# Ford Enters a ‘Brave New World’ in Securing Lithium for Battery Gigafactories to Drive EV Production Surge

written by InvestorNews | May 24, 2023

Ford Motor Company (NYSE: F) hosted its investor event on Monday and it would appear that in a single investor day presentation the Company has gone from worst to first when it comes to securing battery-grade lithium supplies to scale up its electric vehicle production. I’m pretty sure all these deals didn’t come to fruition over the weekend, but they sure made a splash when they were presented on Monday.

In total, Ford announced deals with five separate companies sourcing lithium from all over the world, including Quebec, Chile, Argentina, Australia, and a few U.S. locations sprinkled in for good measure. These latest supply deals announced by Ford complement the ioneer Ltd (ASX: INR | NASDAQ: IONR) contract signed in July 2002.

## Ford Investor Day Lithium Announcements

According to the Ford Investor/Analyst Day presentation transcript (yes I scanned most of the 78 pages and know way more about Ford than I ever wanted to know), they’ve now sourced about 90% of the nickel and the lithium to meet their future capacity targets, including producing 2 million electric vehicles (EVs) by 2026. On Monday, the Company announced lithium agreements with 3 of the top producing major global suppliers –

Albemarle Corporation (NYSE: ALB), Chile's Sociedad Química y Minera de Chile S.A. (aka "SQM")(NYSE: SQM), and Nemaska Lithium.

Nemaska is a joint venture backed by Livent Corporation (NYSE: LTHM) and the investment arm of the Province of Quebec. According to Ford, these are some of the largest lithium producers in the world with the best quality, existing capacity, and IRA compliance (although Albemarle does have plenty of Chinese processing capacity but we'll assume Ford knows that).

## US-Based Lithium Development Deals

Coupled with these deals with major players to provide stability to its plants, Ford is also investing in U.S.-based development projects through agreements with Compass Minerals International, Inc. (NYSE: CMP), EnergySource Minerals LLC (*private*), and the previously announced deal with ioneer.

The interesting thing about these investments is that Ford is basically pursuing promising technology that has yet to be proven at scale. Ford claims they are developing extraction technologies to further diversify the industry, but if they are betting on the right horse, it could certainly give them a leg up on the competition.

## A Bet on Direct Lithium Extraction Technology

Specifically, we are talking about direct lithium extraction (DLE) technology. The Holy Grail for lithium extraction as it seeks to extract the white metal from brine using filters, membranes, ceramic beads, or other equipment that can typically be housed in a small warehouse. It would enable miners to boost

global lithium production with a footprint far smaller than open-pit mines and/or evaporation ponds, which are often the size of multiple football fields.

Compass and ESM are using ESM's proprietary ILiAD™ adsorption technology, which is a DLE technology that competes with what ioneer and Lithium Americas Corp. (TSX: LAC | NYSE: LAC) are pursuing at their respective projects. The pursuit and potential success of DLE technology is easily an article in itself, and probably well above my pay grade to do it justice.

## FIGURE 1: Giga Factory Locations




*Source: Ford Investor Day Presentation (May 22, 2023)*

# Ford to Build 5 New EV Battery Giga Factories

So we'll circle back to the Ford story and talk about why they've locked in several large, multi-year lithium supply contracts. Ford is building 5 new giga factories to produce batteries, with the first two, located in Kentucky and Tennessee, on track to open in 2025. Another plant, in Marshall, Michigan, will be dedicated to producing battery cells using LFP

(lithium iron phosphate) technology.

With respect to the LFP facility, it helps explain one of the lithium announcements noted above, the SQM deal which supplies lithium carbonate. Lithium carbonate is required for LFP batteries versus lithium hydroxide, which is the primary component for the current generation of lithium-ion batteries. Ford now feels it has control of its value chain. Instead of relying on a cell supplier, Ford can now move material around where they need it, so If they wanted to flex more into LFP and use more lithium carbonate, no problem. If the Company wants to swing more towards hydroxide, it can also do that.

# Final Thoughts

Granted this isn't original thinking as Elon Musk was the first one out of the gates lining up sources of lithium (and other critical materials) for Tesla, Inc. (Nasdaq: TSLA), and in January, General Motors Company (NYSE: GM) signed a deal with the aforementioned Lithium Americas.

Nevertheless, it seems now that virtually all North American automakers are securing supplies of battery materials to boost EV output as demand for EVs continues to grow, and to take advantage of U.S. tax credits.

It would appear automakers are entering a '*Brave New World*'. Which, ironically is a dystopian novel written in 1931 by Aldous Huxley, where the citizens of the World State substitute the name of (Henry) Ford, founder of the Ford Motor Company, wherever people in our own world would say Lord. We shall see if the Ford Motor Company of 2023 will become the messiah of EV production.