Will Lithium Batteries Power Tomorrow's Military?

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The title of today's *Markets %26 Money* is not exactly in the spirit of this holiday.

But, nevertheless, I hope you find this essay enlightening. And, potentially, exceedingly profitable.

Geopolitically, the world has gotten even more complicated — and dangerous — over the last two weeks.

As investors, it pays to try and figure out who the winners and losers might be in a world of escalating military tensions.

It is my opinion that the winners will be Gigastocks.

(If you haven't read up on my three latest Gigastock 'hyper-growth' plays, you can do so here.)

But what do stocks tied into the lithium-ion battery boom have to do with Syria, and a potential conflict between the US and Russia?

I'll explain…

Rising global tensions and 'white gold'

Most people only see lithium as a 'fuel' for electric cars. That's what's been getting all of the mainstream attention anyhow. That and the growing potential for home (and business) battery storage.

While those are both going to drive increased demand for lithium over the next few years, there's a lot more to the story which you don't hear much about.

You see, 'white gold' has attracted the interest of the world's leading military powers. Nations with a combined military budget of roughly US$1.7 trillion per year. And it's already starting to transform the military, a trend which I expect will grow even more rapidly than rising global tensions.

To give you an idea why, let's turn back the calendar to a few historical 'hot' periods…

Regardless of your thoughts on the military, the fact is that military spending has driven innovation throughout history. For example, the discovery of penicillin — one of the world's first antibiotics — marks a true turning point in human history.

Dr Alexander Fleming discovered penicillin in September 1928. Fleming was a bacteriologist. He returned from a summer vacation one day to find a messy lab bench…and a good deal more.

The discovery was ground-breaking…but it would be another 14 years before people realised that.

Penicillin didn't become, well, penicillin, until during the Second World War. Anne Miller became the first civilian patient to be successfully treated with penicillin in March 1942. She was lying near death at New Haven Hospital in Connecticut, after miscarrying and developing an infection that led to blood poisoning.

Without military spending — and medical experimenting — penicillin's true 'discovery' may not have happened until decades later.

There are plenty of other military spending success stories — i.e. the solid fuel rocket, radars, and the space race between the US and USSR.

And there's good reason to believe a similar story could happen with lithium-ion battery technology.

Remember, well over a trillion dollars are spent on maintaining and developing military technology, equipment, and personnel worldwide each year. Countries compete against each other, trying to gain any advantage possible. That costs money…a lot of it.

Today, multiple countries are building their militaries and spending billions more each year.

ABC Australia reported on 1 March:

> '*United States President Donald Trump has pledged to pump a further $A70 billion into the country's world-leading defence budget, in what he says will be a "message to the world in these dangerous times".*
>
> '*The United States already dwarfs the rest of the world in military spending — last year, the US spent $US622 billion, followed by China with $US191 billion, while the UK, India, Russia, and Saudi Arabia all spent about $US50 billion.' Australia's defence budget was about US$27 billion, making it the 11th-biggest spender.*'

Saudi Arabia, one of the richest oil countries in the world, allocated a whopping 14% of its gross domestic product (GDP) on defence last year. That's double what it spends on health and social development.

It has been throwing its weight around recently, engaging in a war in Yemen and joining forces with Turkey against Syrian President Bashar al-Assad.

While Saudi Arabia might not have the highest incentives to develop alternate energy sources to oil, their regional and global adversaries certainly do.

This is just the start. Military budgets are likely to skyrocket in the years a…

The Middle East, long a global hot spot, has only become more volatile and dangerous in recent years. And that frightening trend is only ramping up.

One wrong move…

One wrong move by any of these major players could see this 'regional conflict' erupt into something much bigger and uglier. I certainly hope that doesn't happen. But as far as lithium and the world's major military powers go, it doesn't much matter either way.

There's already massive growing resentment between many of these countries. And as geopolitical tensions continue to grow in the Middle East and around the world, military spending should increase as well.

That's one reason why countries are investing plenty of money on complex technological equipment, and new energy sources to power them.

Lithium military technology in development

Lithium-ion batteries are a massive new trend, and the military wants in.

It's all about moving man and machine around the globe and around the battlefields of tomorrow. Without needing to haul around giant tankers of fuel. Or giving your position away with awkward plumes of smoke.

And while that may sounds like a futuristic dream, as the battery's effectiveness and efficiency rapidly improves, it could become a reality faster than you may believe. Similar to the development of the 'Turing Machine' during the Second World War, lithium-ion battery technology could advance rapidly, with billions of dollars in investment from international militaries.

