
exponential energy
— FORTUNES

The 1,000% disrupters:
my top three picks to
play Biden's \$1 trillion
Green New Deal



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The 1,000% disrupters: my top three picks to play Biden's \$1 trillion green new deal

Dear reader,

Congratulations on your decision to take action and join *Exponential Energy Fortunes*.

As you know, I don't think your timing could have been better.

As I write, we are just days away from what I believe could be the biggest catalyst for clean energy I'll ever see in my lifetime.

And the very first of three "1,000% disrupters" stocks I'll brief you on today has major sensitivity to political catalysts in recent history...

Green New Deal Profit Play #1: the stock to send 20+ million American kids back to school... on electric school buses

On the first day of his presidency, Joe Biden announced a 100-day plan to reopen schools. And now, 99% of schools have re-opened, which means that 26 million American kids will be back in classrooms.

To move all these boys and girls between school and home you need a lot of buses. 550,000 to be exact.

In fact, school buses are the United States' largest mass transit system.

But this year, some of these buses will be a little different.

President Biden is spending billions of dollars to replace every single school bus with a zero-emission one.

And this fleet upgrade will be completed within five years.

If you're an investor, this should be music to your ears.

Because with a \$200,000 minimum cost per electric bus... this is a \$110 billion bonanza.

You read that correctly: there's \$110 billion up for grabs for the companies that will supply the new buses.

And I think I've uncovered the company that could benefit the most from this policy.

...continued on next page...

I believe that the company is set to dominate the upcoming electric vehicle (EV) school bus manufacturing boom – and it is already ramping up capacity.

To my mind, it has some huge competitive advantages in the marketplace that put it above its competitors.

It's a high-risk play but, even by our standards, this is very exciting stuff.

Last quarter, it announced it has already secured the largest single order of electric school buses from any school district in the United States.

It's not an exaggeration to say that this company's EV school buses could soon be seen in almost every major city and town in the United States...

But right now, it appears as if most investors simply don't realise that the company even exists.

Which is *great* news for us.

There is a knowledge gap here – and that's our window of opportunity.

So without further ado, let me introduce you to Blue Bird Corp (NASDAQ:BLBD).

Your first recommendation: Blue Bird Corp (NASDAQ:BLBD)

Blue Bird is looking to become the dominant manufacturer of EV school buses in the United States.

It's hoping to achieve that feat from a running start.

That is because rather than being a start-up or a special purpose acquisition company (SPAC), it's a 94-year-old company that's already the number one school bus manufacturer in North America.

And now, it's moving aggressively towards alternative fuels and electric motors. To me, that makes it the best investment in the sector, as it has developed a number of competitive advantages along the way.

I'll get into those in a minute. First, though, is a brief overview of the business.

Blue Bird manufactures school buses – that much is clear.

It sells four classes of school buses, and it sells four major fuel types as well – petrol and diesel, propane and electric.

It's the electric segment that we are most interested. It's currently the smallest, but it's

growing fast, and is the future of the company.

In terms of its fuel mix, it sells only around 10-20% diesel buses, while most competitors in the United States are at around the 50% mark.

It's much more focused on its alternative fuels business.

At the moment this is mostly to do with propane, a lower emission, cleaner burning fossil fuel than petrol or diesel.

It's not the worst solution in the world, and Blue Bird is clearly a market leader in selling propane school buses with 76% market share of US propane bus sales in 2020.

But it's the EV segment that we're really interested in.

Blue Bird is the only manufacturer that has produced and deployed every type of electric-powered school bus: Types A, C, and D. These are the two, large, long yellow school buses that you traditionally see in North America, plus a smaller version.

Having launched its electric line in 2018, it already holds more than 50% share of the US and Canadian market for electric school buses.

Last quarter, Blue Bird announced a backlog of 4,800 orders, up over 300% from the 1,100 backlog it reported in Q1/2021.

And just before that, it delivered the first operational DC fast charge V2G (vehicle-to-grid)-capable school bus. V2G is a key emerging technology that I believe will have a growing presence in the EV market.

It basically means that your vehicle can act as an energy storage unit as well. By allowing two-way flow of current, vehicles can send electricity back to the grid, rather than just charging off it.

So, if there's a blackout, you can power your home with your vehicle.

Or, more commonly, the vehicle will be able to generate revenues by selling back to the grid when demand (and therefore price) is high. At a fleet level, this is a key technological addition to an electric vehicle, especially one with a large battery like a bus.

This therefore allows operators to store clean electrical energy in the bus, and generate revenue by reselling unused energy back to the grid during peak demand.

Being the first company to get a V2G capable school bus on the road highlights a strength of Blue Bird.

The company may be almost 100 years old, but that doesn't mean it's resting on its laurels or relying on what has served it well historically.

Instead, Blue Bird is innovating vigorously, with the intent to transform itself radically for

the new electric age.

And one interesting development for the coming years, hinted at in a note from the CEO in an annual report, is that Blue Bird will offer its electric chassis to other segments of the vehicle industry.

So freight/trucking, or coach builders, for example, could all put different bodies on top of a Blue Bird chassis.

And then, there's President Biden's plan to electrify thousands of school buses in the United States, as mentioned above.

But it's not just Biden's America that could move the needle for Blue Bird. Quebec, Canada's second-largest province by population, is only purchasing electric buses going forward. And Blue Bird is one of only two companies authorised to sell electric buses there.

As a reminder, at roughly \$200,000 per bus, it's an enormous opportunity for Blue Bird to leverage its existing leadership to benefit from this multi-billion-dollar opportunity.

