Ford Motor Company

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CORPORATE PARTICIPANTS

Durgesh Chopra - *Power and Utilities Analyst at Evercore ISI*

Ted Cannis - *CEO Ford Pro*

PRESENTATION

Durgesh Chopra
I'm Durgesh Chopra, the Power and Utilities Analyst at Evercore ISI, and I'm thrilled--and I welcome you to our keynote breakfast session at our ninth annual Evercore ISI Utility CEO conference. So, in a minute, you will hear from our guest speaker, which will be followed by a Q&A that I'll moderate, and we'll leave plenty of time for questions at the end. So, with that, I'm very excited to have Ted Cannis joining us today. Ted Cannis is the CEO of Ford Pro, the global business and brand within Ford, dedicated to delivering the world's most comprehensive suite of solutions to government and commercial customers.

Appointed to this role in June 2021, Ted leads Ford Pro's global team, which is a one stop shop providing a trusted productively platform of vehicles, software, charging, financing, and customer support to serve commercial customers of all sizes in different industries and is leading the transition from gas to electric vehicles for commercial customers. Ted began his career at Ford in 1989 and has had several key leadership roles at the company including General Manager Commercial Vehicles, Global Director Battery Electricity Vehicles, President of Ford Argentina, and several other leadership roles in U.S. and globally within Ford's finance organization.

Ted is a graduate of Indiana University with a master's degree in Business Finance and holds a bachelor's degree in philosophy from the University of Michigan. So, we're delighted to have him here with us today. And Ted, I really, really thank you for your time.

Ted Cannis
Good morning, everybody. So, during the COVID process, I decided I will never wear a suit again. I'm swag only, so this is what you get. And when I was running Ford Investor Relations years ago, I always used to be able to tell who the investors were and who was the company because the investors were all wearing vests. But clearly, something happened during COVID so it's harder to tell now.

So, it's great to be here. It's an unusual thing. We're in a different place now, because a lot of you in the room are on the company side, you are now our partners and collaborators. You were always customers. I was checking the list of companies here today. 50% of you are heavy Ford customers. About another 40% have a lot of Ford's. It's a big business for us. But now, we're in this together. And if there's a message, I want to say to you guys, that's what we're here about. And we're in a different place. It's a big growth story. We're talking big growth, and we're trying to figure out how to get through it because we're in inning one barely. And that's a bit what I want to talk about, what we're doing, and what we're doing with you guys, many of you in the room. Some we can talk about, some we can't, but it's an exciting, exciting time.

So, a couple of things I would like to say as we get started. We formed up the Ford Pro commercial business a couple years ago, and the target was really to streamline all the focus on commercial and government customers, B2B businesses, not just the vehicle, but two major things are happening for us in the vehicle space. One, electrification, why we're all here today. But the other one is this software capability vehicles. These are smartphones on wheels. It's kind of like our houses. A few years ago, we didn't have Nest in the house to manage the temperature and optimize the climate and costs and oh, I forgot it, on vacation, and I forgot to adjust it. Now, you got that.

You got Ring watching the front door to see if anybody's delivered a package or stealing anything. The whole house is connected, and that is what's happening in the vehicle space. Modems are in the vehicle. I can manage the vehicle health. I can see how the drivers are working. Are they idling? Are they in the wrong place? Are they going to be a liability for my insurance? And connecting that with the service, physical capacity and the network and bringing this all together, and not just for the big companies. Big companies have staffs of people, SAP, IT departments, but the small and medium business doesn't, and this matters even more for electrification.

So, a big company might have a team working on how we're going to meet our sustainability goals. But a small and medium business, they want to go but it's complicated and confusing. They were buying oil before. What the hell is a kilowatt? I don't understand anything. And there's so much confusion and education out there, which is why we have huge roles together. So, I'm just going to take you through a bit of our business to give you some context. And as we said in the beginning, Durgesh said, before I was running the commercial businesses, I was Ford's Global Lead for Electrification, going around six times a year to China and Europe and North America to come up with products like Mustang Mach-E, the Lightning and E-Transit, talking to customers all over the place in high density markets like Norway and California to low density markets. How do you get this adoption rate? Because these early years, is not everybody, it's the front end of the s-curve, and it's a different kind of customer. And if we just read the miles driven every day, it isn't going to tell the story of what needs to happen and who's going to buy and where the infrastructure is going to go.

