21 June 2024

The Company at the Intersection of Three Megatrends

Dear Investors,

The US is currently in the midst of an extraordinary construction boom. This boom has been driven by three prominent trends which continue to pick up substantial pace – (1) federal government incentives and re-shoring of manufacturing capabilities, (2) the continued adoption and advancements in artificial intelligence, and (3) the renewable infrastructure roll-out. These trends have played out quite clearly in equity markets in recent years, with many companies displaying rapid growth in their share prices. There is one company however, with significant exposure to all three megatrends and whose share price is yet to price in the substantial growth opportunity ahead of it.

Hammond Power Solutions (Hammond) produces electrical equipment mainly in the form of transformers. It sits squarely at the intersection of some of the major megatrends that are expected to continue throughout this decade. This article will outline why we hold strong conviction that this company will continue to grow at a strong pace. We first consider in depth why we believe that these megatrends will continue for years to come. We then explain why we believe Hammond will benefit from these trends. Finally, we highlight why we have considerable conviction in this thesis from a valuation perspective.

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Three Structural Megatrends

Hammond is riding on three megatrends that will be around for years to come. These trends are intricately linked. For instance, the boom in construction of datacentres across North America is being driven by the rise of AI. As Graphics processing units (GPUs) are energy-intensive, the main problem these datacentres currently have is a lack of secure energy sources. Given the trend towards renewable energy, new datacentres are increasingly being built near sources of green energy. In this section, we take a look at why we believe these so-called megatrends are likely to continue throughout this decade.

Federal Government Incentives and Re-Shoring of Manufacturing Facilities

If we were to sum up the key fact or judgment in one idea, it would be that, since the Inflation Reduction Act was passed, the amount of mega construction projects that have been announced has run at a rate 300% faster than before Covid. Since January 2021, to-date, there have been US$933 billion worth of announced projects. Growth in announcements has continued unabated. Of these announced projects, only 18% of them have commenced their build. 72% of the projects remain in planning stage. For most of these projects, from the date of announcement it takes around three to five years for revenue recognition. 55% of the projects announced have federal government incentives from either the Inflation Reduction Act, CHIPS Act or Infrastructure Investment and Jobs Act. These laws have been passed and even in the event of a Trump presidency, will be difficult to overturn because of the filibuster rule in the Senate. In other words, there's a long runway of onshore construction projects to come.

Eaton Corporation's CEO, Craig Arnold, recently summed it up well, saying, "the primary conclusion is we've not yet seen a significant impact from the large step-up in the number or size of mega projects, but it's coming." For Eaton, mega projects currently consist of about 3% of Eaton's total revenues, but they represent 16% of their negotiations and 6% of their orders. Hence, Arnold concludes that "most of the impact from the significant step-up in mega projects is still ahead of us."

In this regard, the fiscal stimulus in response to Covid is still having a stimulatory effect on economic activity and job creation. In a recent interview, Starwood Capital CEO, Barry Sternlicht, pointed out that normally when new homebuilding activity cratered like we've seen so far, a million or so American construction workers would be out of a job. This retrenchment would form one of the initial income shocks kickstarting a recession. But in the post-Covid world, housing construction workers have simply been transitioning into commercial building jobs.

All of these new mega projects need electrical components. Typically, the electrical content of these mega projects will make up anywhere between 3% to 5% of total project spend.

Artificial Intelligence

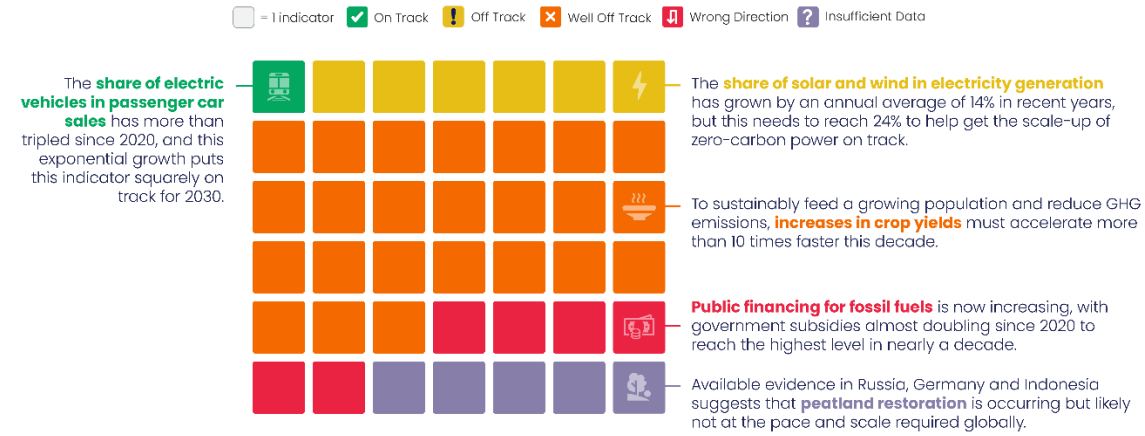
The second megatrend is artificial intelligence. By now it's become abundantly clear that AI will eventually change the way many things in our world operate. During the Industrial Revolution, we replaced human muscle power with machines. At its core, the AI revolution seeks to replace human thinking power with machines. With only the information we're privy too, we're seeing major advances in approaches to enabling machines to build and use "knowledge." We're sure that advancements in the technology exceed what we're privy to.

