Greetings and welcome to the Nikola Corporation's Fourth Quarter and Full Year 2020 Earnings Conference Call. At this time, all participants are in a listen-only mode. We begin today's call with a short video, followed by management's prepared remarks. A brief question and answer session will follow the formal prepared remarks. If anyone should require operator assistance during the conference, please press *0 on your telephone keypad. As a reminder, this conference is being recorded. We will now begin the video presentation.

(Video Presentation)

Operator
Thank you. It's now my pleasure to introduce Britton Worthen. Thank you, Britton, you may begin.

Britton Worthen
Thank you and good afternoon everyone. Welcome to Nikola Corporation's Fourth Quarter and Full Year 2020 Earnings Call. With me today is Mark Russell, Chief Executive Officer of Nikola; and Kim Brady, Chief Financial Officer.

During today's call, we will share our views on the business environment and our financial results for the December 2020 quarter and our outlook for the March 2021 quarter and the full year 2021. The press release detailing our financial results were distributed a little after 2 p.m. Mountain Time this afternoon. The release can be found on our Investor Relations section of the company website, along with presentation slides that accompany today's call. Today’s presentation and Q&A includes certain forward-looking statements within the meaning of the Federal Securities Laws. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and as a result are subject to risks and uncertainties. Many factors could cause actual future events to differ materially from forward-looking statements in this communication.

For more information about factors that may cause actual results to materially differ from forward-looking statements, please refer to the earnings press release we issued today as well as the risk factors section of our quarterly report on Form 10-Q for the quarter ended September 30, 2020, and our Annual Report on Form 10-K to be filed with the Securities and Exchange Commission in addition to the Company’s subsequent filings with the SEC. Forward-looking statements speak only as of the day they are made. Readers should be cautioned not to put undue reliance on forward-looking statements. With that, I will now hand the call over to Mark.

Mark Russell
Thanks, Britton. We're pleased to welcome you to Nikola’s fourth quarter and full year 2020 earnings call. During the quarter, we made significant organizational and other changes to sharpen our focus and align our resources to execute on our core objectives. On today's call, I'll provide an overview of what we achieved, including updates on the Nikola Tre BEV testing and validation, our long-term electricity rate agreement with APS, and progress at our manufacturing facilities Ulm, Germany and Coolidge, Arizona. I will also recap some of the organizational and strategic decisions we made during the quarter. Then Kim will discuss our financial results for the fourth quarter and provide you with some expectations for 2021. And then of course, we'll do our best to answer your questions after that.

Let's kick things off with an update on the status of the first five Nikola Tre BEV prototypes. All of the trucks are complete, and are now in the commissioning process. We have four trucks here in the United States two or at northern proving grounds for cold weather validation and powertrain and durability testing. Two trucks are on the test track here in Arizona for torque, speed and payload testing. One truck is in Hanover, Germany for brake commissioning including regeneration, ABS, traction control, and electronic stability control. And the next batch of nine prototype trucks are being assembled at the Ulm, Germany facility.
Moving on to our rate schedule with APS in December, last year, APS and Nikola finished negotiations on a special rate that the Arizona Corporation Commission unanimously approved on January 12. This is a huge accomplishment for Nikola and represents an essential milestone for the company and executing our plan to produce hydrogen fuel for our customers at price parity with diesel. As many of you know 80 to 90% of the cost of hydrogen production from electricity is for the cost of electricity. We believe that the rate schedule with APS will allow us to produce hydrogen fuel for customers in the region at or below our price parity with diesel fuel.

The rate agreement also gives us the flexibility to look at hub and spoke model production and distribution. And since the rate schedule is so favorable, we can build centralized hydrogen production hubs and then transport fuel to dispensing stations in locations where favorable electricity rates may not be available. It's a big step for Nikola. It reflects the understanding of the benefits we bring to the grid and to the utilities. Our hydrogen production facilities have the potential to help balance renewable energy into the grid by curtailing during peak periods of demand and provide utilities with newfound revenue during periods of off-peak. We continue to believe that this has laid the foundation and groundwork for our station network. And this agreement will serve as a foundation and model for future negotiations in other regions and with other utilities.

Next, we'll provide an update on progress at our joint venture manufacturing facility and IVECO's industrial complex in Ulm, Germany. As of today, the dismantling and building refurbishment including the civil works such as the floor and HVAC and power and plumbing systems has been completed. And the next step will be installation of the automated guided vehicle system. The installation of that system is on pace and should begin completion next month. And the logistics warehouse, the internal logistics system, the end of the line and finishing and the IT infrastructure and the ordering and installation of production tooling and equipment are all on pace for completion of the facility by the end of May, with trial production set to begin in June 2021.