Our goal is to accelerate productivity for your businesses running bucket trucks, or to a guy who's plumbing, because what you want to do is what you do. You want to fix lines, roofers want to roof, plumbers want to plumb. They don't actually want to work on vehicles. Their goal is to be doing uptime running their business, and they buy the tool for the job that they need. If a V6 engine will do, why would you buy and spend more money on a V8? And it's a very scientific business. It's like us. You got Excel spreadsheets, return on investments, total cost of ownership, measuring fuel, repair, residual values of the vehicle. It's a different conversation than a retail electric customer.

Retail customer, they're buying on a might. You know, why do you have a seven-seater vehicle? You only have one kid? Oh, you know, we might take the soccer team to practice and visit grandpa with a load. So, have you ever used seven seats? No. Nope, never used it. Have you ever towed anything? No, but just in case, I bought it. That does not happen in the commercial world. None of you are doing things just in case. You got to have it and that's it. A plumber in Michigan who's got customers in a neighborhood isn't going, I wonder if I should go to Chicago and drive all day to get a client over there. It's a completely different business model and a completely different conversation.

We have the widest range of commercial and electric vehicles in North America. And later today, we will also talk about how great we are in Europe, seven years of leadership there. So, we have a pretty good perspective on the space. And the goal is to have this always-on capability. Now we're modem connected. How can you connect all these services together digitally? And that includes with you guys on utilities and charging the data on that side of the business and integrate it into one digital dashboard. We all came out of COVID, and we had to get all our reference material online. And the customers are expecting a suite of solutions that work together online, not a bunch of fragmented solutions that don't work together.

And if you buy software from here and a charging solution for there and a charger from here and something goes wrong, it all starts to fall apart. Well, who is it? Was it the vehicle? Was it the firmware? Was it a cloud problem? I don't know. And so, what we said is we're going to pull those all together. If there's a throat to choke, it's mine. We will solve the problem, and it's our problem to handle. So that's the high level of what we're trying to do.

What is Ford trying to do on electrification? Or maybe I should just address something on everybody's mind, demand. Are we in a recession? Are we not in a recession? In our case, demand is very strong. In the commercial space, both here in Europe, just got back from Germany two nights ago to come here, the commercial side has been so underserved, you guys screaming for bucket trucks, guys waiting for 5G, infrastructure bills, the delivery economy. People have a new way of life, and they need a lot of vehicles. Walmart wasn't delivering products to your home before. Now, they needed a lot of vehicles to do that, in our case.

So, it's a completely different economy, and what we see is a lot of pent-up demand in the commercial space. So, between the infrastructure policy and IRA, in our case with electrification, sustainability objectives, returning over of fleets to hit their numbers that they have already committed to, we just see a huge amount of demand. Unfortunately, on the supply side, the situation remains tenuous. We expect the chip situation to get a little better this year, but it's still an ongoing issue. We expect other issues to get better, but the tight labor market, it's tough for the plants, it's tough for our tier one suppliers, and it's tough for our tier two suppliers. The system is so thin, anything kind of scrambles, there's no room for makeup. And so, the labor situation I'm sure that you are facing as well, is a constant challenge for us, which means it's a constant challenge to provide vehicles to our customers, in some cases, very long waitlists.

So that's a bit what's going on there. And that includes all the way through the supply bases, securing the battery supply, from battery supply from the facilities on the electric side, which I'll talk about in a second. So, what are we doing at Ford? We're going to invest $50 billion, are investing, between now and 2026. We have huge new facilities like we're putting in Tennessee and Kentucky for the next generation F-series, $11.4 billion, including some partnerships. And we're investing in another facility in Ohio for another next generation electrification commercial vehicle.

We've got new battery plants going up around the world, because we need all that gigawatt capacity. So, we're all in. This is where it's going, and we see the demand every single day. So, our view, off the moving, is 50% of global sales will be electrified for us by 2030. That's a huge rate of increase from today. That means a lot of resources investment through the entire chain. And we are already moving--that number is behind us. When we got the Lightning orders last year, that we had 200,000 reservations and had to shut it off, we rapidly increased our whole planning projections and supply chain for Lightning.

So, the final numbers last year were 15,600 Lightnings, which I'm happy to say won Motor Truck of the Year two days ago, and Motor Trend Truck of the Year, et cetera, et cetera. But this year, we're going to ramp up on Lightnings to over 150,000 annual production rates by the end of the year. And in total across the Ford system, 600,000 units of annual production rate by the end of this year. And we've got 100% of raw materials already secured in for that one, because that was the key. And that's a key part for you guys because you're working with a lot of companies and there are a lot of promises out there.