A “start-up” with an existing defensive moat

So it's already a leader in the small but growing electric school bus space, but that only forms a tiny part of the overall business. Why not go for a pure play?

To my mind, its long and impressive history of operating in the school bus sector gives it some key competitive advantages over a smaller start-up.

Competitive advantages include:

- An existing client network of dealers
- Existing safety record and standards
- Experience with compliance and regulatory framework
- Brand recognition for trust, and safety – especially important for parents and schools
- Proven track record in selling school buses at scale
- Big name partnerships with the likes of Ford and Cummins.

With history comes trust, comes long-standing customer relationships, comes experience with safety regulations, and consumer demands.

The experience means that Blue Bird knows how to deal with all the little technical, operational problems that are associated with running a school bus company.

It's one thing to create an EV product. However, it's quite another to build it out at scale, as Tesla has shown. Tesla is slowly getting there, but it has provided a tale of woe – of cars built in tents, shoddy workmanship, accidents, missed delivery targets, and the rest.

Blue Bird has the opposite problem, a legacy business that may become a burden before too long.

But this gives it other advantages.

It has developed its EV drivetrain and chassis.

These can simply displace the current, fossil-fuelled models, in the same operational chains: production, dealer networks, compliance, marketing – the works.

Let's take the dealer network, for example.

Pre-pandemic, there were 600,000 school buses ferrying 26 million American children to school each day.

Blue Bird manufactures these buses, but it doesn't sell them. Retailing is done by dealer partners, of which it has an extensive network (there are 10,000 school districts and a few thousand retailers in North America).

In fiscal 2020, Blue Bird sold around 93% of its vehicles through its US and Canadian dealer network, currently consisting of over 50 dealerships. What's more, in their territories, the dealerships are exclusive to Blue Bird with Type C and D school buses.

This is a sector where intermediaries (i.e. dealerships) matter deeply, and when trying to push new products, having that existing relationship will be enormously valuable.

It is the dealerships who are responsible for selling your vehicle, responsible for what happens to the children who use it to get to school each day, and responsible for breakdowns and repair.

You can imagine, as a dealer, what it is like to look at a product from a company that you've done good, profitable business with for decades versus a product from a new upstart competitor.

You know which one you'd trust more. You know which is the one that you believe could deal with any issues.

As noted, the dealerships are responsible for the repair and maintenance of the vehicles.

This requires them to be trained and equipped to deal with any issues with the bus. It also means having an existing framework to access authentic Blue Bird parts and training for mechanics.

Parts are centrally manufactured by Blue Bird in Ohio, and they are typically shipped out the following day for dealer stock orders. Parts are shipped on the same day for urgent customer orders that can be reached on the following day by air.

Alongside its 50 retail dealership partners, Blue Bird has 250 parts and repairs dealers across the United States and Canada.

The dealers are already set up to help purchasers with the EV charging infrastructure needed to incorporate electric buses into their fleet.

That kind of well-oiled system can take a new entrant years, if not decades, to build out so that it works perfectly, with all the kinks ironed out.

Blue Bird is able to roll out its electric buses out via this network – and that is a huge advantage.

Another competitive advantage to focus on is safety.

Safety is and has for a very long time been the top priority for Blue Bird.

School buses are ferrying 26 million children per day around North America – and the safety of their children is clearly the number one priority for any parent, or school.

The new electric buses benefits from *exactly the same* standards as all other buses in the range.

This is a safety record that people can trust.

Safety is a real issue in the EV space.

Tesla, for instance, has suffered bad press around the failures of the automatic braking system, and the deaths that have occurred because of the badly understood “full self-driving” feature.

From an investment perspective, we gain much confidence in the fact that Blue Bird has proven that it can be a profitable bus manufacturer.

If it can do it for fossil-fuelled buses, then it makes sense to think it can do it with electric buses too.

The competitive advantages it has in the market are impressive, and I believe, sustainable.

I expect Blue Bird’s electric bus network to be one of the top beneficiaries of the federal attempts to overhaul the school bus fleet through the Clean School Bus Act and the Clean Commute for Kids Act.

The multi-billion dollar opportunity for electric bus manufacturers is going to create a few big winners, and I think Blue Bird has the best chance of anyone of being one of them.

Indeed, electric school buses have Buy America regulations, which means US manufacturers such as Blue Bird should be insulated, to a large extent, from competition from overseas.

Blue Bird meets all our EXPO criteria – and some

Blue Bird meets all the EXPO criteria – which act as our informal research guide rather than an overarching entrance requirement – quite easily.

- The company is **Established**

The company was founded almost a century ago. It has made hundreds of thousands of school buses.

And when it comes to clean energy, it has made more alternative fuel school buses than all of its competitors... combined.

In fact, it owns the majority of EV school bus market share.

Lastly, as a company it has a reputation for safety.

And that is one of the most important factors when it comes to transportation – especially transportation of children.

- The company has the **X-factor**

It is the only manufacturer that can make every type of school bus.

This means every school in the United States and Canada buying a new EV bus is a potential client.

Now keep in mind that school buses are a highly specialised product. It will be very hard for newer companies to break into this market.

Not to mention that the company already has an established network of dealers and service centres.

Another X-factor is the company's use of V2G, a technology that will allow schools to reduce operating costs.

You see, thanks to V2G, schools can sell electricity stored in the buses back to the electric grid.

This could take place during summer, when school buses are mostly idle, but electricity is in peak demand.

- The company has **Potential for Growth**

As I've said, President Biden plans on replacing the United States' entire fleet of 500,000 school buses with zero emission buses in just a few years. That's a great opportunity for the company.