Moving on to our Greenfield manufacturing facility, Nikola began steel erection at the Coolidge, Arizona facility during the fourth quarter and today the steel work is almost complete. The roof is ongoing, siding scheduled to follow. The manufacturing equipment has started to arrive on site and installation of that will begin in May. Nikola is currently hiring and training manufacturing technicians for this facility and our efforts are being fully supported by the City of Coolidge and our building and engineering departments, and we're on track to begin trial production this summer.

Next, let's talk about some of the strategic decisions we’ve made during the quarter beginning with General Motors. On November 30, last year, we announced our revised deal with GM. The revised Memorandum of Understanding that we executed made much more sense for both of us. GM will supply Nikola with their Hydrotec fuel-cell system, helping us to commercialize investments that they made into their fuel-cell program and giving us a dual source, a second
source, for fuel-cells in addition to Bosch. So between Bosch and GM, we have two world-class fuel-cell system suppliers.

As part of this new MOU, GM and Nikola will no longer develop the Badger pickup truck. The decision to cancel the Badger means that Nikola will no longer be committed to pay up to $700 million of CapEx related to Badger specific tooling in the manufacturing facility there, and our shareholders will no longer face $2 billion of dilution for stock, which would have been paid to GM for the in-kind services for the Badger.

Moving on to the cancellation of our BEV refuse truck program. On December 23 last year, we announced the discontinuation of the BEV refuse truck program with Republic Services. After careful analysis along with Republic, both of us realized that it would take 12 to 24 months longer than we previously anticipated, and in addition, the previously planned upfront development costs ballooned up over $200 million. That additional time and resource needed to be dedicated to the program would have distracted us from executing on our core deliverables. The cancellation of the refuse program was one of the last difficult but necessary steps in a series of decisions we took during the quarter to restructure the organization, and to realign and focus our resources. We now believe Nikola is in the best position the company has ever been to execute on our core business plan.

Next, I'd like to give some color regarding COVID’s effect on our business. The pandemic has caused significant supply chain disruptions into Tier 2 and Tier 3 and the supply base as consumer spending and parts of the economy have recovered to near pre-COVID levels, we see pent-up demand hitting the supply chain, creating global critical parts shortages for components like HMI and electronic systems. We’re also facing a battery-cell shortage. At this time, we don't have final commitments for our cell allocation for 2021 from our battery suppliers. We will have greater visibility into our cell allocation commitments towards the end of the next quarter, and we'll give you updates once the information becomes available.

Furthermore, we've had to modify our working practices including employee travel policies, and non-essential people working from home and various work restrictions imposed by local governments, especially in Germany. In light of all of these uncertainties, we believe it would be prudent to revise expectations for Nikola Tre BEV deliveries in 2021 down to a range of approximately 100 trucks, which will represent approximately $30 million in sales.

Regarding our ongoing regulatory and legal matters, the company made a fulsome disclosure in our form 10-K which we file to the SEC today. To be mindful of the call’s length here, we encourage you to refer to form 10-K, for updates on these legal and regulatory matters. With that, I'll turn it over to Kim, who will discuss the financial results for the quarter. Kim.

Kim Brady
Thanks, Mark. And good afternoon everyone. As Mark alluded, Q4 was a peculiar time for Nikola. However, we have been able to refocus on our core businesses and realign our vehicle
programs to ensure we have the right people, process and plan for execution. I'm really excited about what we have ahead of us in 2021 as we continue to execute on our milestones and deliver the first Tre BEV in Q4 2021.

Now to review our fourth quarter financial results. In the fourth quarter, net loss was $147.1 million, and on a non-GAAP basis, adjusted EBITDA totaled negative $65.5 million. Adjusted EBITDA excludes among other items $146.3 million in stock-based compensation. Two, $19.5 million on regulatory and legal matters and other professional service fees incurred in connection with the Hindenburg report from September 2020. Three, $14.4 million in impairment charges related to Powersports, and four $1.8 million in normal depreciation and amortization. Research and Development expenses for the fourth quarter were $67.5 million including $8 million of stock-based compensation expense.

R&D expenses consist mainly of costs incurred in the development of Nikola Tre BEV and certain remaining outside engineering costs for Powersports. SG&A expenses were approximately $64.9 million of which $38.2 million is stock-based compensation expense. SG&A expenses include about $19.5 million related to regulatory and legal matters mainly regarding external legal counsel cost. Nikola maintains a D&O insurance policy with $12.5 million total coverage and a deductible of $15 million. As of December 31, 2020, our total headcount exceeded 450 full-time employees and is growing at a rapid pace as we continue to build our team in engineering supplier quality management and energy.

