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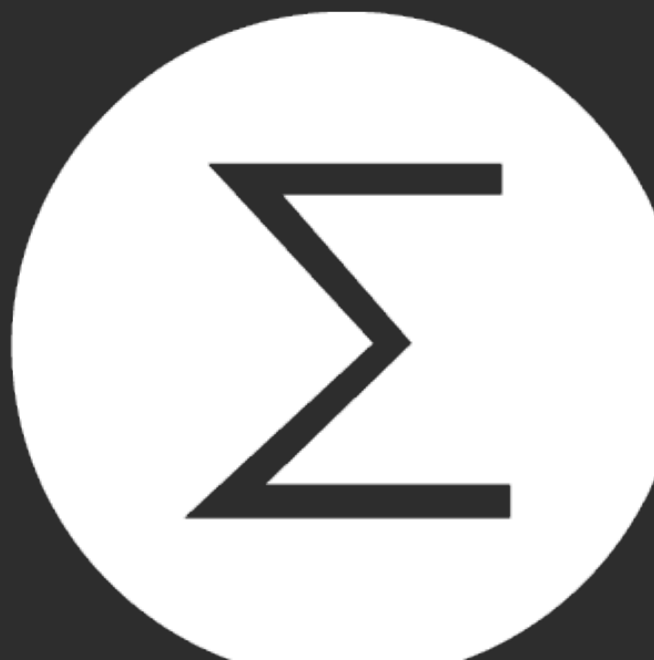
MANAGER Q&A



*BUILDING A NEW  
ENERGY PARADIGM*

FEAT. WALTER NASDEO & NICHOLAUS  
ROHLEDER, NEW AMERICAN ENERGY

MAY 2021



# ABOUT NEW AMERICAN ENERGY

New American Energy is a clean & environmental technology fund. The Fund's Chief Investment Officer is Walter Nasdeo, one of the longest tenured clean & environmental technology analysts, having covered the space since the late 1990s.

The Galaxy Plus Hedge Fund is a pure play clean & environmental technology fund coadvised by New American Energy and Ardour Capital Investments. The Fund employs a long-term, deep research driven, and carefully concentrated strategy consisting of listed growth equities, listed dividend equities, listed deep value equities, and select structured investments. The Fund's operational infrastructure is provided by Galaxy Plus.

# ABOUT WALTER NASDEO

Mr. Nasdeo is the Co-Chief Investment Officer of New American Energy. Mr. Nasdeo is also a Managing Director in the Investment Banking Group of Ardour Capital. Mr. Nasdeo was previously Vice President and Head of Energy Technology at BlueStone Capital.

Mr. Nasdeo began his career researching consolidating industries at Credit Lyonnais Securities. Mr. Nasdeo has frequently appeared on CNBC, Bloomberg, and the BBC. He has also presented at numerous energy technology conferences and been quoted in various publications.

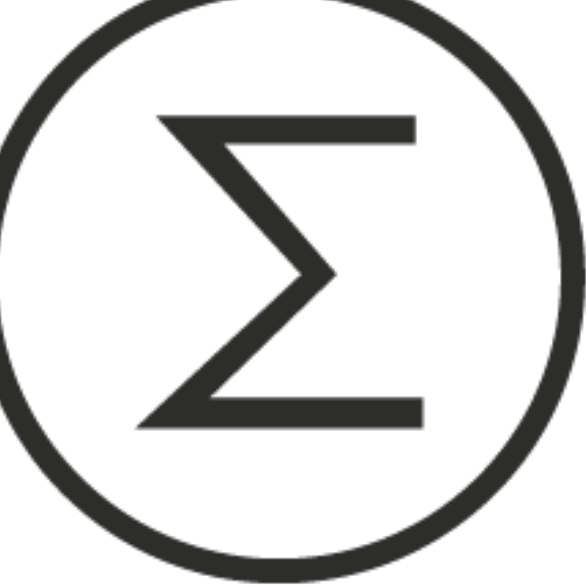
Mr. Nasdeo received his MBA and his BBA in Entrepreneurship from the University of North Texas. He served in the U.S. Army European Operations, Berlin, Germany, and held a secret security clearance as a member of the Berlin Brigade in the 1980s.

# ABOUT NICHOLAUS ROHLEDER

Mr. Rohleder is the Co-Founder and Environmental Technology Portfolio Manager at New American Energy. Mr. Rohleder is responsible for the implementation of the firm's pure play environmental technology hedge fund's investment strategy. Mr. Rohleder also oversees the firm's infrastructure investment activities. In addition to his role at New American Energy, Mr. Rohleder serves as the Director of Finance at Lone Cypress Midstream Services, an energy infrastructure developer based in Tulsa, OK. Mr. Rohleder is currently a Senior Advisor to Ardour Capital, a New York-based alternative energy and clean technology investment bank.

