# CAPITAL PARTNERS LLC

Through the Years The Evolution of Electron Capital

#### **Overview of Electron Capital**

Electron Capital Partners LLC ("Electron") is a New York based investment advisor founded by Jos Shaver in 2012. The firm deploys a long/short equity strategy focused on the transition of energy consumption towards lower carbon intensity solutions. Electron allocates capital globally to alternative/renewable energy, infrastructure, and utility companies which serve as key enablers and beneficiaries of major structural changes affecting economies worldwide. The strategy has a 17-year track record and firmwide assets under management (AUM) are approximately \$2.7 billion.

From 2008 - 2012, the senior investment professionals at Electron, led by Jos Shaver, worked together at SAC Capital Advisors (now, Point 72 Asset Management) overseeing a long/short equity portfolio of \$1.3 billion, utilizing the same long/short strategy that is deployed today.

Between 2004 - 2008 Jos Shaver founded an independent hedge fund known as Electron Capital Management ("the original Electron Fund") that also focused on opportunistically allocating capital to the alternative/renewable energy, infrastructure, and utility sectors. AUM for the original Electron Fund grew to approximately \$450 million until the investment team proactively returned capital to investors prior to spinning out to join SAC Capital Advisors.

Electron's investment strategy, philosophy, core focus and investment team have remained consistent from 2004 - present.

#### Team

**Managing Partner & Chief Investment Officer:** Jos Shaver has over 17 years of experience as a long/short equity portfolio manager and has been covering the global infrastructure, renewable, and utility sectors for approximately 30 years. Prior to founding the original Electron Fund in 2004, Jos lived and worked in Europe and Asia for 10 years.

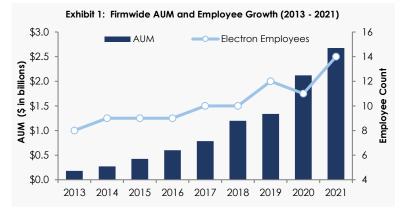
**Partners & Co-Portfolio Managers:** Ran Zhou was Electron's first employee, joining the firm approximately 17 years ago after receiving a masters in statistics and emigrating to the US from China. Neil Choi joined the team over 12 years ago during Electron's tenure at SAC Capital Advisors and has over 25 years of experience covering US / UK utility and power markets.

**Diverse & Accomplished Team:** The firm employs a team of 14 individuals with various backgrounds and lived experiences that create a unique culture of collaboration and inclusiveness.

**Investment Partners:** There are 4 investment partners, who together, have an average of 23 years of industry experience, including over 14 years at Electron. Additionally, 3 of the 4 partners have extensive international experience, with 2 partners having emigrated to the United States from Asia. This level of cultural and language literacy is essential to global investing.

**Evolution:** The firm has experienced steady growth in AUM since re-launching in 2012, particularly over the last 5 years. As seen in Exhibit 1, the increase in headcount has grown alongside the firm's growth in AUM.

We view this lock-step growth as a natural progression of Electron's positive positioning as thought leaders within the Energy Transition and our track record of delivering strong risk-adjusted returns with low correlation to broader equity markets.



### Investment Strategy & Universe

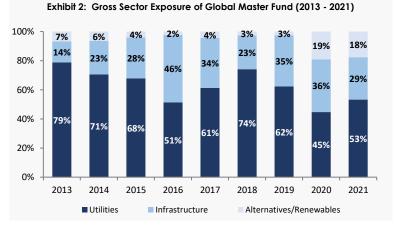
Since 2004, Electron has consistently deployed a strategy that is non-directional, differentiated, and diversified against our peer group and within equity markets. While Electron's opportunity set and investable universe has grown, our repeatable investment process continues to focus on fundamental, bottoms-up investing against the backdrop of large-scale structural change at company, sector, and geographic levels. Without question, the demands of a greener and cleaner future are increasing innovation, capital expenditures, and dispersion within our investable universe.



While our core strategy, investment process, and portfolio construction have not materially changed, we have made enhancements to risk measurement and management. These enhancements are attendant to evolving market dynamics, macro and micro-environments, and lessons learned throughout Electron's tenure. Today, our proprietary, fundamental global sector risk model tracks over 60 metrics (vs. approximately 20 in 2004), deploying real-time feedback for portfolio monitoring. Examples include interest rates, fuel type, beta, sectors, regions, etc.