Turning to the balance sheet, we ended the fourth quarter with approximately $841 million of cash and cash equivalents. Our restricted cash balance was $8.4 million comprised of cash collateralization of our equipment term-loan and the required deposit to P&L land holding to construct the Coolidge, Arizona manufacturing facility. As of the balance sheet date, we had a $4.1 million equipment note fully secured by the restricted cash on our balance sheet. The note was expired and was repaid in Q1 2021. We have no other debt outstanding as of December 31, aside from our Phoenix headquarters lease obligation. Our capital expenditures totaled $31.1 million year-to-date and $15.9 million during the fourth quarter. Capital expenditures are comprised of the construction of our Coolidge Greenfield manufacturing facility, purchases of in process equipment and Nikola’s portion of investment into our joint venture in Ulm, Germany.

We ended 2020 with 391 million shares outstanding. Weighted average shares outstanding for the fourth quarter were 386 million, GAAP net loss per share for the fourth quarter was $0.38 and non-GAAP net loss per share was $0.17. Non-GAAP net loss per share excludes stock-based compensation, regulatory and legal matters previously mentioned and impairment charges.

Now turning to the 2021 outlook and the guidance for our calendar year. We anticipate during Q4 2021, we will make deliveries of the first Nikola Tre BEV to large customers. As Mark previously mentioned, we are experiencing some COVID impact, including work restrictions in Germany and part shortages and lead time challenges with certain suppliers. As such, we think
it would be prudent to adjust our Tre BEV delivery commitment to approximately 50 to 100 BEV trucks. We expect revenue generated from Tre BEV sales in 2021 will be in the range of $15 million to $30 million.

The gross margin related to Tre BEV sales will be over negative 150%. This is attributable to low scale production volume and high costs of bill of materials for the first 200 to 300 BEV trucks. As we scale up our production volume forecasts of 1,200 Tre BEV trucks for 2022 and 3,500 Tre BEV trucks for 2023 and localize our North American supply chain, we anticipate a sharp drop in the bill of material costs in 2022 and 2023. We believe our Tre BEV bond costs could drop by approximately 40 to 45% in 2022, followed by a further decline of 25 to 30% in 2023.

Our full-year 2021 estimated R&D is in the range of $305 to $315 million including $27 million of stock-based compensation. Estimated SG&A for the full year 2021 is $235 to $245 million, which includes $152 million of stock-based compensation. Total estimated operating expenses will be in the range of $540 to $560 million on GAAP basis and approximately $360 million to $380 million excluding stock-based compensation. Total shares outstanding at the end of 2021 will be about $400 million and we expect weighted average shares for the full year ended December 31, 2021 will be approximately $395 million.

By the end of 2021, we will have approximately 1,000 employees comprised of roughly 180 manufacturing plant employees and 820 corporate employees. Our anticipated capital expenditures for the fiscal year 2021 are $210 to $230 million. Our capital allocation plans include: Phase 1 Coolidge manufacturing plant and associated assembly equipment, hydrogen infrastructure, hydrogen technology development equipment, and fuel-cell electric vehicle engineering equipment.

For the first quarter of 2021 estimated R&D is in the range of $70 to $75 million, including $6 million of stock-based compensation expense. Estimated SG&A is in the range of $60 to $65 million, which includes $37 million of stock-based compensation. Total estimated operating expenses will be in the range of $130 to $140 million on a GAAP basis, and approximately $87 to $97 million excluding SBC. Our anticipated capital expenditures for the quarter are $50 to $60 million.

Now that we have put our business restructuring behind us, we are looking forward to achieving the following milestones in 2021. First, start of trial production at our joint venture manufacturing facility on IVECO’s campus in Ulm, Germany in June 2021. Second, start of trial production at our Greenfield manufacturing facility in Coolidge, Arizona, in Q3 2021. Break ground on our first commercial hydrogen station infrastructure. Fourth, announcement of hydrogen collaboration partners and electricity procurement agreements, and fifth, delivery of Nikola Tre BEVs to customers during the fourth quarter of 2021.

This concludes our prepared remarks. We will now open the line for questions. Operator.
QUESTION AND ANSWER

Operator
Thank you. We will now be conducting a question-and-answer session. If you’d like to ask a question, please press *1 on your telephone keypad. A confirmation tone will indicate your line is in the question queue. You may press *2, if you’d like to remove your question from the queue. For participants choosing speaker equipment, it may be necessary to pick up your handset before pressing the star keys. We ask that you each keep to one question and one follow up. We’ll pause a moment to allow for questions.
Thank you. Our first question comes from the line of Jeff Osborne, with Cowen & Company. Please proceed with your question.