Large language models (LLMs) were a major step forwards towards generalised intelligence because it allows the machine to communicate with the human. While Deep Blue and AlphaGo could compute and analyse within extremely structured environments, LLMs allow for computation in less discrete and rule-based environments. This development has increased the ability of machines to automate, compute and analyse. Increasingly, NVIDIA, Google and Amazon are embedding AI into physical applications. The race to create a general intelligence is on.

To power the development of these technological advancements, the world needs a lot more accelerated compute power. There's currently around US$1 trillion of CPU infrastructure in the world that can't do the accelerated compute required for AI. In the next 5 to 10 years, we believe nearly all these datacentres will be upgraded in speed, in addition to new datacentres being built. Datacentres are energy-intensive and the management of electricity and climate is one of the primary concerns for operators. Having the right electrical equipment can significantly reduce operating costs, which mainly take the form of energy.

Renewable Energy

The third megatrend is the renewable energy infrastructure rollout. According to Climate Action Tracker, the world is a long way from achieving the goals set out in the Paris Agreement, with only one in 42 indicators on track to reach its 2030 target:



Source: Climate Action Tracker

As Bill Gates sets out in *How to Avoid a Climate Disaster*, he enumerates the challenges ahead:

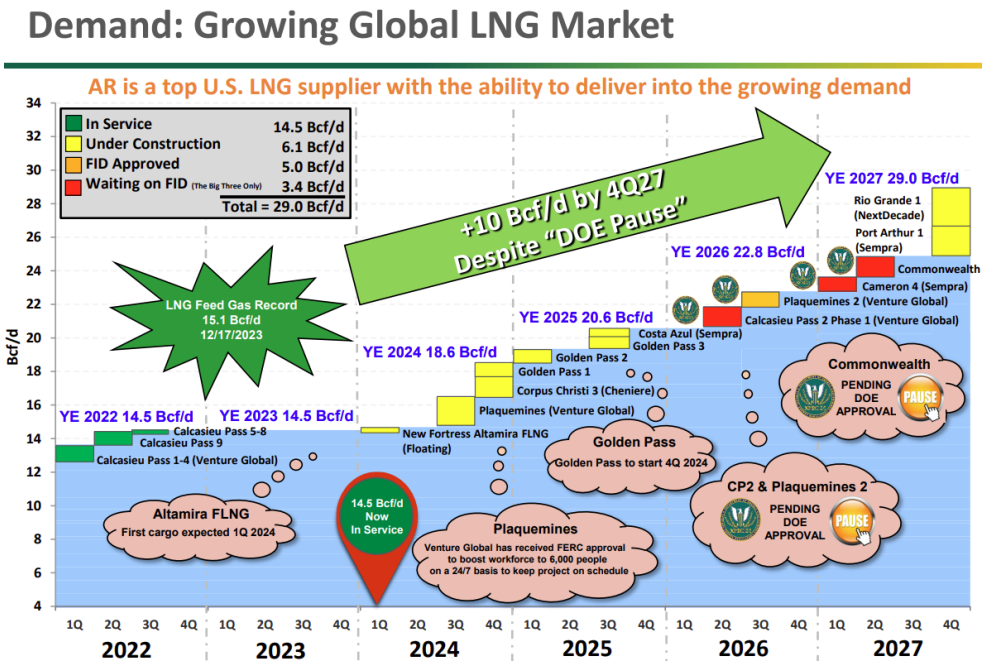
> *"To completely decarbonise America's power grid by 2050 will require adding around 75 gigawatts of capacity every year for the next 30 years. Is that a lot? Over the past decade, we've added an average of 22 gigawatts a year. Now we need to install more than 3 times that much each year, and keep up the pace for the next 3 decades."*

In 2023, according to both the International Energy Agency and US Energy Information Administration, it was estimated that only around 37 gigawatts of renewable energy were added in the US. Solar was the most common form of renewable energy addition, making up 80% of the total. This was followed by wind which made up nearly all of the rest. This is far below what's required to decarbonise the grid.

