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# VECTOIQ (VTIQ) COMBINATION REPORT

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MARCH 2020



SPACInsider

## BLUEPRINT FOR A COMPANY IN AMERICA 2.0?

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# NIKOLA MOTORS

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## Nikola Motors

**On March 2, VectoIQ Acquisition Corp. (VTIQ) proposed to combine with Nikola Motors**, a company focused on the development of next-generation smart transportation. Upon the closing of the transaction, the combined company will be named Nikola Corporation and remain NASDAQ-listed under the new ticker symbol "NKLA."

**Nikola's business plan** is to be a vertically integrated zero-emissions transportation solution provider. Nikola's core product offering centers around its battery-electric vehicle ("BEV") and hydrogen fuel cell electric vehicle ("FCEV") Class 8 semi-trucks.

**Essentially, they are Tesla for Trucks.** A bold visionary/disruptor, Trevor Milton (Executive Chairman), has been able to problem-solve for a fair amount of issues that arise when thinking about a "greener" path for the transportation sector and Hydrogen's role. Fuel-cell batteries have been lauded as a good option for long-haul routes in trucking. Still, infrastructure build-out for fueling purposes has been a significant hurdle for industry adoption.

**Why hydrogen fuel cell over battery-electric, you ask?** Hydrogen Fuel Cell technology has been called "fool cells" by Elon Musk, and when comparing the two technologies, it does look like BEVs make more sense for the Auto market as well as the short-haul market. The charging infrastructure is more established for BEVs, just plug it into the electric grid. To be a vehicle fuel, hydrogen needs to be produced. That process takes energy, and most of the methods of production have some relationship with fossil fuels or natural forms of greenhouse gases. Kind of defeats the purpose, right? Now, there is one method that, if designed right, can be as near to a carbon-

free fuel as there is. If one can harness wind and/or solar energy, use that energy to produce hydrogen from water by electrolysis and then fuel a vehicle onsite (eliminating the transportation issue), you could claim a zero-carbon solution.

**I don't see that happening for the auto market as the infrastructure build-out needed would be too large.** However, hydrogen has a distinct advantage when it comes to the long haul market. Between refueling, FCEVs can travel farther than BEVs. A Class 8 BEV has a top range of 300 miles, though the Tesla Semi claims a range of 500 miles, and the electricity draw, as well as the weight of the batteries needed, are problematic as well. FCEVs can travel farther between charges, and the fuel cell stack is apparently more efficient weight-wise than BEVs. Nikola is presenting a truck with a range of 500 to 750 miles, which is on par with today's diesel trucks. Other differentiators that favor FCEVs over BEVs are shorter fueling times and reliability to operate in cold weather.

**The opportunity in front of them is tremendous.** Globally, the commercial vehicle market, is estimated to be ~\$600 billion-per-year (Source ACT Research) with steady growth expected to continue as e-commerce and global economic growth fuel the need for more heavy-duty trucks. According to ACT, expectations are for ~5% annual growth in the Class 8 truck population from 2019 to 2023, driven by double-digit yearly growth in e-commerce and a healthy global economic outlook. Now, of course, this past month probably puts these numbers in jeopardy of being revised down or hopefully pushed out in time.

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**Combine the above with the push to reduce greenhouse gas (GHG)** seen across the globe, and the market opens up even more for Nikola. According to the International Council on Clean Transportation (ICCT) heavy-duty trucking in the U.S. and EU, which is <10% of the vehicle population, is responsible for ~40% of GHG from the transportation industry.

**Before the pandemic**, there was a tremendous push to reduce global GHG emissions from leading governments. For example, the EU has a mandatory 15% reduction in CO2 emissions by 2025, and a 30% reduction target by 2030. To incentivize industry players, they have put in place financial penalties for failure to achieve these targets. Conventional technology (diesel) will most likely have trouble helping companies meet the EU targets. And this is where Nikola can come in. As they eloquently put it in their filing, "These ambitious CO2 targets are likely 'technology-forcing' towards alternative powertrains such as battery-electric and hydrogen fuel cell." In the U.S., states have put in place a bevy of incentives for producers to pursue non-fossil fuel endeavors.