But do they have the raw materials? Do they have the battery plants? Can they produce vehicles? And we're going to get to two million EVs production rate globally by 2026. And we

got 70% of that supply locked down. And that's a lot of effort, flying people out to Indonesia to book agreements to make sure we can get nickel and lithium and the other products around the world. And our goal--we were number two in electrification market in the U.S. last year. And our goal is to be the number two guy and we aspire to be the number one guy. Not proud enough in us to get there yet, but number two, we're looking at. And in the commercial space, which you'll see in a second, we're particularly strong and have a lot of additional benefits that we can offer our customers there.

So, what's our perspective on the commercial business and why it's worth listening to what we have to say as we interface with our fleet customers in the U.S. and around the world. We have 40% of the class one through seven full size trucks and vans in North America, F-series pickups, Super Dutys and vans. We're a huge player, basically about double the next person. We lead in the commercial vehicles in Europe for seven years straight with growing share. So, we have a lot of synergies, and we can see far across the world.

Transit is the best-selling cargo van in the world. F-series is the best-selling vehicle in America for a long time and 41 years of leadership. And where we're not in leadership around here, Ranger, the small pickup in the rest of the world is number two. So, we see a lot of where our commercial customers are going, particularly these vehicles that require a lot of fuel. And if we're going to save the planet, we need to get those moving, and they drive longer miles per day, heavy usage, continue usage versus variable retail usage. So that's a bit of the perspective we have coming in. And the average commercial customer rotates their fleet 10% to 15% per year, just like you guys who are making capital investments in whatever you're making in. Nobody does it all at once, all your laptops, change them all in one day. Oh, no, it's a constant rollout of capital investments.

So, they're going to have internal combustion and battery electric vehicles for a year and some of the vehicles are going to take longer. Super Duty heavy truck, bucket trucks is a lot of energy with bad aerodynamics moving up and down highways when you guys have an emergency and have to go cross state or cross country, and it's not always there yet. And we can say that because we have both internal combustion and battery electric. I don't want to sell you an electric vehicle that won't let your job get done. If you're working on lines, or if you're in forestry, or you're an ambulance, we can't afford that the customer can't do their job. Roofers got to roof.

And so for us, it's very easy. We have a great internal combustion solution for you. You can get an F-150 hybrid, just as much as you can get a Lightning. And that is a huge part of it, is eliminating these myths that the EVs are all perfect. They're not all perfect. They don't do everything yet. They do a lot of great things. I have a Lightning and my wife has a Mach-E. We are 100% electric, but it doesn't do everything. It does a lot of things better and other things like towing long distances in the cold is not ideal. So that's the perspective where we start from.

So, what do we do in a commercial electrification? We see accelerating adoption. We did a survey of 1,200 fleet decision makers across North America and Europe last year, and about 60% say, yeah, yep, we're going get one or we're going to try one. And the larger the company, the more likely. Also, 60% says, yeah, but it's going to be a major headache in particularly charging. Because fleet customers, like retail customers who have not had an electric vehicle before, they think they're going to go out and charge in the wild. I'm going to go to a public charger. That's what they all think.

We all know that 85% of charging is at home. But that's what they think because for some reason, the charging industry decided to go away from branding and signage. Everything else,

Applebee's, McDonald's, Shell stations, where are the chargers? Where's the big signs? You don't see them. And until you put them in the software to go find them, they're kind of invisible. It's kind of like Pokémon Go, you can't find them anywhere. So, 60% of our managers say they're going to go into electrics. And they have a lot of new capabilities. They're quiet; you can drive into neighborhoods at night, for commercial vehicles, because they're silent, where there's noise restrictions and working restrictions for commercial vehicles.

You have new spaces like frunks where you can put and secure lockable storage. It's the only reason I ever went to a pickup. I didn't know--where was I going to put my stuff? I'm not going to have it slide around in the bed all the time. I wanted somewhere I could lock stuff in the vehicle. Pro power on board to power up your tools, your tailgate, frontgate, whatever you're going to do. It's got new capabilities they never had before, plus other capabilities.

So, here's our plan as we go forward globally. In E-Transit, we're number one. We have 70% of the share coming out of last year. We're going to have global production--have a production rate of 150,000 units annual rate by the end of this year. F-150 Lightning, 150,000, Mustang Mach-E, 270,000. We sold about 40,000 Mach-Es last year and it just continues to climb, and demand is strong. So that's kind of what we're looking at.