And in relation to how the transition to renewable energy will require massive amounts of electrical infrastructure upgrade, Gates writes:

> *Here's another complication: As our houses rely less on fossil fuels and more on electricity (for example, to power electric cars and stay warm in the winter), we'll need to upgrade the electrical service to each household – by at least a factor of 2, and in many cases even more than that. A lot of streets will need to be dug up and electrical poles climbed to install heavier wires, transformers and other equipment.*

One part of the transition to cleaner energy is through the use of gas as a transition energy. One of the problems with renewable energy is that the sun doesn't always shine and the wind doesn't always blow. Until batteries can efficiently store a lot of energy (which is a long way off because to store enough energy to power a city like Tokyo would require 14 million batteries, which is more storage capacity than the world produces in a decade and would cost over $400 billion to build), we need a source of energy that isn't weather dependent. Gas and nuclear can play that role. As we've learnt from the war in Ukraine, the developed West needs an increasing amount of US gas to fill Russia's void. This will be no easy feat and will take a lot of time because Russia is the second largest producer of natural gas in the world and 4th largest LNG exporter, accounting for around 8% of global LNG supply. There's a long way to go for the West to replace it. Even after Biden's "pause" on new permits for LNG export facilities, the US is set to increase its export capacity by around 100% over the next 3 years:



Source: Antero Resources

To sum up, it's clear to us that a lot more transformers, switchgear and other electrical products will be needed to support AI infrastructure, onshoring of manufacturing facilities and the transition to renewable energies. We can further triangulate this from recent comments made by various other large companies (the larger the company the better the signal) operating in the same field:

- General Electric, whose products help to generate approximately 30% of the world's electricity, noted on their recent quarterly earnings call that orders for their products were up over 20% year-over-year led by stronger onshore energy equipment demand. North American equipment orders at their Electrical Grid division were up more than 70% and global onshore equipment backlog increased by around 40% year-over-year.
- Schneider Electric, the other major global player in the industry, reported record revenue in 2023. Energy management revenues were up 14% year-over-year, and management noted that "Of course, we're starting off with digitisation and AI, which is so important for the market and with the deliveries that we have with the

most complete and best electrical and cooling infrastructure that is out there…Climate change. January was the first time in history that temperature went up by 1.5 degrees. So it's urgent need to drive it."

- Quanta Services noted in its latest earnings call that "our Electric Power Infrastructure Solutions and Renewable Energy Infrastructure Solutions segments drove our revenue and profit growth, reflecting ongoing capital deployment into grid modernisation and hardening. Power grid expansion and construction of new renewable generation and other necessary investments needed for North America's emerging energy transition."

A lot more transformers will be needed to support the megatrends we've described.

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Hammond Power Solutions

This leads us to Hammond Power Solutions, a manufacturer specialising in dry-type transformers designed for commercial applications. Transformers play a crucial role in transferring electrical energy between circuits. This process enables the conversion of electrical current voltages, facilitating efficient transmission. Typically, electricity is generated and consumed at varying voltages, necessitating voltage conversion for transportation. To minimise losses, electricity is often transmitted over long distances at higher voltages.

We have witnessed signs of the three megatrends discussed above having an increasingly large impact on Hammond's earnings growth, as can be highlighted below:

- In their third quarter earnings report, Hammond stated that "we continue to see strong demand across our portfolio, especially in custom power units that serve renewable and datacentre applications. Hammond is in a great position to capitalise on the growing demand for clean and efficient energy solutions."
- Hammond's backlog of orders has been growing at around 40% year-over-year. The company noted that "as the backlog continues to be high, product lead times are extended and the timing of shipments in the backlog becomes more uncertain…Hammond remains cautiously optimistic given the many macro-economic trends favouring the electrical industry, including onshoring, public and private investment in renewable energy, infrastructure, datacentres, electrical vehicle charging, investment in mining, oil and gas production and semiconductor production – all of which the company participates in." On the last quarterly earnings call, management noted that they were actively turning down business. The last company we came across that said that was SuperMicro Computer.

We have conviction in our judgment because the proof has been in the pudding. The thesis can be written in the following short-form of premises, inferential leap and conclusions:

Premises 1: The megatrends of AI, renewable energy and onshoring will continue at a fast pace.
Premises 2: The megatrends will require greater amounts of transformers.
Conclusion 1: Hammond's earnings will grow at a substantial pace.

The inferential leap between the premises and conclusion is strong because we've seen it empirically. We've outlined why we believe both premises are true. The main judgment we're required to make in this instance is how long the trend may last for. In our view, these megatrends will last for a long time because we're well behind in the infrastructure build-out that's required to meet the Paris Accord climate goals, the ramp-up in data centres is just beginning and because many of the onshoring projects are yet to reach production. If we're wrong on our forecast of one megatrend, the other megatrends are likely to be strong enough to validate the truth-value of our conclusion. In this way, our conclusion isn't particularly sensitive to variability in individual inputs. These are the reasons that give us great conviction in this investment thesis.

The last question for us is valuation. What do we have to pay for a company that's set to grow revenues 50% year-over-year and profits by 50%+ year-over-year over the next year and at elevated rates thereafter? Given the expansion projects in train, we estimate that the business will probably be making an annualised profit of around CAD$100m per year by the end of 2024 compared to an enterprise value of around CAD$1.0 billion at the time of

writing. 10x 1-year forward annualised earnings is far from demanding given the growth we're expecting. We believe the trend has a long way to run and that the current valuation of HPS doesn't reflect the likely growth ahead.

Kind Regards,
Fawkes Capital Management

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