Already, last quarter the firm reported an 18% jump in orders year-over year. Meanwhile,

its backlog stands at a record \$500 million.

And it has plans to increase its production capacity six times in response to surging demand.

- The company already has **Orders, Clients and Partnerships**

Already 10,000 schools are customers of the company.

And with the average school bus being 11 years old, soon these schools could go shopping for a new bus.

The company also has an exclusive partnership that gives it access to alternative-powered engines from one of the biggest car manufacturers in the world.

All in all, it is well-positioned to capitalise on the opportunity arising from the US government subsidies for electric school buses.

Perhaps it is no wonder, then, that a whopping 90% of all stock issued by Blue Bird is held by institutions.

Including some of the most reputable names in finance like:

BlackRock...

Vanguard...

And others...

On top of that, the company's insiders believe that Blue Bird is ready for success.

For example, Blue Bird's CEO Matt Stevenson bought another 60,000 shares of stock in December 2021 – to add to his prior \$8 million position.

Financials

For us the financials are a little hard to judge.

There are two stories – one of the legacy business and its decent financials.

But secondly, of its rapidly growing EV business.

Total revenue is up over 50% since 2010, so the trend is one of broadly positive, albeit not explosive, growth. Average revenue per bus sale has increased from \$94,000 to \$98,000 last year alone. Bus unit sales are up 40% over the same period, and market share in the United States hit 62% in May 2021.

In the last few years though, total company revenues have been pretty flat, at around

the \$1 billion per year mark. A slight dip in 2020 as schools closed and business dried up stretched into 2021, with \$1 million fewer revenues reported year-over-year.

To be honest, it's pretty surprising the hit to the top line in 2020 wasn't worse though. Revenue still came in at \$880 million during a national pandemic and lockdown.

The drop in sales was largely in line with the experience of the broader industry, where bus sales dropped from 33,800 units to 28,500.

Until 2019, although revenues had been flat, margins had been expanding such that net profit grew from \$3 million in 2016 to \$24.3 million in 2019.

In 2020, although sales fell in unit terms, the average selling price actually rose by 7%. This carried on the margin expansion that had driven improved net income in previous years.

Blue Bird has had a slow start to 2022, with Q1 returning \$129 million revenue compared to \$130 million the year before.

However, the EV business nearly doubled from last year. Margins also grew by 1.4%, even as supply chain issues dogged the whole industry.

Given that this is a large focus for us, this fits into a fair picture of the company financially.

It's an established school bus manufacturer, earning decent revenues and positive net earnings. However, it is trying to move aggressively into EVs, as it's the key growth area for the market and for the business too.

Going back to margins, the alternative fuels vehicles – propane and electric – deliver higher price points and margins than their petrol and diesel predecessors. Leadership in two sectors with promising impressive growth and higher margins is a very promising combination from a financial perspective.

So there's a lot of promise from Blue Bird's pivot to alternatives.

There are three key risks, though, which should be noted.

Risks

One key risk arises from the fact that electric school buses are relatively new. The company could lose market share fast as a result of an unanticipated change to the market.

It is possible that another wave of coronavirus forces schools to close again. That would result in delayed orders for new buses.

It is also possible that, as a result of the pandemic, education is much more online and at

home than in classrooms. This could produce a once-off decline in the number of school buses that are needed.

Conversely, it may be that the pandemic results in laws and rules mandating more space on buses between children.

With fewer children per bus, more buses would be needed.

Other potentially adverse changes can be imagined.

Furthermore, the propane business is something in which Blue Bird has invested a lot of time and money.

While that business has been successful so far, it's possible that that too could become a burdensome legacy business as the electrification of transport really gathers pace.

But again, I think the company is clearly focused on growing its EV business, and is as well placed as anyone to benefit from that trend too.

The second key risk is that growth of the EV business is not enough to offset a possible contraction in the propane business.

It is also true that the investment case is partly predicated on a massive government initiative to electrify the United States' school bus fleet.

In my mind, that is an initiative that is also backed by the people at large, as well as by the financial system – it is therefore likely to continue.

However, it's possible that politics could get in the way and hurt the prospects for Blue Bird's EV business.

That is the third key risk.

In that case though, it has its legacy business to rely on so it's less vulnerable to such a turnaround than a pure-play EV manufacturer.

A plethora of other, more general risks also apply here. In no particular order, these include (and are not limited to): a stock market that is expensive by historic norms; economies' over-reliance on central bank stimulus; potential competition from other established players and new entrants; rising costs of doing business from inflation in commodity and shipping prices; and semiconductor shortages.

But despite all that, I believe that the potential reward outweighs the risk. Blue Bird is well placed to exploit the electric school bus bonanza, and investors in the company should be reaping the rewards.

I'm therefore recommending that you BUY Blue Bird Corp (NASDAQ:BLBD). It trades on Nasdaq and is available from numerous major and smaller brokers, including Hargreaves Lansdown. For more information on possible brokers to use, see [here](#).

For current prices and buy up to limits, [click here](#) to check the portfolio for details.

Green New Deal Profit Play #2: the billion-dollar solar company that institutions can't get enough of

In the weeks leading up to the US election in 2020, I sent an urgent message to my *Exponential Energy Fortunes* readers.

I told them of an “opportunity to get in on the ground floor of a profitable, established company in one of the fastest-growing segments of the solar sector.”