So, what did we have to do? Our commercial customers are confused, and they want a lot of help. And we didn't want to have an error state. The key part of us to accelerate the move to electrification is to make it easier. There's a lot of nervousness. There's a lot of confusion, the program's, how the vehicles work, where to charge. So how do we eliminate as many variables as possible so people can make decisions, good decisions, as fast as possible, get the right infrastructure and the right product and make sure the product can do the job.

We created Ford Pro charging, and we bundled those three things together. We have public charging because they think they're all going to charge in the wild. They think they're going to do a lot of public charging. Now, really, no company wants to do public charging. What? I'm going to have an employee paid sitting at a charging station at dwell times. It's not good math, but you have to have a solution in case of emergency, you have to have it.

We take advantage of Ford's roaming network, which is one application that you can roam from instead of all the different signups. You can go to EVgo and Electrify America and SemaConnect, and in one tool to roam across the network instead of a whole bunch of signups. Which is particularly important when you have drivers. You don't want them pulling out a credit card and having to sign out forms so they can charge. They need an easy way through an application. They don't want to have a bunch of RFID cards and everything else that they need.

So, we have that because they need it just in case. But the more important part was home and depot charging. Home charging, they had to take the vehicle home. They're a service and maintenance company, they take their vehicle home. They got to split the bill between the refrigerator and the company. Driver reimbursement is key. We learned from early days in plug-in vehicles, the drivers forget to charge their vehicle. So, we have to have warnings to the fleet manager or the driver, hey, notification, you forgot to plug it in, because otherwise, you're not going to be able to work tomorrow. So those kinds of things are services.

Preconditioning the vehicle, hey, it's cold, let's reschedule. You have a 9:00 work start. The guy can set up his fleet. Let's warm up the battery chemicals so you can get adequate range when you come out of there and get as close to optimum range as you can. And by the way, the cab will be nice and warm as well. And that's a key part of the process. And the last one was depot

onsite charging. If you have a warehouse or your vehicles are there at the facility, we'll set up a depot work. And all of this has to work with the utilities, with you guys in the room as partners, or it won't work. And that allows us to manage the flows and come up with turnkey solutions.

We'll do the advising. Is this the right vehicle for you? Hey, what's your mileage? You're in Quebec and you have a big upfit. We had one guy who carries glass on the side of his van. So his mileage was going to be way down. It was like having a parachute on the van. And they're in Quebec. And you're like, no, we're not going to sell you the vehicle. It's not going to work for you. We have internal combustion vehicles. When the time is ready, we'll come back but this isn't going to be a good fit for you.

So that's what we do a little bit on the front end. We do coaching and counseling. We help them do the planning and deployment and we work with them and you guys to install the whole solution for them. And when something goes wrong on the operations, then they know who to call. If it's the charger or it's a maintenance issue, or it's a vehicle or a firmware issue or it's a cloud issue, the whole thing, and all managed with software so we can maximize the time of day rates. They want to minimize their kilowatt costs, so we want to make sure they're charging at the right time of day.

This is the kind of the comprehensive plan that we work with and working with you guys in a lot of utility across the country as we put in these installations. So first, you have the vehicles. They're purpose built to maximize the electrification process, estimate the range and make sure we protect the battery, so the customer gets that battery for as long as possible, including training and tips on the process, preconditioning and battery care, managing the customer information. Hey, you did you know what you're doing? There's a better way to drive or improve your capability there. The seamless operations. If something goes wrong, notifications, charging, explanations and support when they have issues with chargers or service or working with you guys.

On the telematics, providing them information about the vehicle health, driver health and the structure and status of their charging network. And where they are, if they want to rebalance their fleet, match drivers to different jobs on different days with remaining charge in the vehicle. Make sure they don't go off peak rates and have some unfortunate monthly bill that they were not expecting. And then we integrate the driver reimbursement process. We have the build services and then these complete solutions. So, this is what we're doing on this planning, operating and deployment process.

But it goes beyond that. One of the key goals when we came up with Lightning was not just that it could do new capabilities like frunk, or pro power and board to tools and other capabilities is, can we do it as a backup power to the system? So, working with Sunrun, we're doing bidirectional power to do the intelligent backup. Your generator goes down, I live in Michigan in very heavily wooded area, and we're always down. But I love DTE. That's not the question. But it's just the nature of where I am, and we have to have a generator to the house. Well, now I have a better solution. I got a rolling generator on wheels all the time. Most of us are not using the vehicle to its maximum driving range. We may have one long trip, but basically, back and forth to work, back and forth to school, you're not going to use that huge battery.

