the different things that come with that resale value and everything else, but it's an enabling technology. We do watch all these different technologies that are coming in and the way they consume weight, then you made a good point a moment ago. It tends to be those customers who are very weight-sensitive, whether you're a ball caller or something. They're always going to be looking at any sort of lightweighting technology, but even we're seeing with other customers are starting to get little sensitive to it.

MIKE ROETH

Yeah, absolutely. We believe that there's a trend. In this area, there's three types of customers, right? Well, you just mentioned that they go out at 80,000 pounds every day. So, you are saving 500 pounds, they can 500 pounds of helium or oil, peanut butter or whatever in the truck and that's a big deal. And then there's the folks that basically never grows out, and that's like private fleets that are hauling potato chips or other things. And then there's people in the middle.

MIKE ROETH

There's a growing group of fleets that are saying, "You know what, I'm being asked a little more every week about how can you put a little more on." We think that's driven by a lot of technologies that are having companies add more to the trailer. And so, instead of taking two half loaded trips somewhere, they're trying to get both full or they're trying to get the trailer full and make one trip. That helps with congestion, that helps with fuel burn, helps with all kinds of things. And so, we do see that growing. Now, personally, I thought it would happen a little faster than it is, but I still have much confidence that we are adding more freight to the trucks and trailers and lightweighting will continue, if not be a bigger part of discussions going forward.

MIKE YAGLEY

Yeah. Something that a lot of people don't think about is the impact of logistic planning on how weight and logistic planning work together.

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MIKE ROETH

Yeah. Another comment I'd make is we're in the middle of Run on Less Electric. We have 13 fleets and truck builders that we are highlighting over the next number of months, primarily in September. It is really exciting. And so, we're out visiting all of those right now. And so, I was with a tractor trailer just last week that had wide-base tires, aluminum wheels, on an electric tractor. This is a tractor that right now can only do about 200 miles of range, but that's exactly a lightweighting approach to save as much fuel as possible, to get as much range as possible out of that electric truck. So, that's the opposite of what the case study I mentioned earlier about aerodynamics on natural gas trucks. Here's a real-world example of some of the very first regional day cab tractors with aerodynamics and the kinds of features on that truck that will help with range.

MIKE YAGLEY

Exactly the kind of lessons that were learned with LNG. It seems like they're taking them to heart because trucking is a holistic endeavor. You have to take everything into account. The more I've learned that... When I got into this industry many years ago now, I had no idea how complex it was. You see the trucks going down the road and you don't think twice about them, but when you get into the industry and you realize the complexity, and it's amazing to me, what the... Almost every truck that goes down the road is a unique situation that has to be looked at and considered and has its own strategies.

MIKE ROETH

I'm glad you brought that up. One of us today or in the next few days is going to go to a big-box store and we're going to buy milk and we're going to buy some bolts and a pair of jeans or something. That store has no warehouse. I mean, it really literally has no warehouse. So, how is that 1% milk that you like or the 20, whatever your jean size is, how is it that that's there and readily available? Well, that's because the truck got it there and the logistics system of bringing that was successful for what we needed. You're exactly right. When we step back and take a detailed look at that, even for those of us that can see behind the curtain and see what's going on, it's pretty extraordinary. Our logistics efforts are really good and strong. The whole trucking industry should be proud of that.

MIKE YAGLEY

Absolutely. You get a chance to get out there to the fleets and you get some pretty deep dives into what they're up to, what they're thinking about, what their strategies are. We've talked a little bit about it, we touched on it, but I'd like to go a little deeper into that. Can you give a little more insight in some of the interesting fleet strategies that you're seeing out there?

MIKE ROETH

Oh, really good question. So, top of mind for fleets are a few things when we talk to them, one is drivers, driver attraction, as well as mechanics. And so, it's important for us all to understand truck drivers and do what we can to support them, so getting home every night or once a week. Two to three weeks out at a time was common. Now, even the truckload-for-hire carriers are trying to get as many drivers as possible home every week, and that's a tough thing to do. So, driver and technician attraction and retention. I think no matter what you're developing out there as part of a manufacturer, you should constantly be asking yourself, what effect, positively or negatively, does it have on truck drivers themselves? And so, that's one.

