



**FMC Corp. Presentation at Barclays Electronic
Chemicals Conference**

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As Prepared for Delivery

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Officer**

Good afternoon and thank you for having FMC here today and allowing us to give a short presentation on FMC Lithium.

Before we begin, let me remind you that today's discussion will include forward-looking statements that are subject to various risks and uncertainties concerning specific factors, including but not limited to those factors identified in our release and in our filings with the SEC. Information presented represents our best judgment based on today's information. Actual results may vary based upon these risks and uncertainties.

Today's slide presentation is available on our website. With me is Tom Schneberger, Chief Operating Officer of our Lithium business, and he will join me for the Q &A at the end of this presentation.

As you all no doubt know, FMC intends to separate FMC Lithium into a standalone publicly traded company later this year, reflecting the fact that a high-growth EV-focused material science company has limited overlap with a leading agricultural sciences company. FMC Lithium produces high performance Lithium-based products, and has done for more than 7 decades. While there are plenty of companies today that are investing in lithium extraction assets, or at least the promise of operating lithium extraction assets, FMC Lithium is one of only a very small number of companies that has the capability, the reputation, the track record and the know-how to produce the high-value lithium-based performance materials that are driving the growth in demand for lithium today and over the coming decades.

In 2018, 90% of FMC Lithium's revenue will come from lithium-based materials that are sold based upon their performance characteristics. Put another way, we sell very little lithium carbonate and, like everyone else, we don't sell any LCEs. FMC Lithium is one of less than a handful of companies today that can supply Lithium Hydroxide with the performance characteristics demanded by customers in this part of the EV value chain, and today I hope you leave with an appreciation as to why this incumbency advantage is so important. I will focus today on why the market is growing, how quickly it is growing, and why performance-based lithium products will be at the heart of this growth.

Let me start with a little history, and please bear with me. This is not intended to be a gratuitous walk through a storied but ultimately irrelevant historical story, but is in fact a key element of FMC Lithium that helps explain why we are where we are, and why it is a position built on some very real and sustainable competitive advantages.

Slide 3 sets out a simplified timeline of our history. Our predecessor company was in fact founded by the US government in the 1940s as part of the Manhattan Project. Following this somewhat singular initial objective, we spent several decades figuring out how to commercialize lithium. To do that, we built upon three basic legs; first, shown here in green text, we developed various lithium derivatives for use in multiple applications. We started with lithium hydroxide and carbonate and then into butyllithium. To do that, we built production facilities for hydroxide, for chloride and for BuLi. Lithium carbonate was always a raw material, an input for us. So we built our resources and production sites in North Carolina, in Argentina, in the UK, India and China, over many decades, in each case focused on supporting our customers and on producing the materials needed to meet end market demands. These resources are shown in blue text on this slide. But driving all of this has been a focus on the applications for lithium products. And this has always required that we innovate. We have shown just two examples here; partnering in the development of the

first Lithium-ion batteries almost 30 years ago, and developing technology in stabilized lithium metal powders that continues to be a focus today. Not shown on here are the multiple patents we have registered, and the revenue we continue to generate from cathode material producers based on licenses for technology we developed over the last few decades. And this record of innovation continues today, as we work with multiple customers and R&D labs to develop new applications for our lithium products. We will talk more about the importance of nickel-rich cathode technologies shortly, but bear in mind that we have been sharing know-how and expertise with the battery industry on exactly this subject for many years.

However, progress is never linear, as many of you already know. Moving onto slide 4, and you can see that FMC's opportunity today is in many ways very different to our recent past. It is true that the EV wave has been a long-time coming; while many have touted it as just around the corner for many years, the financial record suggests that it did not exactly drive the lithium industry to particularly

great heights. FMC Lithium has always been cautious about the when and the how of EV growth; while we have always believed it will happen, we have been realistic (or perhaps pragmatic) about this future opportunity. For several years we have focused on maximizing the returns of our lithium production; essentially moving our production to those products that drive the highest revenue per LCE. For us, that has always been Butyllithium, Lithium Metal and Lithium Hydroxide. Perhaps we have in fact been more lucky than good, a compliment I understand one market observer recently sent our way; but the reality is that our focus on higher value added products, rather than just throwing capital at producing more lithium carbonate than the market growth warranted, is looking like it was in fact the right strategy. While revenue barely grew between 2012 and 2015, it has since accelerated to grow at over 20% a year, a trend we see continuing into the future. While we chose not to invest in increasing capacity in a business that was growing so slowly, and where pricing trends were somewhat anemic, today we find ourselves very much

committed to a significant investment in our lithium hydroxide business. You can see the benefits of this approach starting to play out in 2018, as our recent investments in doubling our hydroxide capacity are starting to pay off. As a point of reference, the price we are achieving for each LCE is around 50% higher than today's market price for lithium carbonate itself.