**The company openly states that the economics rely on federal and state grants, loans, and tax incentives** under government programs designed to stimulate the economy and support the production of alternative fuel and electric vehicles and related technologies, as well as the sale of hydrogen. Before the pandemic, these initiatives were well entrenched in the investment decision-making of companies and lenders, both private and public. I think we can all safely say that the investment landscape is currently in a state of violent flux, and programs rooted in forecasting financial models might be in jeopardy.

**The details of the Coronavirus Aid, Relief, and Economic Security Act (CARES)** do not specifically address the next phase of the U.S. economy but it is clear that there will be federal government role in rebooting the economy and lobbyists are surely already jockeying for a seat at that table.

**I can't imagine the ravaging the current state of affairs is having on state budgets**, and what they are going to do once we get through this will be up for debate probably for years. It is my opinion that the Green New Deal was absurd and impossible to implement. But, I did and still do believe that aspects of a green new deal (notice the lowercase) will be a part of "**America 2.0 - the rebooting**".

**The undertaking that Nikola presents**, particularly the build-out of 70 hydrogen stations by 2028, is a crucial part of the narrative. I can say that companies like Nikola should be a part of a "new" America, but I am not sure if that is the route our leaders will take us.

**So, the backdrop for Nikola was promising** as they position themselves as a company that can provide the balance of economic solutions for corporations attempting to become greener without losing financial returns. One can argue on the merits of government intervention in a "free market," but the push was there.

**I have followed the energy space for many years**, and I have seen transformative events change the flow of investment in numerous ways and directions.

**The conventional gave way to the unconventional**, and it looked like the baton was passing to the renewable. Now the race has been postponed.

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**THE NUMBERS**

# NIKOLA MOTOR CORPORATION

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The slide presentation accompanying the merger announcement shows the blueprint the company intends to use as it matures into a going concern. They address a fair amount of the issues I have seen with alternative fuel initiatives in the past. Infrastructure build-out, commodity cost exposure and early adoption risks in particular.

A crucial part of the business plan is to build out a network of hydrogen fueling stations. Another feature that is of note is the offering of a bundled lease. This approach should provide customers with a FCEV truck, hydrogen fuel, and maintenance for a fixed price per mile. The Nikola model addresses the early adoption risk by initially partnering up with companies with dedicated routes.

This approach allows customers to lock in a fuel price, which in the conventional diesel world can be highly variable. The fixed-rate also helps Nikola's ability to de-risk infrastructure development as they can lock in end-user demand and map capital outlay accordingly.

## CONSIDERATIONS

As a non-revenue generating company, there is going to be a fair amount of risks, and for investors and potential investors here are some things to consider:

- They are not registered as a dealer in any state, and many States prohibit manufacturers from selling vehicles directly to customers.
- As a company, they do not have experience in high volume manufacturing. However, they have partnered with CNHI Iveco, a leading manufacturer of trucks, buses, and light commercial vehicles in Europe.
- Though they have reservations for 14,000 Nikola Two FCEV trucks, they do not have lease agreements. I think the arrangement with AB Inbev for 800 vehicles is particularly vital as the hydrogen filling station buildout looks to be hand in hand.

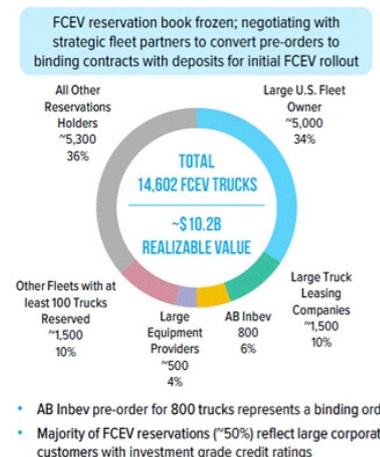
THE NUMBERS

# NIKOLA MOTOR CORPORATION

- The corporations on the bottom right of slide 13 are all well-known names and it was pointed out to me that most of them are not unfamiliar with hydrogen fuel-cell vehicles as most of their fork-lift fleets are FCEVs.
- They plan on using a third-party partner to provide financing to their prospective customers.
- Competition is intense with Daimler, Hyundai, Tesla, Toyota, and Volvo, all working on BEV and FCEV trucks. Looking at the timelines of the competitors it does not seem like anyone has a first mover advantage at the moment.