Jeff Osborne
Yeah, good afternoon, guys. A couple questions on my end, and thanks for all the detail and the guidance. It’s very helpful. Can you just give us an update on the order book for Tre or when we’ll move out of the validation and testing phase both in the Northern states in Germany and when people can do ride and drives, and hopefully get a book of business growing?

Mark Russell
Yes, Jeff, that’s a great question. We obviously have had a lot of interest in the Tre, that interest started in the summer of ’19 after we unveiled the unit at Nikola World and concept, and that’s when we found out that North American customers really wanted the Tre to come to America. So we started working on the battery version of the Tre for the North American market at that time. And, and in just about a year, we have production prototypes in production testing and validation. And obviously, there’s a lot of customers who are interested in it. We have conversations going on with many customers in North America. The launch is in North America first, of course. We'll deliver to our launch customer here in the fourth quarter the first vehicles. And those discussions while being delayed by the controversies last fall, and delayed now by COVID just a little bit, are ongoing. We anticipate just as you mentioned Jeff, that we’ll be able to conclude agreements with a launch customer at least and possibly multiple launch customers, after we’re able to show them production prototypes that have been fully validated and tested, which we think will happen in the April, May timeframe. We're already setting up times where we can bring customers to the track and get them in the trucks and get them actual ride and drive experience, which we think will be the time that we'll be able to finalize and conclude negotiations for specific customer orders and contracts.

We don't have any shortage of interest. Everybody’s question is “When can I get a truck?” So what we're really -- what we're trying to do is come up with agreements with a launch customer who’s going to be committed to us and help us with the development and even share a little bit of risk with us as we go forward in launching these vehicles. Like Anheuser-Busch did and has done and continues to do on the fuel-cell side, we're looking for that kind of a launch...
customer on the battery side of the Tre battery vehicle side. And we anticipate we'll be able to get that done in the next upcoming quarter in all likelihood. So good question.

Jeff Osborne
Got it. And just with COVID and everything going on with the delay in parts and whatnot, with the guidance for Tre, is there any delays as it relates to the fuel-cell variants of either vehicle being available for sale in the '23 timeframe? I know that's a long ways away, but I just wasn't sure if your KPIs are being hit on that.

Mark Russell
Yes, Jeff, that's another great question. At this point, we do feel like we have enough time between now and launch that we can have a chance to recover from any delays we're experiencing there. We are experiencing delays on the fuel-cell program in the same way. We're just not that near to the start of production there that we think we have to push anything back at this point. We think a lot can change in the next 18 to 24 months, and we hope that we can overcome some of these shortages. The critical ones to us of course, we've already mentioned battery cells, semiconductors, and products that incorporate semiconductors are in really short supply right now. But we think there's a good chance for that to get ameliorated over the next 12, 18 and even 24 months.

Jeff Osborne
Got it. That's all I had. Thank you.

Operator
Thank you. Our next question comes from line of Daniel Ives, with Wedbush Securities. Please proceed with your question.

Daniel Ives
Thank you. So my question is on the partnership side, have you now seen just a--what I would call surge or spike in interest from partnerships, whether it's on the hydrogen fuel-cell side or on others if I compare where we are today versus let's say, three to four months ago?

Mark Russell
Daniel, we definitely have more, I would say intensity in those discussions. Obviously, what happened last fall gave everybody a pause. And, and at this point, I think that they people have seen that we've gotten refocused and we're back to execution mode, and that has increased the intensity of discussions with potential partners. You've also seen a number of people get into our slipstream in terms of especially fuel-cell vehicles and hydrogen, a lot of people now trying to trail us and catch-up to us, copy us, etcetera on that front. We used to be kind of all alone there, not that long ago and now there are a lot of big names who are also jumping into the space and doing the same things we're doing.
That also lends credibility and also, as I said increases the intensity of those discussions. We’re also refining our approach, we have made a lot of progress, our need for partnerships has evolved. We’ve actually done some things that partners could have helped us with if we had done some of the deals we were talking about last year. We’ve actually already accomplished those things, so our need for partner help is reduced on some fronts in some areas. But we’re still interested in being partnered up with people who bring a lot to the table, and who are interested in what we bring to the table. These things are like marriages, both parties need to bring something to the table and for it to work well.