Mr. Rohleder began his career at Dwight Capital, a financial services and private investment firm encompassing real estate debt, asset-based lending, and fixed-income fund management.

Mr. Rohleder received his Master of Science in Sustainability Management with a concentration in Environmental Economics from Columbia University. Mr. Rohleder completed his undergraduate studies at the University of Oklahoma, graduating Summa Cum Laude and Phi Beta Kappa



**AVERY PAGAN, SUMZERO:** *Walter & Nicholas, thanks for joining us after a big week for renewable energy with the Earth Day Leaders' Summit on Climate and all of the new climate commitments announced by global heads of state. Before we get into it, I'd love a bit of background on you and your current fund, New American Energy.*

**NICHOLAUS ROHLER, NEW AMERICAN ENERGY:**

New American Energy is a vertically integrated asset management firm focused on the clean & environmental technology sector. The New American Energy Fund is a long only, zero leverage, equity fund focused on wealth creation for our investors. The Fund began investing in October 2019 and has returned 46.15% on a gross basis since inception. The Fund targets 15 core public equity holdings with a carveout for private transactions. We characterize our strategy as the intersection of Graham and Doddsville and growth investing anchored in the megatrend of decarbonization. Our Fund is also the beneficiary of an investment team grounded in the engineering discipline of the technologies we have exposure to, an in-house technical team, and a network of affiliate companies covering infrastructure, manufacturing, investment banking, and media in our sector.

**SZ:** *Walter, when did you start specifically developing your expertise in renewable energy and why?*

**WALTER NASDEO, NEW AMERICAN ENERGY:**

I began following the renewable energy space in the late 90's. Back then we called the space energy technology. The firm I worked for at that time approached me about looking at the space with the aim of developing a knowledge-based practice on both the research and investment banking side. It was a relatively new area with not a lot of participants, and I believed we could make a difference if we devoted some resources to it, and that is what we did.

A few years later, two colleagues of mine started Ardour Capital Investments and I joined them with the idea of developing a renewable energy/clean tech boutique investment bank. That was in 2002. This has been my sole focus ever since.

Obviously, at that time there were not as many public companies in the space as there are today. We had some flywheel companies, fuel cell companies, super conducting, and wind companies. There were very few public solar companies and the dominant technology at that time was solar thermal and not PV. Over the years we have gone through a number of peak and valley cycles. When the price of oil climbed to over \$100 per barrel, we saw renewed interest and focus on the alternatives, when oil dropped back below \$40, interest waned. In the early stages of development, government programs such as the ITC and PTC were looked at as being crucial to the advancement of the technologies. Oftentimes these programs were ridiculed as being an undo tax burden on people and that the traditional producers of fuel and power had significant cost advantages over the new technologies. This is a strikingly disingenuous argument as the traditionals have enjoyed more subsidies and tax advantages than the alternatives have ever been allocated.



**SZ:** *Let's chat about the Leaders' Summit on Climate for a moment. Were there any announcements - or lack thereof - from participating countries that surprised you?*

**WN:** I found the outcome of the summit to be very encouraging. However, the bottom line still revolves around the ability of the signatories to find suitable replacements to both the traditional fuel and power paradigms currently in place. This is easier said than done. As far as any surprises go, I was not surprised. We have seen these types of initiatives before. Most countries agree that there is a pressing need to address climate issues and are comfortable putting aggressive mandates in place. I have hope that these mandates will be met by the allocated timeframes. However, it must be stressed that significant infrastructure along with technology developments will need to continue at a rapid pace in order for these goals to be achieved.

**SZ:** *The U.S. has been criticized for inconsistent climate leadership from one administration to the next. At a high level, what does a climate-friendly administration mean for the renewable energy industry? Is this administration working on signing new sustainability standards into law?*

**WN:** Clearly, a climate friendly administration is a positive for the space, and yes, I believe that the Biden Administration is seriously working on bringing new sustainability standards into law. As to inconsistent climate leadership, I think that is a bit overstated. While the previous administration did everything it could to roll back the clock on climate change standards, the proverbial horse is out of the barn. Too much time, effort, and money have already been dedicated by large, global companies to be significantly damaged by a one-term administration.

**SZ:** *What do you know about the Clean Energy and Sustainability Accelerator*

*which was introduced to Congress in February 2021? Can you help us understand the national climate bank model and how it would direct financing to clean energy tech and infrastructure projects?*

**WN:** The Accelerator is initially expected to be part of President Biden's infrastructure and climate package. This model is not new. Numerous states have employed similar programs in the past. As the name implies, what the initiative is meant to do is help accelerate the development of many environmental programs from decarbonization to reforestation. The proposed allocation into this program is significant. Initially the program would start with \$50b and for the first five years an additional \$10b will be available to maintain the \$50b level. This is all very positive. However, here is where my concern lies. Who will administer the program? How will funds be allocated? What stages of growth or development will a company or project need to be to qualify for funding? We have seen these types of government directed programs in the past turn into colossal failures. Solyndra comes to mind.