## ROBUST BLUE CHIP DEMAND FOR A ZERO EMISSIONS TRANSPORTATION SOLUTION

### SUMMARY OF FCEV TRUCK RESERVATIONS PRIOR TO BOOK FREEZE IN FALL 2019



Nikola has over 14,000 FCEV truck pre-orders, with robust demand for newly introduced BEV truck

### ADDITIONAL RESERVATIONS DETAIL

- Nikola BEV demand: following unveiling of Nikola BEV truck in Fall 2019, company has been engaged with potential strategic customers
  - Discussion focused on multi-thousand truck pre-orders with binding contracts with significant deposits 12 months prior to delivery
  - Robust BEV demand projected to fill first 2 – 3 years of production
- FCEV demand equally robust, with reservation book projected to fill first 2+ years of production

### THEMES DRIVING DEMAND

- Commercial vehicle purchasing decision driven by Total Cost of Ownership (TCO) of vehicle, including cost of truck, fuel, and maintenance
  - Nikola's unique FCEV Bundled Lease model ensures TCO cost parity with diesel as well as TCO consistency and predictability for fleet operators
- Corporations are increasing focus and efforts to reduce greenhouse emissions in their value chains



((All slides are from the company presentation filed on March 3, 2020))



THE NUMBERS

# NIKOLA MOTOR CORPORATION

FINANCIALS

At closing, the company is expected to be nearly debt-free and have over \$700 million in cash. On slide 31 of the presentation, they put together projections for the years 2020 – 2024, and it looks like they will need to raise another \$1.5 billion over that period to support their goals.

## NORTH AMERICA FINANCIAL OVERVIEW

Financial projections below only cover North America business and do not reflect potential upside from 50/50 JV in Europe

**NORTH AMERICA FINANCIAL SUMMARY**  
SM, UNLESS OTHERWISE NOTED

	2020P	2021P	2022P	2023P	2024P
<b>Key Income Statement Drivers</b>					
BEV Trucks Sold (# of Units)	-	600	1,200	3,500	7,000
FCEV Trucks Sold (# of Units)	-	-	-	2,000	5,000
H2 Stations Completed (# of Units)	-	-	-	10	24
<b>Income Statement Items</b>					
BEV Truck Revenue	-	\$150	\$300	\$875	\$1,750
FCEV Truck Revenue	-	-	-	470	1,175
FCEV Service & Maintenance Revenue	-	-	-	13	56
FCEV Hydrogen Revenue	-	-	-	56	245
<b>Total Revenue</b>	-	<b>150</b>	<b>300</b>	<b>1,414</b>	<b>3,226</b>
% Growth	nm	nm	100.0%	371.4%	128.1%
(-) Cost of Goods Sold	-	(112)	(242)	(1,113)	(2,507)
<b>Gross Profit</b>	-	<b>38</b>	<b>58</b>	<b>301</b>	<b>719</b>
Gross Profit Margin	nm	25.2%	19.2%	21.3%	22.3%
(-) Operating Expenses	(222)	(303)	(274)	(416)	(574)
<b>EBIT</b>	<b>(222)</b>	<b>(265)</b>	<b>(216)</b>	<b>(114)</b>	<b>145</b>
EBIT Margin	nm	(176.9%)	(72.0%)	(8.1%)	4.5%
(+) Depreciation & Amortization	11	20	41	48	68
<b>EBITDA</b>	<b>(\$211)</b>	<b>(\$245)</b>	<b>(\$175)</b>	<b>(\$66)</b>	<b>\$213</b>
EBITDA Margin	nm	(163.3%)	(58.4%)	(4.6%)	6.6%
<b>Balance Sheet and Cash Flow Items</b>					
<b>Net Working Capital</b>	<b>(\$9)</b>	<b>\$20</b>	<b>\$41</b>	<b>\$201</b>	<b>\$476</b>
% of Revenue	nm	13.4%	13.8%	14.2%	14.8%
Truck Manufacturing Facility, Equipment & Other Capex	(156)	(293)	(196)	(64)	(34)
H2 Stations & Equipment Capex	-	(6)	(100)	(305)	(639)
<b>Total Capital Expenditures</b>	<b>(\$156)</b>	<b>(\$299)</b>	<b>(\$296)</b>	<b>(\$369)</b>	<b>(\$673)</b>
% of Revenue	nm	198.7%	98.6%	26.0%	20.9%