And that’s certainly the case at this point. There are still a number of really attractive potential partners for us that can help reduce our risk or help us speed things up and bring essential things to the table. And we think we bring a lot to the table as well. So those conversations are ongoing, and we’re back to serious negotiations now that the uncertainty of last fall is pretty much behind us.

Kim Brady
And Dan, as I alluded to last year fourth quarter that--you know, some of the conversations will likely spill into Q1. And of course, that’s the case. But as Mark alluded, we are having number of discussions and we feel confident that we’ll be able to share the progress on many of those discussions in the upcoming months.

Daniel Ives
To sort of paraphrase and just tell me if you agree or disagree. Like here it is you had a ton of partnerships, that you guys are in discussions, the fall comes, things obviously get put on ice. And now it feels like that's really starting to come back pretty quick. And we likely could expect over the coming months, or whatever two to five months, more partnerships—that maybe a lot of these were even started pre-fall, they just basically paused ‘till everything calmed down. Is that a correct characterization?

Mark Russell
That is correct. We did see some pause in some discussions that we had ongoing last year. We also have some new ones. There's a lot of activity in this space, as you know. So we have--we've restarted most of the discussions that we were having last year or rather, we've reengaged on a serious level with most of the discussions we had last year. And then we've added a couple of new ones. People who have come to us with ideas and with things they want to talk about.

Daniel Ives
Thanks for the insight.

Kim Brady
I think what you'll find is that as we make some additional announcements, you will find that we have been very thoughtful how we think about hydrogen value chain and our view of
hydrogen potential partners have expanded and it will give you greater confidence in terms of how we're thinking about the roll-out of the hydrogen pathway.

Daniel Ives
Great. Thanks for the insight.

Operator
Thank you. Our next question comes from the line of Chris McNally, with Evercore ISI. Please proceed with your question.

Chris McNally
Thanks so much. Good afternoon, team. So my question is around the hydrogen station partners. I was curious if we could get an update--again lots of these discussions, but how close you are to finally finalizing maybe the first tranche of stations? It sounds like the strategy is moving more towards multiple partners rather than one broad partner as you discussed previously, but also on timing, how long from breaking ground on a station, can it be tested ahead of 20% to 40% of the beta trial?

Mark Russell
That's a great question, Chris. First of all, let's talk about the likely focus, you saw our announcement about the rate schedule that we have with the--with APS in their service area, which is really groundbreaking. And it's going to be a model for us in other discussions in other areas without the utilities. That tells you that that's an area of focus for us. We're definitely focused on that that area. And as you said, there's multiple potential partnerships, there's multiple potential models of hydrogen supply chain that you're going to see here, within that APS rate area, we have the rate that we would need to generate onsite.

And that's the base station design that we worked on with Nel for the last several years, where we can produce and dispense up to 8 tons a day, or 16 or 24 or higher in 8 ton increments on location by using the electric rate that's favorable to diesel on a location. And then, as you get to say, on the west side of the APS service area, west on Interstate 10 corridor closer to the California market, there we might see us, producing hydrogen in bulk, and then transporting that hydrogen either in a compressed form or liquid form into the Southern California market for example, where we're not going to get that kind of rate, most likely in the Los Angeles Basin, etcetera.

So you're going to see different iterations of the infrastructure, you're going to see different or more than one type of partnership as well. As you said, things have evolved at this point, and there's probably no one partner that could provide everything that we're looking at in terms of what we're looking at in terms of a partnership and what they bring to the table. So you're probably going to see multiple partners, you're going to see multiple forms of infrastructure. As we go forward, there will be solutions that are tailored to an individual location and solutions that are tailored to specific partnerships.
Kim Brady
And Chris--

Chris McNally
--That's super helpful. I'm sorry, yes.--

Kim Brady
--Chris, one more thing. In certain locations, we may not even consider actually having centralized hydrogen generation, it may be possible in certain locations where gray and blue hydrogen may be available, where carbon is captured. So we're focused on really CI score and we think there are value streams that can be captured, where we can actually purchase hydrogen and are able to deliver to our stations and where we are responsible for actually dispensing. So there are a number of value chains that we are considering to optimize overall hydrogen pathway.

Mark Russell
And again, to Kim's point about CI, which is Carbon Intensity by the way, that's what we're looking at as the overall scorecard for how green a solution is. So we are looking at situations where people are making hydrogen from sources that otherwise would be emitting carbon, but they're capturing and sequestering. So we're looking at those as well in some locations, also.

And your other question, Chris was about the timeline. When we actually start construction on a station depending on the kind of infrastructure that we have there, it determines how long that construction time is. A generating and dispensing station, the construction time is about 12 months. We beat that slightly for our dispensing location here at our headquarters. We think for a generating and dispensing location we could do the whole thing in 12 months, and that would be after the completion of all permitting and paperwork is all done.