On a large Lightning, it's 320 miles and 240 on the shorter-range battery. So we're going through that. We're also working with a lot of you on vehicle to home solutions. So how can we manage that load in the house on a dynamic basis, to if you have solar and the rest of the solution? So where do we go with that? I would say we're doing that, also piling on the

commercial side, a bit more complicated because the residential power 240 volts versus the three phase on the commercial side, adds quite a bit of complications. And each of the utilities operates in a different model. Very complicated for us to interface.

I think it's about 100 utilities cover about 70% of the population that we need to do. But a lot of you, all different interconnectivity, different programs, different capabilities, and it makes it quite complicated to map out a solution that works and is rinse and repeat over and over. And you all have different regulators. So that's one of the challenges that we have of really optimizing the grid capability, the resilience opportunities that we all have, but we're in that process.

The other one is the data. You guys are trying to figure out, where should I put it? Are they going to add a fourth house in the neighborhood and trip over the substation or some sort of infrastructure problem? Our problem is the customer, and they don't know this many times, they'll call, okay, I want and E-Transit today. Yeah, but do you have a charging solution? No. And so then they're going to end up public charging all the time, paying a lot of money, higher costs for the charging, generally. They're going to have employees paid, sitting there charging. So, what we need to know, and we do now is okay, they want to set up charging, we get that ready, then we can start the build out process before the vehicles come.

And that's what we really need a lot of help with the utilities on, hey, working with you, here's charging locations. Here's a company. They have a charging plan that they're putting forward, let's work together on ironing out that plan. And because it's commercial customers, they know generally how many miles they're driving. They've got that because they're doing cost expense report. The COO wants to know how the business is going. They're managing all that. So they know what kind of flow is going to be there. Which is really helpful because a lot of us when we were trying to figure out who's going to use electric vehicles, we all look at miles driven. But miles driven is not that helpful in this space. Its energy used, because whether it's sitting in an idling or it's in winter, it's not the same when you don't have the heat of an internal combustion engine keeping the thing moving.

And so, the management and triangulation of how much energy usage, who will go first, what kind of businesses are best suited to the vehicle fit is not an easy science, or it hasn't been for us, and a lot of learning along the way to predict where the loads and use cases are best matched up. So part of that is the data, the health insights of the vehicle, how the charge management's going. Public charge management is complicated. There's a lot of maintenance issues, it's down, it doesn't connect well, especially on the DC side with an inconsistent set of standards that are a bit loose.

So working through that to ensure system reliability for our customers and drivers to, hey, this is where you can have confidence of where to go, and all the other charging (inaudible) that we have to optimize charging times, rates and loads on our depots, and to minimize the cost there. So that's what we're doing. And that's a lot of what we can make available to utilities, with the customer's consent, of course, is in that planning and usage process of how collectively we can optimize and see where we go forward and put the infrastructure in.

Utilities customers. So first of all, you guys are our customer. We provide a lot of vehicles to the utility business, and we love the business and thank you for all of you who are loyal customers. We really appreciate your business. And in this space, we're doing this together. There is no electrification without the utilities, and we have to work on a plan. So you're also a customer as we roll out charging businesses, and to support our customers in that process. It's not like I'm trying to make a lot of money on AC chargers. I have a $40,000 Super Duty and an AC charger

isn't it. But what we do do is when we talk to our commercial customers and say, hey, look, an AC charger will work to charge you completely overnight, eight hours, 10 hours, you're good.

You don't need to have, as they often come in, a DC charger. I'm going to jam it full of kilowatts quickly. You don't need that. It's huge amount of money, infrastructure and time to put it in. An AC charger will do the job. And we put an extra inverter, at our expense in weight, on F-150 Lightning with the big battery, so that you can do more fast charging at home and completely charge it overnight on a big battery, residential or commercial. So, our goal was to make the vehicles ready for, whenever possible, level two charging at home or at the depot to eliminate loads, reduce infrastructure costs, reduce pressure on the battery, and make it all easier.

So, the data services we can work together on as well. And then as partners, one of the big things we're doing, we just worked through our dealers. We have 3,000 dealers in the U.S. And of those, 650 commercial specialists who are really dedicated commercial customers, bigger bays to fit a transit or a bucket truck, capabilities to work with those larger engines, for example. But they also just signed up to be EV certification on a next level, 1,900 Ford dealers and of those, about 1,700 said they're going to put in DC chargers at all locations by 2024. That's a big commitment affecting a lot of utilities where we will need support. But it allows not only Ford's roaming public charging network, now you have our own internal DC charging network across the bulk of the high-volume part of the country. So that's a huge project, which we'll be working with many of you on to get your help.