- North America BEV production projected to begin in 2021; North America FCEV production projected to begin in 2023
- \$3.2B of revenue expected by 2024
- Expected steady state EBITDA margins of >25%



((All slides are from the company presentation filed on March 3, 2020))

I would be incredibly impressed if they don't revise the timelines presented for their BEV truck (slide 28) and FCEV truck (slide 29) roll-outs.

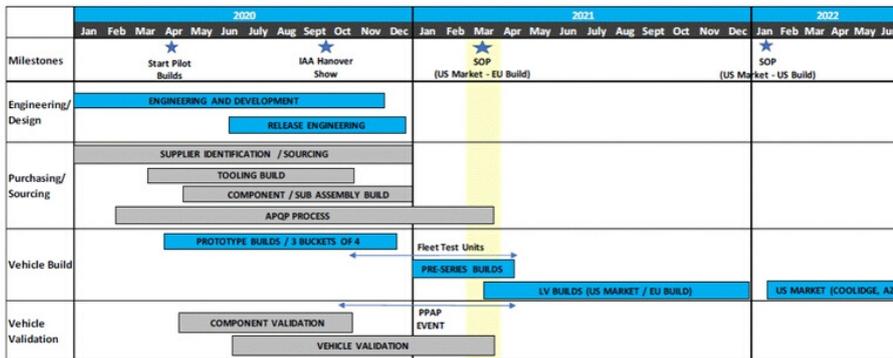
But, if they do, I would assume the investor base would accept it. I am not well-versed in the world of bringing vehicles to market but, I did find the timelines to be very ambitious, especially considering they have not broken ground on their manufacturing facility in Arizona.

## NORTH AMERICA BEV TRUCK TIMELINE

### PROJECTED ROAD MAP TO FLEET TESTING (2020 – 2021)

- Plan: Take the current Iveco S-Way platform and electrify the powertrain
- Iveco Responsibilities: Cab, chassis, and vehicle integration
- Nikola Responsibilities: e-Axle (motors and inverters), battery pack, BMS, vehicle controls strategy, and infotainment
- Projected Schedule:
  - Unveil first truck in Hanover on Sept. 24, 2020
  - Utilize Iveco's Ulm facility in Germany for prototype, pre-series, and low volume builds in 2020 and 2021
  - Begin limited testing with fleets in Q4 2020
  - Enter low volume production in Q1 2021

Nikola's partnership with Iveco accelerates the development and production of a BEV truck, shortening its go-to-market strategy by 1 to 1 1/2 years