So what we've had in our presentation materials prior has been 18 months as a benchmark, which represents six months of permitting time and 12 months of construction. In some jurisdictions, the permitting time might be a year or more, there are parts of California where I think you're probably looking at more than a year in some cases. Here in Arizona, we get permits very rapidly. So it's going to be on the much shorter end of that scale. Construction time is a year, permitting time is somewhere between a month and a year usually. And so we kind of approximate that that from--announcement to commissioning is about 18 months on average.

Chris McNally
That's very helpful on the fueling strategy. And if I can squeeze in one that's related to that. You guys released the three variants on the hydrogen truck this week. I'm curious how that relates to the Budweiser trials. If you look at Slide 6, you're talking about the pilot in '22. Will the pilot still be initially focused on the long haul? I mean, originally, it would take Nikola Two where the
timing is actually more like 2024 or will Budweiser actually use some of the regional Tre launching in 2023, for the pilots in early 2022.

Mark Russell
Great question, Chris, the focus within Anheiser-Busch is on fuel-cell vehicles, they've been a partner for developing fuel-cell vehicles for a long time now, and they will be using both vehicles. The Tre fuel-cell is going to be suitable for routes that are up to 500 miles. Whereas the Two, we’re getting exceptionally long ranges at this point. That's why we released that portfolio requirement because we were going to have a 900 mile at least variant of the Nikola Two sleeper and that will cover the longest routes that AB has in North America. The 500-mile truck will cover a good chunk of those routes and will be available slightly sooner. So we anticipate that the first vehicle that AB will be running from Nikola will be the Nikola Tre fuel-cell with up to 500 miles of range. And then in ‘24, we’ll add the sleeper for the longer hauls. A prototype route for AB with us is Van Nuys, California, where they have a large brewery that serves the market here in the Southwestern United States. And primary route for the Van Nuys brewery is to the Chandler, Arizona warehouse, which services the Southern part of Arizona.

And that's about just over a 400-mile route. So the Nikola Tre fuel-cell could service that route. There are some longer routes that AB has that will tip into the Nikola Two range category. But we think that there's going to be a lot of routes that AB has that we can cover within Nikola Tre fuel-cell.

Chris McNally
Thanks, much appreciated.

Operator
Thank you. Our next question comes from line of Joseph Spak, with RBC Capital Markets. Please proceed with your question.

Joseph Spak
Thanks. Good afternoon, everyone. I actually wanted to follow up on Chris' line of questioning right there. So I think originally, the Tre fuel-cell was Europe only, maybe you could just indicate, give us some indication of what your potential customers were telling you that made you decide to bring in a Tre version of fuel-cell to the U.S? I know that the Nikola Two fuel-cell seems like it was delayed a little bit, was that related to trying to get the higher mileage variant out there? And ultimately, even if the mix is changing between Nikola Two and the Tre a little bit here, is your 2,000 fuel-cell targeted by ‘23 and 5K by ‘24 still valid?

Mark Russell
You wanna start there?

Kim Brady
Sure. We have not changed any of our forecast for 2023, and 2024, and 2025 with regards to fuel-cell trucks. I think what we have done is that we have found that there's some confusion in the marketplace with respect to our fuel-cell trucks. And one thing that we have done especially in the last couple of months is that we have spent a lot of time really trying to understand the market and segments in the markets and understanding the needs and where the gaps are.

And when we think about BEV trucks versus fuel-cell trucks, we know that there's a gap where BEV is not able to provide the right solution. And so, we believe we’ve got compelling products that we can meet the medium haul market and then as well as having a new chassis new truck when you think about the Nikola Two that can meet the long-haul segment of the market. So we feel that we have the best product that’s out there in terms of being able to really attack those sub segments of the market.

Mark Russell
And Joe, your question about the Europe versus USA. That’s another example of the United States market and the customers here helping us to see that we needed to adjust our strategy. We had a number of customers who are going to be customers for the Tre battery say to us, “You know we like this truck a lot. If you had a fuel cell version that could go longer range, still with a full payload, and particularly if you could make it a little bit more aerodynamic for the higher speeds that you see in the U. S. compared to Europe, we would buy it.” So that’s why we decided that we would go next to the Tre fuel-cell variant for the U. S. market, because we can follow right on the Tre battery truck. It’s the same platform, it's the same basic vehicle, we just replace a lot of the battery with fuel-cells--or with hydrogen storage, and then we put the fuel-cell stack in there, the system we have developed in there, and we slightly changed the geometry of the truck.