Turning to slide 5. We have committed to expand our resources in Argentina by threefold between now and 2025. We have a world class operating asset in Argentina, and strong support from local authorities for our operations there. This resource is a key element of our integrated business model; today, we convert almost all of the lithium carbonate and chloride we produce into downstream performance products. Our investment strategy will not change that fact. Our expansion plans give us the ability to produce over 60,000 tons of lithium hydroxide, fully served by the lowest cost raw material position in the world, while also supporting our lithium metal-based business via our world's lowest cost lithium chloride

capabilities. And operating low-cost resources is critical to us; while many tout the fact that it is cheaper to produce hydroxide from hard rocks than it is to produce carbonate from hard rocks, it is absolutely cheaper still to use our Argentinian carbonate to make hydroxide at either our US or China facilities. And for those of you that are counting, the total capital required between now and 2025 to deliver this plan is less than the cumulative EBITDA projected over the same period.

Now, while I am sure you are all impressed by our plans, I am equally sure you are asking where all this lithium is going to go? After all, the historical financial data I showed you hardly suggests that this degree of expansion is needed. But of course, just like in your industry, historical performance may not be the best predictor of future performance. What we at FMC call a “once in a generation change” is coming; namely, the replacement of gasoline and diesel-powered vehicles with electric vehicles. The rest of my presentation today is focused on exactly what this change will mean for FMC Lithium.

Slide 6 gets to what I know all us number-geeks really care about; what does all this mean? To set expectations appropriately, I have no intention of getting into the supply-demand debate that seems to prevent a more commercially-realistic conversation happening. I am happy to take questions on the supply side later, but be warned that I don't subscribe to the supply-demand thesis that is dominating investor chatter right now. Anyone who is looking for a rebuttal to the "over-supply" thesis that some of the more reductive analyses are concluding is going to be disappointed today.

Slide 6 sets out the very simple modeling that we do to assess what future demand looks like. Those of you that have already done this work will recognize what I am referencing; for those that haven't you can see that it isn't a particularly daunting task. First question is "how many electric vehicles will be sold?" For us, it's only the pure EVs that count, given the relatively low lithium content in plug-in hybrid vehicles, and I will focus on that measure

today. To be doubly clear, none of our numbers include plug-in hybrids. The second question to ask is the size of the battery pack. Obviously, the bigger the battery, the more lithium will be in the vehicle. And the third question is how much lithium is needed to produce each kilowatt hour of battery capacity. Again, none of this is rocket science, and most demand models use this basic formula. The final variable that we care about is what form of lithium is needed. And to answer this question, you need to look at how much of future technology will be able to use lithium carbonate and how much will have to use lithium hydroxide. Today, the answer to this lies in the answer to the question - what share of the cathode materials used will be high nickel content materials?

So let's dive into each of these four factors, one at a time, starting with EV penetration.

This slide is intended to show FMC's own model as to what is going to happen with EV sales. The left column in each year shows the sales by OEM, and the right side

calls out the geography that matters most, China. I personally draw two conclusions from this slide; first, the sales are not dependent on any one manufacturer, with a multitude of producers committing to an extensive EV portfolio. And second, what most of us in this room see and feel, what our own personal preferences are with regard to cars, isn't frankly relevant to this conversation. China is, and will be, the center of the EV industry. And if you were to break the Rest of the World down further, you would see Europe as the next largest. While you may not like the idea that government policy or environmental regulation are driving this change, the reality is that they are. FMC's model is constructed in-house, and takes every single model announced by the industry and forms a view as to likely future sales. For those of you ready to accuse us of excessive optimism, just bear in mind that, for example, our model assumes that the sales of the two largest EV manufacturers is just 50% of what they have publicly announced as their targets or expectations for 2025.

Slide 8 talks to our assumption as to average battery pack size. Let me shortcut the conversation here to state that most commentators generally agree that it will be in the 50kWh range by 2025. Regulations, policy and consumer preference all demand higher range, and this means you need higher battery capacity. The reality is that the next generation of cars are all north of this capacity, but that the effect of smaller Chinese-focused commuter cars brings the average down to this level. Even with this effect, a quick glance at the new Chinese incentive programs being introduced this year will show you that there are large financial incentives for OEMs to migrate to vehicles with longer range and the latest cathode technologies.