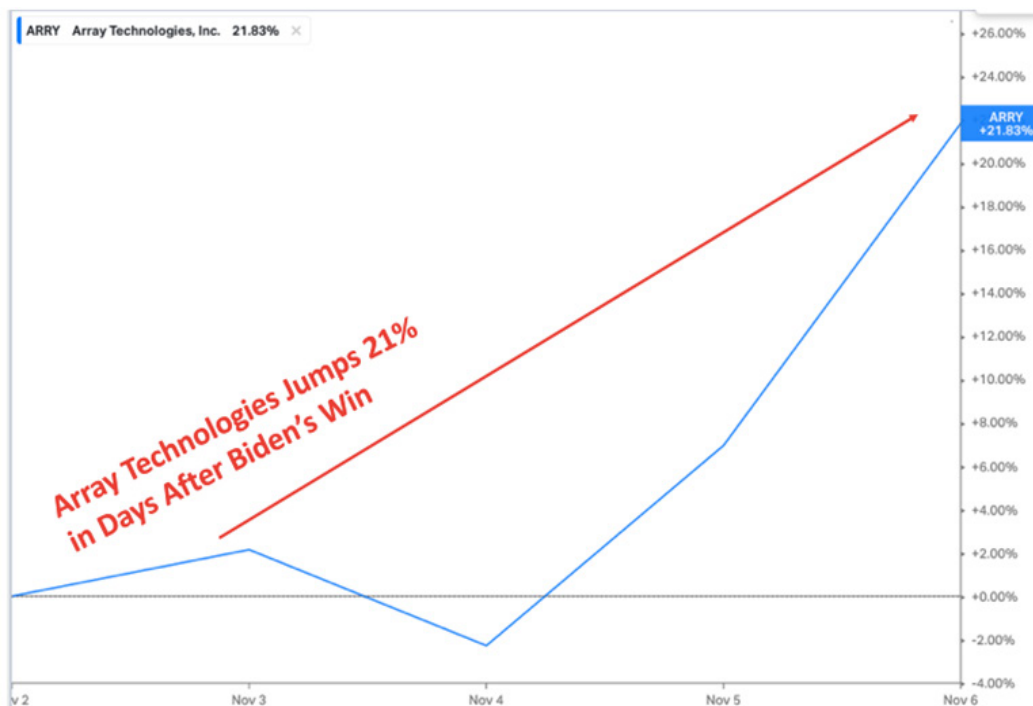
And the company faced a powerful potential catalyst with the US election just 19 days away.

“Mark my words,” I wrote at the time, “a decisive Democratic victory could provide a big push towards renewable energy in the United States.”

And I predicted it could set a light under this company – Array Technologies (ARRY).

I knew its potential reaction to a political catalyst could be big. But I didn't quite anticipate how big...

In the days following the US election, when it became clear Biden had won, this solar firm based in Albuquerque, New Mexico, jumped 21%:



Source: [Koyfin](#)

Please note, this stock began trading in October 2020. 2021 performance: - 62%.

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This \$1.3 billion hardware company has been quietly plugging away in its corner of the solar industry for the last 30 years, selling a niche product that is now seeing huge demand.

Array sells niche products that allow solar panels to position themselves for better absorption of sunlight at different times of day. This helps to boost solar panel performance by as much as 25% – all in a market that's six times the size of the residential solar market.

Over 98% of Array's shares are held by institutions – a major endorsement of the company's prospects.

And if you want a sense of how insiders really feel about where the company is heading, consider this striking statistic...

In the last 12 months, company insiders have traded the stock exactly 20 times. Each time has been to load up on shares – there has been zero insider selling.

Analysts also forecast Array's share price to triple within a year – but for reasons you'll see below, I think that could prove conservative.

Array Technologies is a leading solar manufacturing company that specialises in one very specific component.

It's something that is applicable to every single solar farm in the world.

It saves money and reduces costs, and Array's patented version does it better than anyone.

It may not be the jazziest part of the sector, but it could be one of the most significant.

I'm talking about “solar tracking”.

Solar tracking is the science of getting the most out of the day's sun. At its most basic level, you want the panel to be directly angled at the sun as much as possible. A solar tracker follows the sun through the day, from east to west. A single axis does this in one direction only, while a dual-axis tracker can also swivel for added efficiency.

Array specialises in single-axis solar trackers. Click [here](#) for a brief overview video of a single-axis tracking system.

If you are not a solar expert, know that tracking systems like those offered by Array Technologies were used in 70% of all ground-mounted solar projects in 2019, according to Bloomberg New Energy Finance.

Of course, thousands of panels, arranged row by row, can have wildly different costs and yields depending on how they are mounted.

A basic framework with no tracking technology would be the cheapest, but would also have the lowest yields. What Array specialises in is the technology for maximising yield

by moving panels for the whole farm.

Obviously, it would be inefficient by hand, but the first simple motors for slowly rotating a row of panels are now quite outdated, too.

Array's technology incorporates big data and machine learning, alongside field leading, patented technology for monitoring and maximising the efficiency of a whole farm.

Tracking the sun

The two key products Array offers are SmarTrack and DuraTrack.

The former, SmarTrack, is the advanced algorithmic side. The latter, DuraTrack, is the actual tracker system on which the panels are mounted.

Together, they form the backbone of what Array offers.

Over three decades, Array has developed DuraTrack to be the best-performing solar tracker in the market. It has a mixture of technical advantages that make it more reliable and powerful, while reducing costs at the same time.

Firstly, it has made it powerful enough to control rows of 100 solar panels or more, which is ahead of all competitors. This is achieved through higher power density in the tracker's motor, giving it the power it needs to rotate such a long and heavy row of panels.

The key element of this is that fewer motors and therefore fewer megawatts of electricity are required per cell, lowering costs for the whole farm.