If you look at the renderings in the release, we put out there a couple of days ago, you'll see that there's a slight arrow front to the Tre fuel-cell, it’s the same truck underneath but it's got a more aerodynamic structure, and the nose is slightly lengthened. And based on the simulations, which we'll verify with real trucks here shortly, that truck is much more aerodynamic, the coefficient of drag is substantially improved by that revised geometry.

And so, we think that the Tre fuel-cell will actually be very suitable for a good chunk of the North American market, it's going to be suitable for the higher speeds that you need for Interstate travel, it’s going to cover a lot of the interstate market that's under 500 miles, and we think we'll be able to sell a lot of those trucks. And that's the reason why we go next from the Tre battery, we go to the Tre fuel-cell. And the Two comes out a little bit later. And now our focus on the Two is to make sure that we have a very high mileage distance / long distance vehicle to cover that portion of the market that really needs the long distance, particularly as the hydrogen fueling network that we’re building out becomes more available and our coverage gets better.
You get into—you get to the point where you've got pretty good coverage in Europe on the natural gas front, but you still have the bestselling trucks in the European natural gas truck market is the longest-range version. IVECO our partner has a 1,600 kilometer or 1000-mile truck that is the number one seller in Europe. And that's even after you've got a lot of places where you can fuel that, a lot of places you can fuel the compressed natural gas version, and even a number of places now where you can fuel the liquid natural gas version, they still sell a lot of really large trucks there because a portion of the market, particularly the for-hire carriers and the third carriers in the third-party logistics market, they need a longer range truck.

And they're going to need one for a long time to come until the fueling network gets really dense. And so that's why the Two is now at the end of the introductions in '24, and it's focused on being as long range as it can be. That's another reason for the announcement is that we're now up to 900 miles on the Two range. I'm personally not satisfied with that. I want to push it even further if we can. I would like to get to that 1,000-mile number they got to in Europe for their natural gas truck they've got there. But we're right now at 900-miles and we'll keep pushing that envelope as we get closer to the introduction there.

Joseph Spak
Great. Thanks for the detail there. The second question, maybe we could just turn to capital. So I think, back in August of last year, which I know was a lifetime ago, but I think you talked about second half CapEx of like $100 million, I think it only came in at about 18. And then originally like $290 million for 2021. I think from the original deck and now you're saying $220 million. So, cumulative CapEx is lower. How much of that is a realignment of the priorities you talked about versus delayed spend or maybe some efficiencies? And what does that mean for—you know, the language you had in some of your prior filings about, a capital raise in late ‘21 or early 2022?

Mark Russell
Great question. I would say all of the above. As you know, in 2020, we did defer some CapEx. But when it comes to spending, especially for hydrogen stations, it was important that we found the right solution that made sense. And so, it made sense for us to defer that to 2021. But when it comes to CapEx, it's something that we think about very carefully. As you know, this is investors’ money and our capital allocation decision is super important, and we want to be thoughtful. And while we understand that we need to meet all of our timetable and commitments with respect to the BEV trucks and fuel-cell trucks, and we're making sure that we have capital deployed for operating expenses to ensure that we meet a timeline in terms of CapEx. I think we have that provisioned right for 2021. We have a pretty good idea in terms of what we need to spend to get to the 1.0 phase completed for our Greenfield manufacturing facility. And there are some CapEx related to making sure that our Ulm facility is online by June. So all that's going well, and we anticipate CapEx allocated for those two projects will be fully spent.
With respect to when it comes to hydrogen stations and partners, there, we are trying to be a bit more flexible, recognizing that there could be a number of different options and configurations. And so, we need to be flexible in terms of how we think about the CapEx. But we do believe in the overall context of $225, $230 million that we're allocating for 2021, we think we'll have enough flexibility. Now it's quite possible that especially when it comes to the second half of the year, and if we find that there are great opportunities as we continue to partner, and that perhaps we may need to accelerate capital spending, when it comes to hydrogen side, we will certainly update the market.

In terms of capital raise, I think we have always been clear that at some point, we thought that it'd be prudent pursuing a capital raise. At some time in 2021, we'd like to make sure that we have adequate capital at least a year in advance, or potentially year-and-a-half, two years’ worth of capital for our operating expenses and capital expenditures. And so, we will time to time tap the market, and we do think that so far, the market has been strong. So, do not be surprised if we do end up tapping the market this year. But we do that because we want to make sure that we have ample liquidity at least 12 months to 18 months in advance.