**Sector Exposure:** Exhibit 2 highlights Electron's gross exposure of each sector since the re-launch.

**Utilities:** Transitioning utility stocks are foundational to Electron's portfolio and research process. As seen in Exhibit 2, the allocation to utilities has ranged from ½ to ¾ of the total gross since inception. More recently, a decrease in Electron's gross exposure to utilities can be attributed to an increase to green infrastructure and other alternative/renewable energy investments, which also represent a compelling investment opportunity given the current environment. (Refer to Electron's 2-pager, Energy Transition – The Next Global Revolution, for additional information).



Electric, gas, water, and waste utilities comprise the bulk of Electron's allocation to this sub-sector. Today, utility companies sit at the center of the Energy Transition and are both significant beneficiaries and enablers to decarbonize economic activity. Utilities are also well positioned to be the beneficiaries of the impending influx of capital to rebuild the aging electrical grid and add additional transmission and distribution capacity to support future renewable energy projects.

It is customary for Electron to conduct 800 - 1,000 meetings per year (on average) with management teams, regulators, and industry consultants related to utilities. The outcome of this research significantly enhances our understanding of the ecosystem for energy production and consumption and gives us a competitive edge in identifying key structural changes before other market participants.

Given their large customer bases and low cost of capital, today's utility companies have evolved to become some of the largest developers of alternative/renewable energy in the world. Additionally, utility companies are at the forefront of sustainable development for novel, innovative technologies – wind turbines, solar panels, battery storage, transmission and distribution infrastructure, efficiency technologies, etc. – making them key enablers of the Energy Transition.

Examples of industry leaders include NextEra Energy (NEE), AES Corporation (AES), and Enel (ENEL IM).

**Infrastructure:** While regulated infrastructure assets have historically been a core allocation within Electron's portfolio, today's investments to this sub-sector also include green infrastructure. As seen in Exhibit 2, infrastructure stocks have grown from  $\frac{1}{4}$  to  $\frac{1}{3}$  of the gross exposure since inception.

Stocks within Electron's infrastructure universe had primarily consisted of bridges, tunnels, toll roads, ports, and airports. These companies typically have regulated rates of return, long-dated spending plans, and are able to pass through rising inflation costs overtime, making them attractive assets to investors.

More recently, Electron's infrastructure portfolio has evolved to include companies focused on EV charging infrastructure, as well as engineering and construction of transmission and distribution networks to meet the growing consumer demand for green electricity (i.e., electric vehicles, utility/residential solar and wind, smart residential/commercial buildings, etc.).

These equities are attractive because significant expenditures by governments and companies are needed to facilitate a growing demand for green electricity. As new and innovative consumption technologies expand (e.g., electric vehicles), more renewable generation is needed. Climate change and adverse weather events also necessitate the need for expenditures to make the grid more robust.

Examples of industry leaders include Quanta Services (PWR), Array Technologies (ARRY), and ChargePoint (CHPT).



Alternative/Renewable Energy: Electron has been investing in alternative/renewable energy since inception in 2004. Some of our first portfolio investments were Vestas (wind), Gamesa (wind), and First Solar – all of which were prominent longs. On the short side, an example of a profitable trade was SunEdison in 2015 – a crowded hedge fund long that we were short. SunEdison eventually filed for bankruptcy and became Electron's number one short contributor for the year. Today, we continue to invest in alternative/renewable energy sources and have seen explosive growth in new companies and attractive opportunities in this sub-sector – both long and short.

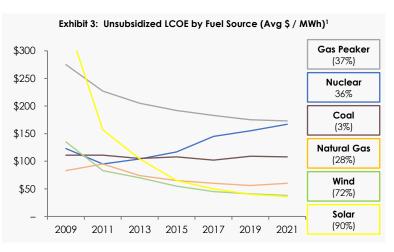
As seen in Exhibit 2, Electron's allocation to global alternative/renewable energy has increased from 5% to 20% of gross exposure today as a result of more companies coming to market and the opportunity set driving the Energy Transition. Stocks covered within our investable universe include standalone wind, solar, biomass, and hydrogen fuel cells, batteries, efficiency plays (e.g., smart homes/meters), and electric vehicles.

More recently, Electron has expanded its investable universe to include the general automotive sector, as electric vehicles have become an increasingly important driver of the Energy Transition.

With respect to alternative/renewable energy sources and storage, the market has seen significant investments in both areas coupled with lower capital costs. This positive combination of factors has added to the economic viability of wind, solar, and battery technologies, which continue to experience higher utilization rates throughout the world.