The lithium-ion model is the most advanced battery type. For that reason, militaries are more likely to focus on improving and utilising the existing technology rather than developing new battery prototypes. That's likely to be left to the research departments at universities and private companies around the world.

Take the Japanese Self-Defense Forces, for example…

IHS Jane's Defence Weekly published on 27 February (my emphasis added):

> ‘***Japan will likely become the first country in the world to equip dieselelectric submarines with lithium-ion batteries.*** *GS Yuasa, a Kyoto-based developer and manufacturer of battery systems, said in a 21 February press statement that such batteries will be mounted on two Soryu-class boats currently in build for the Japan Maritime Self-Defense Force (JMSDF).*
>
> ‘*According to Jane’s Fighting Ships, eight Soryu-class boats are currently in service with the JMSDF.*
>
> ‘*Four others are currently under construction, two of which, SS 511 and SS 512, are expected to be commissioned in 2020 and 2021 respectively, and will be fitted with lithium-ion batteries in place of lead-acid batteries and a Stirling airindependent propulsion (AIP) system.*
>
> ‘“*At this moment Japanese submarines use lead-acid batteries as a source of power, but submarines being produced since the fiscal year 2015 will use lithiumion batteries instead,” said the company.*
>
> ‘*GS Yuasa said it will start producing the batteries for the two boats in a special factory in Shiga Prefecture in March 2017, with deliveries expected to begin in August 2018.*’

Granted, this is just a handful of ships…for now. But the Japanese see a massive future for lithium-ion batteries. The main issue for military applications at the moment — similar to electric cars — is the battery life. But with technology naturally increasing along with military expenditure, that scenario could change quickly. For that reason, while it appears like a long time, the 2020–21 lead-time could be brought forward significantly.

The Japanese aren’t alone with their lithium-ion ambitions. Yahoo News reported on 7 March (my emphasis added):

> ‘*Arotech Corporation (ARTX) today announced that its U.S. Power Systems Division, UEC Electronics, received contract awards from both government and commercial customers totaling $8.3 million over the last three weeks.*
>
> ‘*In one of the recent awards, UEC has been funded $3.4 million to work with US Army CERDEC on an Energy Storage System (ESS) for Tactical Microgrids.* ***Building on their experience in the design of hybrid power systems for military applications, the ESS will utilize both Lithium-Ion ultracapacitors and Lithiumlon battery technologies with intelligent control to enable the microgrid to handle high transient power spikes and to allow time for generators to turn on when new loads enter the grid****, thereby decreasing the need for spinning reserve (generators running below capacity and at less than peak efficiency).*’

This hybrid power system has broad applications. The US Army wants to keep pace with increasing power and energy demands, while lessening the logistics demand for fuel-based power sources. That means more lithium and less crude oil to power the military.

That’s the future folks.

The military side to the Gigastock Phenomenon

So what does all this have to do with my Gigastock ‘hyper-growth’ stock thesis?

Well, while Elon Musk and Tesla capture much of our attention — my own as well, admittedly — military lithium-ion technology is quietly advancing in the background.

Global militaries tend to keep most of their ‘trade’ secrets to themselves. Nevertheless, the intentions speak loudly.

I believe the world is rapidly moving closer to lithium-powered military technology. For that reason, expect an enormous wave of military expenditure towards improving and implementing the lithium-ion battery technology.

That could see the world move further away from fossil fuels and towards battery-powered engineering for military machines.

Militaries are already developing lithium-ion battery-powered technology. If that’s not a strong signal that they are serious about a replacement for fossil fuels, I don’t know what is.

The lithium-ion battery could power armoured vehicles for weeks before recharging in the future. Do you think any fossil-fuel powered military vehicle could do that? Of course not.

I outline the short-term reasons why you could possibly expect 10-plus-bagger gains from Gigastocks here. And I also reveal my three highest-conviction recommendations.

But there is a longer-term case for owning these stocks as well.

And the message behind this argument is simple… You know about the growing electric car market. You know about the growing home energy storage market. And now you know the world's leading militaries are actively interested in making use of lithium-ion technology.

Exactly how interested largely remains concealed behind the veil of national security. But one thing is clear: Tomorrow…and for the next few years…the growing demand for lithium looks set to outstrip new supply.

Regards,

Jason Stevenson,
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