MIKE ROETH

Secondly is, and I don't want to put in these in any particular order, but sustainability. So, every organization with the social and climate challenges we have are in the spotlight of consumers of their own board of directors, and really everyone is to what they're doing to do better with these items. The last couple of weeks, working with some of these fleets adopting electric trucks, even I was surprised at how excited they are to be exploring electric trucks. I thought, "Well, even some of these folks will tell us, 'I got enough challenge just keeping my diesel running and hiring drivers. I don't want to be part of this. Now, why am I bothering with electric trucks? Somebody else would do that.'" No, we're not hearing that.

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MIKE ROETH

And then just getting the freight where it needs to go. I mean, truckers had a little bit of benefit when none of us were out on the highways, and they had clean sailing. Now, constructions out there. Construction season is out there. People are all over. Truckers are now dealing with much more congestion and a lot of cars getting in their way, actually making some bad decisions. So however, we can support... So that's what we're seeing with fleets. You mentioned it earlier, cost of fuel is way up. So, there's a lot of things on their mind, including truck capacity. So, the truck builders can't seem to build enough trucks to satisfy the demand. All those things are on the minds of fleets. There's a lot going on right now, both in the very short term and how to prepare for the longer term.

MIKE YAGLEY

Absolutely. When you mentioned about the excitement about electric vehicles, I was personally not expecting as much excitement from the fleets about electric vehicles compared to what we're seeing. That's a very interesting change from at least my impression of the industry, even five, seven years ago.

MIKE ROETH

Yeah. If there's one this NACFE... So, one of the things that we've done is really try to understand what a lot of people or the academics will call product diffusion. So, what's the adoption? Why do people buy new stuff or not? And there's this other academic called the hype cycle, where these things get talked about. There are interesting magazine articles and pictures and all that. And then they go through this valley of... What do they call it? Disillusionment, I think, where it's like, "Oh, this ain't as good as what we thought it was." That was a horrible grammar there. You go through sometimes years of figuring out how to be effective and cost-effective before the technology grows.

MIKE ROETH

I'm becoming more convinced every day that electric trucks, both e-commerce small truck delivery class four or five, medium trucks class six, seven, and even regional haul class eight, whether they're terminal tractors at yards or whether they might be drayage or short regional, beverage included, they're not going to go through much of this valley of problem. I mean, they've proven themselves now. The electric infrastructure and the charging infrastructure is not as hard as some people thought, or maybe we're learning it quicker than we thought. Of course, there's huge challenges. I mean, don't get me wrong, but I think we're not going to see a lot of that, that some are saying and we're going to get on with it in those cycles. Now, long-haul trucking and other things, kind of a bit of a different story, but yeah, it's here.

MIKE YAGLEY

So Mike, it's been a great conversation. If the folks listening to our podcast here want to get in touch with you or they want to hear more from you, how should they connect with you?

MIKE ROETH

Yeah, that's a great question. So NACFE.org and runonless.com are our sites. Run on Less, of course, with this electric throughout the rest of 2021 and into 2022, we'll have a lot of insights around battery electric trucks. So, that's right now. But NACFE.org, with our lightweighting reports and lots of other interesting, there's some thought leadership reports there that are interesting. Of course, we have LinkedIn, Twitter, and Facebook stuff. And then, finally, I have my own podcast series you can see on the resource's pages there. There's plenty of places throughout our website to engage with us, or simply hit the contact us and we'll get somebody in touch with you. But yeah, efficiency, zero emissions to what we're about and we're trying to have these things to happen quicker because we've been involved.

MIKE YAGLEY

Any upcoming trade shows or events you want to put a plug-in for?

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MIKE ROETH

Yeah, we're really excited. We're going to be all over. So, from some regional shows, like Expediter in July to then ACT Expo, TMC, SAE COMVEC, ATA, MCNE. I mean, we'll be out and about with a booth or a presence or speaking or something at nearly everything that's coming up. It's in our newsletter, the exact places we'll be and what we're doing. So, I'm excited to get back out, and if not, shake hands, fist bumps some people and really get into the details. Right now, we're out visiting all of those electric truck deployments. And so, we will be bringing our face-to-face interactions with them to our virtual and to those shows as we help tell the story of what's going on out there in the real world around electric trucks.

MIKE YAGLEY

Thank you, Mike. That's been Mike Roth, NACFE's executive director. We really enjoyed the conversation.

MIKE YAGLEY

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