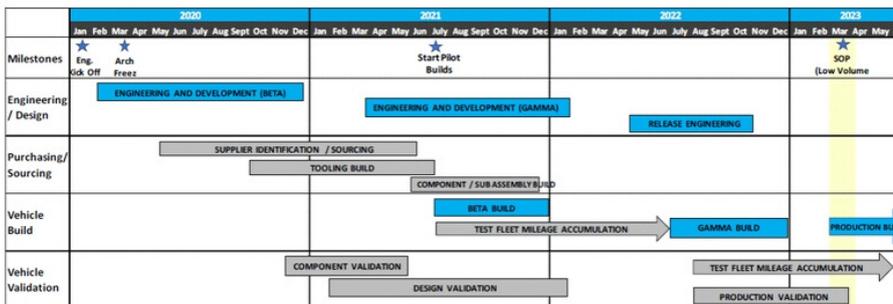


## NORTH AMERICA FCEV TRUCK TIMELINE

### PROJECTED ROAD MAP TO COMMERCIALIZATION (2020 – 2023)

- To achieve SOP milestone, Nikola's engineering, manufacturing, and testing must have a coordinated and collaborative understanding of the overall vehicle architecture
- Production-intent builds expected to begin at Beta Phase (2H 2021)

Low volume production for FCEV trucks expected to begin in Q1 2023



(All slides are from the company presentation filed on March 3, 2020)

For valuation, it looks like they are pointing investors to 2027 metrics as truck revenues are estimated to be above \$10.5 billion and EBITDA to equal \$1.35 Billion.

These numbers do not include the contributions of the H2 stations or the Europe JV.

## DISCOUNTED FUTURE VALUE OF NIKOLA NORTH AMERICA TRUCKCO

2027E NIKOLA NORTH AMERICA TRUCKCO EBITDA WALK  
BASED ON N.A. BUSINESS

BEV Trucks	
Units Sold	14,000
Revenue per Unit (\$)	250,000
<b>2027E BEV Truck Revenue (\$M)</b>	<b>3,500</b>
FCEV Trucks	
Units Sold	30,000
Revenue per Unit (\$) <sup>1)</sup>	235,000
<b>2027E FCEV Truck Revenue (\$M)</b>	<b>7,050</b>
<b>2027E Total TruckCo Revenue (\$M)</b>	<b>10,550</b>
Illustrative EBITDA Margin <sup>2)</sup>	12.8%
<b>2027E Illustrative EBITDA (\$M)</b>	<b>1,352</b>

Illustrative EBITDA Margin conservatively assumes WholeCo OpEx cost structure applies to TruckCo business

### SUMMARY OF ANALYSIS APPROACH

- Analysis applies an NTM EBITDA multiple based on incumbent truck OEM trading levels in order to imply a 2027E future enterprise value that is discounted back to January 2020 using an illustrative discount rate
- This future value is then sensitized across a range of EBITDA multiples, EBITDA variances, and discount rates

### KEY TAKEAWAYS

- TruckCo alone supports a ~\$3B valuation, even with a conservative assumption that TruckCo is valued similar to incumbent Truck OEMs

1. FCEV Revenue per Unit based on truck contribution from overall lifetime value of FCEV bundled lease  
2. Illustrative TruckCo EBITDA margin calculated using 2027E TruckCo Gross Margin burdened by WholeCo OpEx allocated by relative revenue contribution and TruckCo D&A added back

Valuation of North America TruckCo alone is highly attractive; H<sup>2</sup> station network, Europe JV, autonomous ready trucks, and grid storage components of business offer substantial potential incremental value

DISCOUNTED FUTURE VALUE SENSITIVITY ANALYSES  
2020E EV ASSUMING 2027E NIKOLA TRUCKCO EBITDA OF \$1.352M (\$B)

Discount Rate	2027E TruckCo EBITDA Multiple		
	7.0x	8.0x	9.0x
15.0%	3.6	4.1	4.6
20.0%	2.6	3.0	3.4
25.0%	2.0	2.3	2.6

2020E EV ASSUMING 2027E EBITDA MULTIPLE OF 8.0X (\$B)

Discount Rate	2027E TruckCo EBITDA		
	%Δ: (25%)	0%	25%
	<b>1,014</b>	<b>1,352</b>	<b>1,690</b>
15.0%	3.1	4.1	5.1
20.0%	2.3	3.0	3.8
25.0%	1.7	2.3	2.8



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