Now onto perhaps the least understood part of the demand model, and that is lithium needed per kWh. Let me start with an important statement; the question asked by every new lithium ion battery technology is “how do we get more lithium into the battery?” So the trend is very much to use more, not less, lithium in each vehicle. But to put some science and practical experience behind this, on

slide 9 is a representation of what we see today. We have seen many commentators review the scientific literature and state confidently that the end game is around 0.6kg of lithium per kWh. However, that is not what we see today, nor is it what our customers expect to see any time soon. Let me take this bridge one step at a time.

The excess lithium reflects the reality of what is needed to ensure that the working cathode actually has the available lithium needed to meet its stated capacity. For example, after the first time a lithium ion battery is charged some of the lithium becomes no longer available for shuttling between the electrodes. Therefore manufacturers add extra lithium to counteract this. Next are yield losses. Just as no other chemical manufacturing plant runs at 100% of theoretical yield, neither does the battery manufacturing process through each of its steps, from cathode material manufacturing, through electrode coating and onto cell and battery assembly. Third is true loss; lithium that is lost today due to waste or rejected quality

tests that almost certainly will be retained in the future as manufacturing practices evolve.

Beyond this, we see additional lithium in the form of excess capacity that most battery packs have designed in. Let me try and explain what this is. First, loss of effective capacity is a well know phenomenon in lithium ion batteries. When an OEM offers an 8- or 10-year warranty, they need to make sure the battery will perform at the stated level for this period. The reality is that battery packs have spare capacity that can be released, via software, if the battery degrades with time. If you are looking for examples of this, let me give you a couple. First, Tesla offers an after-market option, via software download, to release more of the battery capacity from the existing installed battery. And second, the available capacity for many EVs can be temporarily extended when needed; note how Tesla drivers found extra range suddenly available when fleeing the Florida hurricanes last year. The actual capacity of an EV battery pack is often 30% or more than the badge on the trunk might state.

Slide 10 shows what this means for the lithium industry. Let me attempt to simplify what this slides says; while high-nickel content cathodes require less lithium per kWh than low-nickel content cathodes, they still need more than the older LFP technologies. Allowing for the fact that the 100g of waste we see today will be recovered, the mix shift you see here will result in the effective use remaining in the 1kg per kWh range that our model assumes.

The final factor that we care about is the form of lithium needed. Today, most lithium used in energy storage is lithium carbonate; provided the specification is met, then it's simply a cost decision. However, high nickel content cathodes, and by that I mean NCA, which is around 90% nickel, and NMC 8,1,1, which is over 80% nickel, have to use lithium hydroxide. Carbonate simply does not perform in the cathode material manufacturing process. Slide 11 shows that, in order to meet the higher vehicle ranges demanded in the future, most OEMs have a roadmap to migrate to higher nickel content cathode materials.

Slide 12 shows what this means to us. Today, carbonate is used in most energy storage applications. But by 2025 we see this shifting such that hydroxide will be the primary material in the EV industry. That's not to say that carbonate will no longer be used - we foresee growth in the 17% or so range for non-hydroxide forms of lithium. But it is increasingly hydroxide that our most important customers seek in their processes.

So let me conclude with a short review of what the market expects today. As you know, there are some real bears out there. Slide 13 shows this pretty clearly. But if you stand back and look at this, you will see that they are perhaps not so bearish after all. FMC is proud to be the most bullish today, after many years of self-inflicted skepticism. But you can also see that there isn't exactly a negative demand view out there; as analysts start to do the work around lithium content, and the rate of penetration of BEVs compared to PHEVs becomes clearer, the demand models are far more likely to

converge than diverge. While I don't want to single out any one party here, it is instructive to me that the poster-child for lithium bearishness has a total supply expectation for 2025 of approaching 800kT; if they were simply to accept the need for 1kg of lithium per kWh rather than their model of around 700 grams, they would find an industry that has roughly the same supply-demand balance as we saw in 2017. And that doesn't even reflect the need to model the form of lithium, or the LCE fallacy if you will, that underpins such a simplistic analysis.

Let me conclude by stating what I hope by now is obvious. FMC believes that the lithium industry is poised for significant demand growth, and that we are well placed to take advantage of that growth. Lithium is sold in very specific forms, and models that show supply and demand in LCE format are not helpful in forecasting the impact on companies in our industry. FMC Lithium's legacy, its customer relationships, its technology base and its production capabilities leave us with a huge incumbency

advantage as we enter a once in a generation opportunity for our industry.

Thank you, I'm happy to take questions.