Infrastructure, complicated. It's complicated to get EVSE and chargers approved through the systems. Is it the right one? It's complicated to do the financing programs. Many of you have programs for us, but that is a confusing story to the customer. And the confusing story continues with IRA. By the way, Inflation Reduction Act, for our commercial customers, is fantastic, especially for small and medium businesses. There aren't the strings attached on where the chemicals come from, are they built in the U.S., et cetera. It's $7,500 if you're a taxpaying customer, and you include municipalities and state governments as well.

So, $7,500 if you're trying to decide, am I going to electric. A big company, you've got hundreds in the fleet, you can afford to pile it. But if you're a small business, you have three vehicles and you want to go electric and just wing it, that's a pretty big risk to your personal business. Having $7,500 to help you make that decision and help with some of the infrastructure process, and for those of you who have infrastructure programs, it really makes it easier to make that change.

We designed eight versions of transits, three different roof heights, three different links, chasses, et cetera, because only 10% of the van business in America is delivery. It's plumbers and construction, it's your HVAC guy coming in, service and maintenance vehicles. And those guys are going electric as well. About 60% of ours have medium and low roof vans. They're not just giant vans. A lot of them are, something like 40% are small businesses, 25 vehicles or less in their park. So, it's not just delivery, it’s not just California. It's a wide range of people that are trying to get to electrification.

And in our case, it's because they can just pencil the math. Here's my cost. I have some investment incentives. I'm going to reduce 50% or so of my fuel costs. I'm going to have 40% less scheduled maintenance costs. There's a lot of opportunity and the math for cost of ownership. And many of these guys were already doing it before, moving from police cars that were fully fuel to hybrid police cars because it's really good when you're idling all the time. It's a super-efficient way to to run your business. So, charging incentive programs are really important

for us, and then working together on future products and innovations that allow this grid resilience opportunities that we have. So key partners.

With that, if we go to the next one, we're out. Our goal is serving customers better, including you guys. This always on relationship we have for digital, matching up vehicle productivity and health, driver productivity and health, integrate it digitally into our service networks to anticipate issues in the vehicle based on usage before it becomes a problem. Order those parts before you get to the dealership, and we're going out with mobile service now. We go out to you as commercial customers and to fix it onsite there, maintenance, tires, so you don't have to bring in a shop with employees. Really revolutionizing that business. In these new kinds of capabilities with electric solutions in all regions, this also goes for Europe as well for us, and we're trying to deliver on the commercial van.

For those of you waiting for vehicles, I apologize in advance. We are doing everything we can we are investing deeply in the supply chain, not just parts procurement, but spend hours on semiconductors and deep, deep in the system improving that whole process because there are a lot of customers waiting for vehicles. So, with that, Durgesh, I think you're up.

QUESTION AND ANSWER

Durgesh Chopra
All right. All right. Time for some tough questions now. Okay. Maybe just--I'll start off, I guess, just on the concept of just the utility as a partner. So how can utilities help, what's the ask, from the utilities in this room, what could they do sort of better to support your and country's EV penetration goals? And what do you see the most room for improvement as far as utilities go?

Ted Cannis
For me, I think maybe there's three things. The first, is jointly working on Education of the customers. We have a lot to explain on the vehicles. You guys have a lot to explain on how to support them in a lot of the programs that you have. And also, dispelling some myths. Hey, is the grid going to be there? I'm sure you get the question. We get it all the time. Well, I can't get an electric vehicle because I hear the grid can't support the electric process. This sort of eliminating concerns and myths and explaining how the vehicles can work, and just making it easier, how does a vehicle connect with electrification is difficult.

Most fleet managers that I mentioned, they didn't buy kilowatts. They were buying oil. Maybe the property manager was buying kilowatts, and they don't have any familiarity with the subject, especially the smaller the business. So, this process of being available to collaborate and educate the customer base, here's easy steps and training materials online and collaborating with the dealer network that we have in each of the region, which is our face to the customer, is going to be key. We'll have to do a lot of that.