As seen in Exhibit 3, there has been a dramatic cost reduction for wind and solar (as a fuel source) over the last decade (unsubsidized levelized cost of energy ("LCOE") – Avg \$ / MWh).

Utility-grade renewable generation (wind and solar) has seen dramatic cost improvements over decade. These historical the last cost improvements have been driven by several catalysts, including decreasing capital costs, improving technologies, and economies of scale making these fuel sources cheaper than all other forms of generation (in most markets) over the last 5 years, without a subsidy. As seen in Exhibit 3, the market has exhibited an average LCOE reduction of 72% for wind and 90% for solar,<sup>1</sup> with battery technologies following a similar cost reduction path (one of the key linchpins solving for intermittency of alternative/renewable fuel sources and driving the successful adoption of the Energy Transition).



Examples of industry leaders include Enovix (ENVX), Enphase (ENPH), and Sunnova (NOVA).

**Geographic Exposure:** Electron's global approach allows us to gain a unique perspective on structural change and affords us the opportunity to invest in dislocations earlier than regional specific investors. Knowledge of global precedents and an understanding of various vested interests have been key drivers of idea generation within the portfolio for many years.

Our global relationships and contact with governments, regulators, management teams, customers, rating agencies, shareholders, and lenders – established over the last 2 decades – creates a wellspring of information used within our research and financial analysis.

Historically, approximately ½ to ⅔ of Electron's portfolio has been positioned outside of the United States. While the portfolio today remains well diversified across regions, Electron pivoted its exposure approximately 2 years ago in favor of the United States (see Exhibit 4), as we believe the most



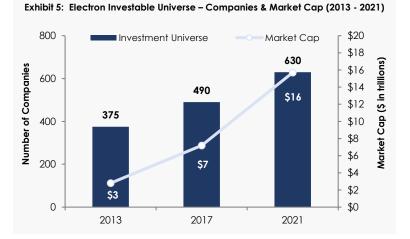


attractive opportunities for generating absolute and relative performance exists within the region due to the Energy Transition. Electron has exhibited a proven aptitude for early identification of structural change across regions and subsectors and we believe we are best suited to capitalize on the momentous shift of the world's largest economy committing to going green.

**Investable Universe:** Today, Electron's total investable universe of global utility, infrastructure, and alternative/renewable energy stocks is deep, comprising of 630 companies with a market capitalization of approximately \$16 trillion.

As seen in Exhibit 5, Electron's universe of companies has grown – both in number of companies and market capitalization – over the last decade. This reflects a natural evolution of market growth via the expansion of existing sub-sectors within Electron's core competency, as well as the emergence of new complementary sub-sectors born from technological advancements and innovation (e.g., electric vehicles and charging infrastructure).

As technology continues to advance and innovation races to keep up with demand, Electron sees future expansion of its investable universe as new entrants come to market, particularly within the alternative/renewable energy sub-sector.



#### Conclusion

While Electron's investment strategy, philosophy, focus, and core investment team remains consistent, we continue to evolve and enhance our offering to capitalize upon the strong opportunity set within the Energy Transition today and in the foreseeable future.



#### Endnotes

1. Lazard's Levelized Cost of Energy Analysis – Version 15.0; October 2021. Reflects the average of the high and low LCOE for each respective technology in each respective year. Percentages represent the total decrease in the average LCOE since Lazard's LCOE Version 3.0.

#### Disclosures

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Electron's investment portfolio can contain a high proportion of securities in the global renewable, infrastructure, and utility sectors. Funds that invest exclusively in one sector or industry lack diversification and subject the investor to additional industry-specific risks. The risks associated with the long side of the portfolio of these investments, particularly renewable sources of energy, include, but are not limited to, those involving supply and demand risks, construction, operation, and licensing risks, as well as accidents. Renewable sources of energy face the risks of regulatory, legal, and taxation changes in the future that may have an adverse impact on investments in this area, including those made by Electron. Finally, alternative sources of energy may be developed in the future that could render the utility positions in Electron's portfolio obsolete or cost prohibitive.

The risks associated with hydrogen investments on the long side of the portfolio include, but are not limited to, those involving supply and demand risks, cost inefficiencies and uncertainty on future cost reductions, transportation and storage costs, operation, and risk of accident or fire specific to the transport and use of hydrogen. Hydrogen as a source of energy also faces the risks of regulatory, legal, and taxation changes in the future that may have an adverse impact on investments in this energy source. Finally, alternative sources of energy may be developed in the future that could render other positions in Electron's portfolio obsolete or cost prohibitive.