Another key element of the DuraTrack system is its reliability. Over the decades, Array has developed it to have the fewest number of components possible. This reduces complexity which is helpful for both installation and maintenance teams over the lifetime of the product. As a result, solar farms with Array have the lowest downtime of any in the world.

This is a crucial factor as downtime is lost revenue to a solar plant operator. Finally, DuraTrack is designed with real-world difficulties in mind like challenging ground or wind variability.

DuraTrack is actually the only product on the market with a fully automated system for recognising and mitigating wind load on the panels. It does this with an auto-release mechanism that allows the panels to release their position in high winds, which differs from traditional systems which rely on the tracker reversing the position itself, which risks failure.

The system can also independently arrange each row to separate angles depending on the wind load and can do so repeatedly throughout the day for the entire 30-year lifecycle of the solar farm.

The ability to adjust rows independently is also a crucial factor in allowing Array to offer customers an excellent solution in difficult or undulating terrain, where the needs of each row might be different to the rows elsewhere in the farm. This flexibility is what allows Array to secure contracts in more difficult locations and gives customers the confidence to buy Array's systems before even building the farm.

So that's DuraTrack, the hardware component of Array's offering. In 2018 though, the company launched a secondary product, SmarTrack...

Hardware made smart

SmarTrack is data analysis and machine learning software which complements DuraTrack directly.

Its advanced machine learning algorithms boost energy production by intelligently adjusting module angles in response to weather and site conditions. Within days, SmarTrack will learn what the optimum module positions of your PV plant is, to yield maximum power over its lifetime.

It does this by refining the adjustments for the positioning of the sun, but also by analysing cloud cover to maximise yield when clouds are causing "light dilution".

It's offered to customers on a licensing basis and fits into the current system smoothly, with no extra hardware or expensive sensors required. It performs on-site analysis of the optimal settings for each row, which allows for improved, customised regulation of the modules through each day, squeezing an extra few per cent of yield out of the farm.

In fact, the number is 5%, based on recent information.

The key point is that it is the combination of the two products that deliver the best result for the customer, and therefore for Array as well.

The company has recently ramped up the functionality of its performance-enhancing software. The upgrade has been shown to improve solar farm yields by up to 5%.

By offering superior products to the consumer, Array is certainly starting to reap the rewards.

Actually, it's already happening, as you can see in Array's fortress-like fundamentals...

A vote of confidence from a \$600 billion juggernaut

The company's revenues have risen spectacularly over the past decade, and last quarter they rose another 21% year-over-year.

The firm reported \$300.6 million in revenue for last quarter, with a robust backlog in orders. Even more significantly, the company expects to achieve \$1.3 - \$1.5 billion in revenue for 2022.

Operating expenses increased from \$30.8 million to \$58.7 million, but this increase happened for all the right reasons. As chief financial officer Neil Patel noted, Array has recently gone public and shouldered the extra costs that come with being a public company. But Array is also spending more on product development and international expansion – such as the acquisition of STI Norland – the leading manufacturer of solar trackers in Europe – which added \$49.9 million to the firm’s revenue.

There’s a lot to like in these numbers – especially since management has shrewdly notched agreements with supplies to fix commodity and component prices for future quarters, to help guard against inflation. This will only help margins moving forward as the company finishes its pre-inflation backlog of projects.

The 11 analysts who follow Array professionally show signs of seeing the same potential here that we do. They project the firm will grow earnings by just over 10% this quarter – but then grow earnings by 87% and 74% in Q2 and Q3 respectively.

But these are the same analysts who underestimated Array’s earnings last quarter by a whopping 100%. It wouldn’t surprise me if they’re grossly underestimating the company again...

The company received another major vote of confidence from Blackstone, the alternative investment management company with over \$600 billion in assets under management.

Under the terms of the 11 August deal, Blackstone bought \$350 million in perpetual preferred stock from Array, in addition to 7.875 million common shares.

Array is using the proceeds to pay off debt and add \$136 million to its balance sheets. The money will also be used to fund growth initiatives.

In total, this deal increases Array’s liquidity from \$87 million in June 2021 to \$325 million as at the time of writing. This gives the company much more breathing room and flexibility in growing its operations and pursuing growth markets.

The fact that Blackstone, one of the most powerful and far-reaching financial firms in the world, is getting behind Array is an endorsement that’s hard to overstate.

Blackstone’s imprimatur could lead to incremental sales growth, apart from the major growth opportunities its influx of capital will provide.

The vote of confidence reminds me of how the solar firm Altus Power, with help from Blackstone, became a top US provider in solar.