I think the second one would be the simplification, us and you guys together. It's really hard to get the business processes to work together on what the incentives, what's available to customers, who do I contact, because there's new people for them. They don't really know. That's part of it. It's complicated for us to get EVSEs applications approved for here's the charges we want to use and help our customers with. And we have a hard time understanding all the different programs. And I think there's other ones that we're working with EEI and EPRI on, which is more on the interconnectivity standards, and some of the back end. Because each utility is its own story, for us to get some of the super opportunities of the future of bidirectional

power and grid resilience, smart charging, it requires a lot more work. And it's hard for us for one company interface with hundreds of utilities to get that capability across the system.

And the last one I'd say would be speed of the planning and deployment. If they're going to buy their vehicles next month, they need charging onsite. And collectively, because they're collectively working together, where is that going? Does the infrastructure--is it going to be in place so they can get the vehicles up and operating? Because if it's not, the experience is going to be bad, and the business case starts to fall apart. And the fleet manager, if you're in their position, they got a job to do. But if their employees are stranded out there or are panicking, for those of you that are panicking, oh my God, sweating, I'm not going to be able to get to the next charger. They're really worried about their job. The board says, go electric. And the guys, yeah, but if I blow it, I'm going to get fired. So it's super personal to have that kind of support. So making sure that we have an infrastructure and charging plan in place collectively that can support them as they make a transition, then the whole process will accelerate.

Durgesh Chopra
Got it. Thanks. So education, simplification and speeding up planning and deployment. Maybe just on the education comment that you made, whether the grid can take it all, right, or whether the grid is going to be there? That's a question we get a lot from investors. So maybe can you just talk about just the energy consumption and impact on the grid? And are you advancing technologies to make it more efficient from an energy consumption standpoint? And just where do you see the annual load impact from EVs trending?

Ted Cannis
So for us, we are tackling that a lot of different ways. So I think, general, I'd say about 1% impact on the grid today and going to maybe 10% by 2030. (Inaudible) is all on the averages again, right? It's like EVs in Europe. Yeah. Norway's at 50%. Italy is not. And I can be fine on the averages. So there's concentrations of electrification, some guys state, and programs, either programs that are incentivizing EVs, or restricting usage or benefits that are non-financial. And so understanding jointly where that is going in to be prepared is part of the problem. This is in the planning process.

In our case, part of it was planning the vehicles. We wanted to have, as I mentioned, level two capabilities and balance out those loads. We don't really want our customers, from a battery standpoint, doing sharp hits on DC charging and jamming chemicals in or taking it from 80% to 100% at the tail end of a charge. So, we're trying to optimize the equipment we put on the vehicle and the charging strategies with our customers to help them through, no, no, you don't really need that. You can manage the business this way with your operating pattern.

And over time, I really think this opportunity is on the peak loading and charging cycles, using the off peak rates with software to really make that flexible. And in the future as we go forward, bidirectional, can we really help you guys take the load off the grid? Or when the renewables are available online, we can help you as we work through that. It's just a lot of mechanics, currently.

Durgesh Chopra
Awesome. Then just shifting gears, on the policy front, you mentioned the Inflation Reduction Act as being sort of a big winner. Maybe just how has that impacted your sort of growth strategy at Ford as it relates to EVs?

Ted Cannis

So, I think for us, especially two sides of it, of course, there's the demand side, and the legislation has been taking its time to come through. Glad to have it, but the lack of clarity, again, slows down customers. Generally, unclear, any part of confusion, all decision makers slow down. So, in the commercial space, happily, it's been much easier, $7,500 no strings, and we get production credits if it's in U.S. production. So, it's been quite simpler, and I think it's really going to help and make it easier for those decisions.

For the retail side with MSRP limits and where's the sourcing, et cetera, some of that is still being worked through, and even the financing policy. Is it a leasing? I think the fleet management companies are trying to determine. I'm still not clear. Are they applicable for the financial credit? So there's some confusion in elements of the business. But the good thing is, is there's something there and it's there through 2032. So that allows, and particularly businesses, I can do planning, and that's what they really want. They want to do planning.

Durgesh Chopra
Got it. Gets you long term stability.

Ted Cannis
Stability is good.

Durgesh Chopra
Excellent. Maybe just talk to how you think about customer affordability. We've seen record high inflation this year. So how are you managing those costs and just your strategy there?

Ted Cannis
So customer affordability for all of us, we're all retail customers every day and watching inflation rates we've never seen. It reminds me back when I was early in my career at Ford. I was in Brazil when it was 40% a month. Which one time I forgot to cash a paycheck like three weeks, and then you're like, ah. It's a different world. Our communities haven't lived with a high inflation environment and it's affecting everything, obviously through interest rates.