Joseph Spak
Okay. Thank you very much.

Operator
Thank you. Our next question comes from a line of Mike Shlisky, with Collier Securities. Please proceed with your question.

Michael Shlisky
Good afternoon. Can I start with a question on the APS deal for electricity? Can you maybe give us some color as to some of the moving parts behind that contract? I mean, this is a commodity that trades openly. So somewhere you're giving in some way you're getting. So can you give us some color as to how you got the good price? And is there any kind of minimum offtake or, minimum amount you need to actually take from APS to get that kind of price?

Mark Russell
Yes, great question, Mike. The rate schedule that we have with APS, which is very competitive by the way, and very innovative, was a result of a lot of work, and a lot of education of stakeholders, because we had to convince the utility that this was going to be a good deal for them, we had to convince the state regulators that oversee the utility that this was good for the rate payers as they're publicly regulated utility, and we had to also convince the people who we're going to be touching on the grid, that this was going to work well.

So the key aspects of the agreement are that we have this rate available throughout the service area, for whatever--for the quantities of electricity that we're going to need, which are very large. And what our advantages to the market is off-peak, which is during the night, every day year round. And during the shoulder season is during the peak of solar production, during the
day, at solar noon, you have a lot more electricity coming into the grid than is needed when it's not a hot day, here in the southwest. And then the peak hits. The peak of the peak here in the southwest is in the hottest month of the year, which is the late summer. And that's in the late in the day, after the solar noon, solar production starts to fall off, but everybody's running their air conditioners. And so you get around five o'clock, you usually get a peak somewhere between 4 and 7 p.m.

We have the ability in making hydrogen to be able to curtail for a period of time during the peak, particularly in that peak of the peak time of year for the Southwest grid. That's gold for the utility and the grid operators, because we're not going to add anything to their peak because in the peak of the peak, we just curtail for a few hours every day. We can do that. We've got buffer built into the system to do that. And then we're at newfound revenue for windmills and turbo--hydro power turbines and other sources of renewable energy, and even non-carbon generating energy sources like nuclear plants, of which there's a great one here in the southwest just down the road from us. It has a lot of life left, but doesn't add any carbon by making electricity. And at night that capacity is just wasted, no revenue, no use.

Well, at night, we're going to make hydrogen with that now. And that's going to be--that's new final found revenue for the utility and for the ratepayers, and then we don't add anything to their peak problem in the afternoon, during the peak times a year.

So that's why we get this very, very competitive rate, because we represent the future of the electric grid. If you're going to get renewable energy, like wind and solar into the grid, and use it effectively, you either need massive kinds of storage of some kind like big grid batteries, which are expensive and degrade quickly, or you can have us do it basically marginally for free and we'll pay you for the electricity that you're not going to be able to sell during the off-peak hours. And we're not going to add anything to your peak problem. So we think this is the model. We think that everybody around the country, the United States and around the world, we have similar discussions going on in Europe by the way, are going to be able to quickly look at this and see that it makes sense to do this, just about everywhere, because the amount of renewable energy goes up every day, every week, every month. And the challenge of balancing the grid gets bigger and bigger every weekend, every month, every year, and hydrogen can be part of the solution for that. I think we just proved that in the APS model here. And we're looking forward to replicating that and other jurisdictions, and with other utilities.

Michael Shlisky
Got it. I also want to ask about the pricing of the Tre, that you've put in your outlook here. This could be me; I might be crazy. I remember seeing in the past, just by dividing what was in some of your earlier slides that the ASP of the Tre BEV to start was going to be about $250,000. And looks like here, same calculation was about $300,000 dollars. Again, I could be working with some old sale data here. But has anything changed, maybe it's price of steel, or some of the other, kind of raw materials here or is it just a different pricing schedule or again, am I working with some old data?
Mark Russell
You’re working with some older data, Mike, that original price benchmark was established by the only product in the market at first, which was being priced at $250,000. That was a much inferior product, to what we're going to have in the market here very shortly, and what we're going to prove to customers that they can get from us, that was a much lower range, less capable, less sophisticated vehicle, but it was the only one available and it was being sold for $250,000.

Right now, we see pricing in the market going north of $300,000 very, very rapidly for a more capable state-of-the-art vehicle. So that’s why you see that that number changing, and we'll continue to use the most up-to-date market reference that we have for our modeling purposes to help you out.

Michael Shlisky
Got it. I appreciate that. Thanks so much, guys.

CONCLUSION

Operator
Thank you. Ladies and gentlemen, this concludes our Q&A session and thus, our call today. We thank you for your interest and participation. You may now disconnect your lines.