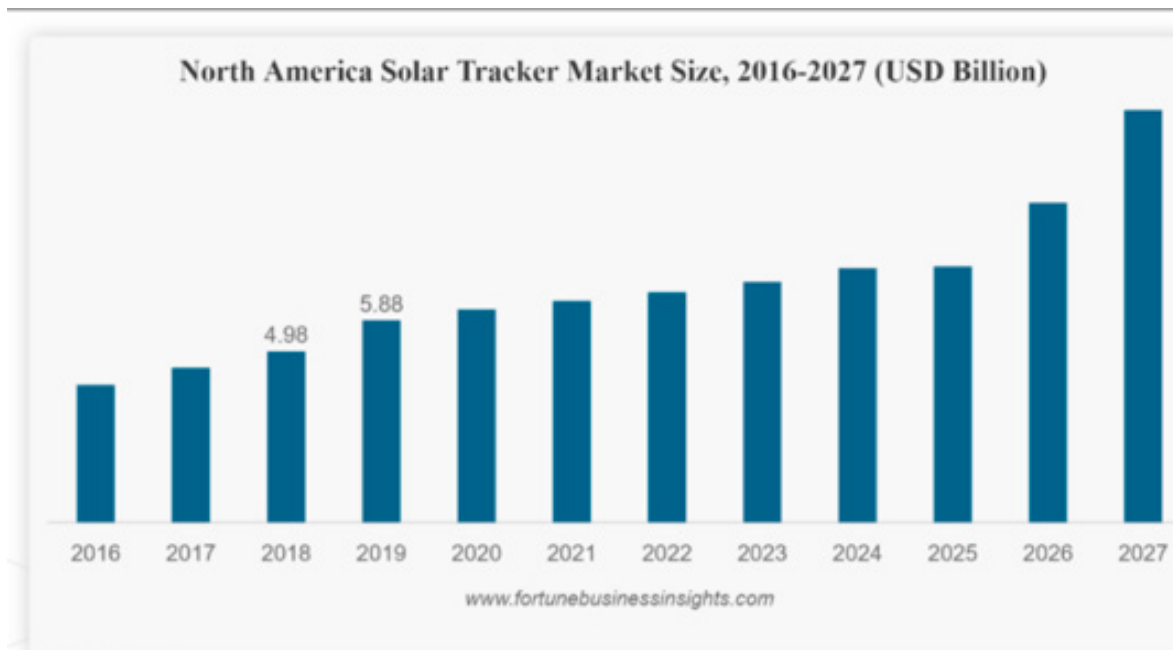
The solar market is booming – but I expect Array’s growth to beat the market

Array operates in the ground-mounted solar sector. Rather than seeing solar arrays installed on rooftops, ground-mounted solar panels make use of land space for optimal and high-volume generation. Ground-mounted PV is most often chosen for commercial

properties and, in particular, for utility-scale solar farms.

What's exciting is that ground mount solar is the fastest growing source of new electricity generation in the United States. It's already six times the size of the residential market. Within that, the utility-scale solar market is also absolutely booming.

As for the solar tracker market specifically, the global market for solar trackers is expected to rise from an estimated \$9.3 billion in 2019 to over \$22 billion by 2027, according to a 2020 market research report by Fortune Business Insights. This represents a forecast compound annual growth rate (CAGR) of 12.6% from 2020 to 2027.



Source: fortunebusinessinsights.com

But to my mind the company is set to grow a lot faster than the market.

The thing I really like about Array's technology is that it's module agnostic, giving its customers great flexibility as new modules come on to the market in the future.

But Array is also innovating and developing new products and services. It plans to create new revenue streams with additional products, software and services related to its hardware tracker systems.

There are some key risks to be aware of

Of course, there are risks that could negatively affect the share price moving forward.

The coronavirus caused a reduction in Array's activity due to the pandemic's effects on supply chains. Should the pandemic really pick up again, this would likely have a negative impact on Array's performance.

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As well as Nextracker, Array also has competition in the form of companies such as PV Hardware, Artech Solar, UNIRAC and RBI Solar.

Array's competition with Nextracker has been particularly fraught and even controversial. Array filed a lawsuit alleging Nextracker, its CEO Dan Shugar and parent company Flex had employed "threats, intimidation and coercion" to undercut Array. Legal proceedings between the two companies are ongoing.

Saying that, while the firms are great rivals, they do employ different technologies.

NEXTracker uses individual motors to control each row, while Array links rows together and runs them on just one motor – a technology that is cheaper and results in less maintenance. There is certainly room for both technologies, and companies, in the market.

And in March 2021, Array became involved in another lawsuit for allegedly failing to warn shareholders about the risk of rising costs on its operations. Though management has taken concrete steps to insulate the company from inflation through fixed pricing contracts, this could be another headache. It's worth noting that BlackRock made its \$500 million investment months after the lawsuits were filed.

Another risk pertains to tariffs. Although Array is a US company with principal operational and manufacturing facilities in the United States, the imposition of additional duties, tariffs and other charges on imports and exports could disrupt Array's supply chain at the very least.

The firm does purchase some of its components and materials outside of the United States through contractual arrangements with various vendors.

On that note, Donald Trump's move to increase tariffs on imported solar cells and modules as well as eliminate an exemption for two-sided solar panels could act as a drag on the share price. As of today President Biden has not reversed the executive order – though in May 2022 he announced he was reviewing Trump's tariffs for possible reversals.

Despite the risks, this is an obvious "buy"

Yes, there are risks but they are dwarfed by the potential on offer, to my mind.

The firm is growing revenues by 21% year-over-year and has excellent financials, thanks in part to the \$500 million infusion from BlackRock. It also has a lot more room for growth.

Of course, the solar industry is a complex and fickle sector, and I have always tried to be very careful about how and when we invest in this part of the energy transition story.

It's the first thing anyone thinks of when you talk about renewables, and it's now a pretty well-established industry.

Yes, it's booming, with the solar market projected to reach \$64 billion by 2030. But everyone knows it's booming, so you can't just buy any old solar panel manufacturer or plant operator and assume you'll make a quick buck.

Competition is so fierce in both of those spaces, which is why we've only dived in when circumstances offer us a particularly good opportunity.

Just as in the gold rush, when the trick was to sell shovels, the key is trying to find companies that will benefit with the industry's growth, rather than just one of many competitors, who's outcome will be defined by luck not skill.

In that vein, I believe we have in Array Technologies another special situation that deserves our attention, and our investment too.

I'm therefore recommending that you BUY Array Technologies (NASDAQ:ARRY). It trades on Nasdaq and is available from numerous major and smaller brokers, including Hargreaves Lansdown. For more information on possible brokers to use, see [here](#).