In our case, I think the story is a lot on how is the electrification going on, because the cost of raw materials has definitely gone up higher there. But our internal combustion vehicles, we've also had to raise the prices, not because--it's because the costs are increasing, and supply chain is expensive. And we have a lot of facilities that can't build vehicles but employing a lot of people. So the cost of the system is definitely going up.

Actions that we're doing to mitigate are quite a number. So it's a new space for us. So the opportunity to have improvements in efficiency through the entire engineering process are definitely there. The battery process, later this year, next year, we're launching LFP onto the Mustang Mach-E, and the the Lightning. Roughly 10% to 15% less cost. Not as dense chemistry, but allows for more more durability, more cycles, so it looks like a good solution for those customers who are not looking for all the density and longer range of NCM. That's a big opportunity.

And we can see the next battery phases coming already. Of course, we're out there talking to everybody that you can see. So the opportunity for battery reduction, and all the other pieces of the puzzle, improvements in aerodynamics, improvements in the throughput of the process, improvements in how you're going to do heating and improvements of how you're going to manage range in the low end with heating solutions in colder environments so that you don't

have some of that degradation. So all the way through from how we think and how we plan to the cost side.

Durgesh Chopra
Awesome. Okay. I do have a few questions, but we're running on time. So maybe, if anybody has a question in the audience, if you can raise your hand, and we'll get you a microphone to ask a question.

Audience Participant
Thanks. Quick one on just demand - on the commercial side, how constrained is demand by vehicle availability right now. So one of the things I think on the commercial side that people struggle with is, if we could all go into a dealership and buy a car that had all the functionality we need, we would probably buy an electric vehicle, but we just can't. We just can't get the cars. So how do you see that currently and playing out as the year goes on?

Ted Cannis
So we talked to the guys from S&P global because our suppliers are also trying to figure out the same thing. You hear all these demand signal concerns on et cetera, et cetera. And a lot of the forecasters have a problem of showing the two sides of the equation when they produce their outlooks. There is a demand side, if there was free capacity, and there's a supply side. The supply side is such an important factor that the forecasts they do for the industry and the forecasts you see, are basically supply constrained forecasts.

The demand that we have here, even in Europe as all the challenges they have in energy in the war, you're still seeing tremendous demand on the commercial side. And particularly in electric vehicles, it's really about, can you secure battery and put in battery plants as fast as possible? It's very quick. Now, if you talk to the analysts in our business, of course, every OEM is the next number one, and I'm sure it's oversold by 500 times, but I think you're already seeing the fallout of those who can or can't produce vehicles. Because if you're making an infrastructure partner and you trying to invest in, well, who should I work with to invest? Everybody's got a charger, but are they all going to maintain? Are they all going to last? No. A lot of them don't even maintain the ones they have now.

I am an electric company. Well, the questions are, well, do you have battery source raw materials secured? You got cobalt and contracts on lithium. Have you got all your nickel ready? Okay. Do you have a battery plant? Somebody's going to put a half a billion dollar line down for you to put a battery plant. Okay. Have you produced vehicles that run at rate? We build about F-150 every minute. Can you build vehicles at that clip? Do you have supply on the other stuff that we're struggling with now, labor? It's tough. So I think there's a lot of supply out there that will fall out, in my opinion.

Audience Participant
Can you talk a little bit about the OEM components in the EV Pros versus the internal combustion? And then also, what's the maintenance, the ongoing maintenance experience with the EVs as opposed to an ICE going forward?

Ted Cannis
So I can't remember the exact numbers. I'll answer the second question first because it's an easy one. So for Ford, roughly, it's a reduction of 40% scheduled maintenance cost, which is what our lawyers are allowed to say and why because we know what you can do or not do. Because we don't have the trajectory of how much less, because we haven't been in the

business that long, electric vehicles, but there's just a lot less parts, and they're not moving. And so the ability to have--you don't have exhaust systems, right? You don't have oil pans and all the rest of it and all the engine parts that you have.

So you're talking huge, less load on the part system, and all that happens. So it's a big opportunity for the customers and generally we hear, I don't have to do hardly anything. Now, traditional parts, yes, you're going to have to change your windshield wipers, brakes. You're going to get in collision, body panels. All of that has to happen. But generally, it's a lot less work and we will have a lot more of that data that we feel comfortable talking statistically, probably soon.

CONCLUSION

Durgesh Chopra
Thank you very much.

Ted Cannis
Thank you.