For full details of current prices and buy up to limits, [click here](#) to check the portfolio for details.

Green New Deal Profit Play #3: *tapping into the \$13 billion heading towards America's EV market*

President Biden's clean energy bill is allocating \$7.5 billion towards building America's first-ever national network of electric vehicle charging stations. It will also put billions more into electric buses and ferries.

I believe this will ignite a frenzy among major car companies for market share as electric vehicles become more convenient and practical than ever in the United States.

We can try to decide which car company is best positioned to thrive from this... but I have a more "catch all" play in mind here.

This is a textbook "picks and shovels" investing play. Just as the people who sold mining equipment were the ones who got rich in the 1830s California gold rush, so it will be that the companies enabling the EV revolution to take place will make serious gains.

This company – trading at just \$0.88 /share as I write – grew revenues by a stunning 115,000% last quarter. My research shows it could have many years of exponential growth ahead of it as advanced economies increasingly ban petrol-powered cars.

The reason is simple: it's a key producer of the element that makes the electric car revolution possible.

The typical EV car battery contains around 14 kg of cobalt. This presents a challenge, since most of the world's cobalt comes from a politically unstable country, Africa's Democratic Republic of the Congo (DRC).

But one company I've found is getting around this geographical risk... it has a stranglehold on cobalt operations in multiple countries from the United States to Australia.

The precious metals and mining research firm CRU forecasts that cobalt demand from electric vehicles to reach 120,000 tonnes by 2025 compared with nearly 39,000 tonnes in 2020.

And Biden's infrastructure plan, which calls for \$13 billion to take EVs mainstream, will spare no expense for the necessary minerals.

We've seen a preview of what could come with cobalt, as the rise of electric vehicles helped spark a lithium bull market.

Cobalt is a primary component for lithium-ion batteries. It's also used to manufacture wear resistant alloys and alloys for aircraft engine parts.

But the majority of its production and reserves are in the DRC.

Cobalt mining in the DRC has been problematic to say the least. There's been accusations of illegal mining, human rights violations, environmental concerns and corruption to name a few.

In fact, several tech companies such as Apple, Google and Tesla have been caught up in the legal wake over cobalt mining in the DRC.

Not to mention that armed conflicts that cause instability in cobalt's supply chain and prices.

Yet the miner we are recommending today has a unique advantage: it's an Australia-listed company focused on cobalt... and with no assets in the DRC.

The company I've picked to play this trend is **Jervois Mining Ltd. (ASX: JRV)**.

But while its main focus is cobalt, Jervois is also exposed to nickel and copper.

The company is looking to become a global supplier in the emerging battery metals market. Its goal is to produce these metals sustainably and ethically sourced while also providing a secure and transparent supply chain for its customers.

For that reason, it has been going on a purchasing spree in the last few years around the world to diversify.

It has cobalt operations in Idaho in the United States at a development stage, a nickel-cobalt resource in Australia, prospective exploration tenements in Uganda and a nickel-

cobalt refinery in Brazil.

But before we get into the company, let's take a deeper look at cobalt production.

Moving away from the DRC-China cobalt supply chain

About 70% of the world's cobalt's production is in the DRC. The country also holds over 50% of the world's reserves.

Some of the other major producers are Russia, Philippines, Cuba and Australia but their production combined only makes up about 14% of total world output.

Cobalt is primarily mined as a by-product of nickel and copper and then it can be separated through several processes.

Some of the largest cobalt producers are Glencore and China Molybdenum.

But it's not just production that is concentrated in one area. The supply chain is quite obscure and controlled by China. In fact, China is the world's largest producer of refined cobalt, which refined over 50% of the world's cobalt in 2018 before it could be used in EVs.

Most of that cobalt comes from the DRC. Indeed, Chinese companies own 8 of the 14 largest cobalt mines in the DRC.

While Tesla and EV car makers have been trying to diminish the amount of cobalt they use in their batteries, it doesn't look like they will be able to eliminate the need for it any time soon.

Cobalt has several characteristics for making it good for EVs including stability and high energy storage. One EV can need anywhere between 4kg and 14kg of cobalt.

Umicore's chief executive Marc Grynberg said in 2019:

Cobalt is the element that makes up for the lack of stability of nickel. There isn't a better element than nickel to increase energy density, and there isn't a better element than cobalt to make the stuff stable. So [while] you hear about designing out cobalt, this is not going to happen in the next three decades. It simply doesn't work.

Bloomberg NEF estimates the market share for new EV car sales around the world will increase to 10% by 2025, and reach 28% by 2030.

But to get those amounts of EVs in our roads we will need massive amounts of cobalt. In fact, Benchmark Mineral Intelligence forecasts that the battery industry will need an extra 100,000 tonnes of cobalt by 2025. To put that in perspective, that's the same as all of the DRC's production for 2019.

And of course, we will need a stable supply chain. That makes cobalt quite a strategic

metal.

The US government has been looking for a way to reduce cobalt imports and build a supply chain outside of the DRC and China. In 2019 the United States imported 78% of its cobalt consumption.

And that's what Jervois is looking to do – to play a role in creating a sustainable and ethical and reliable supply chain for cobalt.

Jervois' flagship asset is the Idaho Cobalt Operations (ICO) of which it owns 100%. Located near the town of Salmon, Idaho, the project is at the centre of the Idaho Cobalt Belt that produced 2Mt of contained cobalt ore between the 1900s and 1960.

ICO is a high-grade cobalt-copper-gold deposit and partially completed mine site that has an approved plan of operations and is fully environmentally permitted up to 1,200 short tonnes per day (stpd) ore processing capacity.

At the moment there's no cobalt mining in the United States, so once it starts production, which is scheduled to happen in the third quarter of 2022, ICO will be the only cobalt producer in the United States.

In fact, as the company said:

Battery demand for cobalt is expected to rise sharply, and ethical, non-Democratic Republic of Congo, low capital sources of supply outside the Idaho Cobalt Operations are essentially non-existent.

Over a year ago the company completed a feasibility study that confirmed the potential of the project to establish a high-return, low-capital investment. The feasibility study detailed reserves of 13,650 tonnes of cobalt, 19,800 tonnes of copper and 51,391 oz of gold.

It currently estimates a mine life of seven years, which is short, but there's the opportunity to increase the mineral resource and extend mine reserves.

The mine already has some infrastructure in place, like a water system and a maintenance building. The mine is partially built having received over the last 20 years about US\$100 million invested in developing the mine.

To complement the Idaho operations, in September 2020 Jervois bought a nickel and cobalt refinery in Brazil. The company acquired São Miguel Paulista from Companhia Brasileira de Alumínio for a mere US\$22.1 million.

The refinery is located in the city of Sao Paulo 120 km from the major port of Santos. It has the largest class I nickel capacity in Latin America with a refined production capacity of 25,000 metric tonnes of nickel and 2,000 metric tonnes of cobalt per year.

Jervois assets also include Nico Young, a nickel and cobalt deposit in New South Wales, Australia. Nico Young is 25 km from the town of Young, close to rail and 300 km from Wollongong, which has an export facility.

...continued on next page...

After it's done, Nico Young will be one of Australia's largest cobalt-nickel operations. Jervois expects construction period to take four years and commissioning starting after two years.

Jervois also has operations in Uganda, which has a similar geology to the DRC and where the company is already drilling.

Kilembe has five exploration licences totaling 708 sq km in areas bordering the DRC. Four of these exploration licences are on a trend with the former Kilembe mine, which operated between 1956 and 1977 producing 16 million tonnes of ore grading 2% copper and 0.17% cobalt. At Bujagali, located only two hours' drive from Entebbe, it has five exploration licences.

Jervois also has an experienced team at the helm, comprised of ex-senior executives from Glencore, Xstrata and WMC Resources and experience across Australia and Africa.

Let's take a look at the financials.

Financials

Jervois estimates capital expenditures (capex) of US\$99.1 million for ICO. The feasibility study projects an annual production of 1,915 mt cobalt, 2,900 mt copper and 6,700 oz gold, and operations beginning mid next year.

At its estimated cobalt price of US\$25/lb, the company projects annual earnings before interest, taxes, depreciation and amortisation (EBITDA) of US\$54.8 million. Only a few months ago, I would have said that was optimistic – but cobalt prices have roared to \$37/lb in the time since.

Cobalt prices could enjoy a years-long lift from the electric vehicle boom. Already, 57% of the demand for cobalt comes from electric batteries.

The EV market is expected to grow by 30% a year through 2025. Demand for cobalt for batteries has grown by 10% a year since 2013, while the cobalt market has grown by just 5% annually on average.

And with the rollout of more EVs in the near future, demand for cobalt will keep increasing. In 2018, Bloomberg NEF estimated that by 2030 cobalt global demand could be 47 times more than of demand in 2017.

As of the end of Q1/2022 Jervois had US\$88.2 million in cash. It also recently completed a A\$313 million equity raise (\$226.27 million in USD).

Risks

One of the biggest risks, of course, is Covid-19, which is a particular challenge for a company such as Jervois that is diversified into several jurisdictions. It could face

operational challenges. In particular, both Brazil and the United States have seen Covid run rampant.

The firm is also still at the development stage: until it starts producing, a lot can go wrong. It may run into problems acquiring customers, on the production side... you name it.

In particular, a main risk is that its project in Idaho is delayed. While first ore processing at the ICO is on track to start in the third quarter this year, until the facility is actually up and running then no chickens should be counted. Any delays to the start date could weigh on the stock.

There's also the risk that technology advancements eliminate the need for cobalt in EV batteries. As said, some battery firms are exploring ways to reduce the cobalt content in batteries. I don't think this could dent battery composition in a meaningful way in the short term, but it's definitely something to keep an eye on.

Jervois will also need more financing, and it could have problems finding it. There's risk too that higher cobalt prices will increase competition. And if inflation doesn't subside in the following months, that could cut into Jervois' margins as well.

Saying that, although I think cobalt prices will rise, it's no slam dunk. There's always the risk that they don't rise as much as anticipated or actually fall. If the expected ramp-up in demand is met with an equally strong ramp-up in supply, then prices won't go anywhere.

But despite all the risks, the company has a unique proposition which is producing ethically and sustainable cobalt and moving the supply chain closer to the United States.

This is why I am recommending you BUY Jervois Mining Limited (ASX: JRV). The stock is listed on both the ASX and the TSX-V in Canada (both under ticker JRV), though we are recommending the primary listing on the ASX in Australia. Both listings are available via Interactive Investor.

For current prices and buy up to limits, [click here](#) to check the portfolio.

There you have it – three briefings on the companies I consider best positioned to thrive as Biden's \$1 trillion Green New Deal takes effect.

I'll continue to watch the situation closely, as well as vet and deliver new profit opportunities over the year ahead. And should anything change in my forecasts and recommendations, *Exponential Energy Fortunes* readers will be the first to know.

Regards,



James Allen
Editor, *Exponential Energy Fortunes*