**SZ:** *How does Biden's infrastructure bill plan to invest in renewable energy and what is the potential for long-term job creation?*

**WN:** The infrastructure bill currently being debated has numerous avenues that would benefit renewable energy. A significant amount of funding is slated to go to improving and upgrading the electric grid. The US grid is a shamble of disparate segments held together with baling wire and kite string. Think back to the blackout of 2004. This rolling event should have been halted at any number of sub-stations but because of the lack of cohesion, was allowed to travel all the way to Canada. Upgrading and modernizing the grid would benefit not only the traditional power producers but would also be a positive for all other grid connected alternative power producers by establishing better, more sophisticated

interconnection sites for a smoother, uninterrupted onboarding of electricity. There is also direct funding earmarked for decarbonization initiatives along with new power production.

## “The US grid is a shamble of disparate segments held together with baling wire and kite string.”

**NR:** With respect to the job creation implications of the bill, it is important to separate investments that stimulate activity carrying jurisdictional constraints from those that contribute to global leadership in the renewable energy sector. For example, the plan proposes extensive expansion of tax credits for low carbon electricity production and electric grid resiliency upgrades. The implementation of both of these initiatives is inherently jurisdictionally constrained, as execution will be carried out by local domestic workers on a short-term basis with limited export potential. The bill also proposes investments in domestic semiconductor and electric vehicle manufacturing, both of which are inherently global, permanent initiatives carrying significant job creation and export potential.

**SZ:** *From a supply chain standpoint, where does the US stand vs. China and what is being done to improve domestic manufacturing and clean energy independence?*

**NR:** Currently, the US accounts for roughly 12% of global semiconductor manufacturing capacity, with over 80% of global capacity located in Asia, led by China. In addition to this, China accounts for 73% of the world's solar photovoltaic module production, while the US accounts for just 1%. Due to the semiconductor being the root of

technology, the status of clean energy insecurity is synonymous with technological insecurity. Biden's infrastructure bill includes steps to address this in two stated capacities. First, the bill proposes a \$50 billion investment in the National Science Foundation to focus on fields such as semiconductors and advanced energy technologies. Second, the bill proposes \$50 billion to create a new office at the Department of Commerce dedicated to monitoring domestic industrial capacity and funding investments to support production of critical goods.

**SZ:** *Can you speak to some of the opportunities in ancillary wind energy products and how they fit into the picture?*

**NR:** This is an interesting area of future growth. Over the years there have been significant advancements in design, placement, and components of wind systems. When we look at what goes into constructing a wind turbine, we see there are numerous components that over the years have become highly advanced. Take turbine blades for instance. We have seen exciting developments in materials, blade profiles, structure and how these factors affect aerodynamics and efficiencies. As we mentioned earlier, the miniaturization of electrical components has led to smaller, lighter, and more efficient designs of components. We have seen superconducting wires used in the manufacture of DVAR systems to manage the turbines reactive power. So, an investor looking for opportunities in the ancillary products realm can find numerous companies that supply this market.

**SZ:** *There are also capacity concerns when it comes to the electric vehicle transition for example. We simply do not have enough battery and semiconductor fabrication at the moment to reach the ambitious goals set by major U.S. automakers. How can we get there?*

**NR:** There are separate challenges associated with battery production and semiconductor manufacturing, respectively. The current semiconductor shortage we are experiencing is an illustration of the global acceleration toward digitization. At the height of the pandemic, the automotive industry experienced a recession while the demand for personal electronics increased considerably. This led to automakers redacting fabrication capacity reservations and technology companies expanding fabrication capacity reservations. The automotive industry has rebounded quicker than expected, and broad electronics demand has not subsided, leaving the automotive industry supply constrained. This is a capacity expansion issue, which is solvable, but takes time. Taiwan Semiconductor, in its Q1 print, outlined plans for record capital expenditures to address fabrication capacity expansion, with several planned expansions in the US. In addition to this, Intel rolled out its “IDM 2.0” strategy in its Q1 print, a move to drastically increase the company’s US fabrication capacity.

On the other hand, battery production is constrained by a number of items including raw material availability, geographic production concentration, and the general challenging nature of the business. Battery production requires significant capital investment, yields thin margins, and bears high quality control risks. Currently Asia, led by China, dominates the battery market. This is largely due to the Chinese state’s support to build out the full value chain domestically. The Biden administration has recognized the need to act in a similar fashion and has taken action by

engaging groups such as the Federal Consortium for Advanced Batteries.

**SZ:** *What are some of your core holdings in electric vehicles and trucking and why do you like these names (briefly)?*

**NR:** It is generally quite challenging to achieve pure play, downstream, electric vehicle exposure as an alternative investment manager. On the one hand, there are large, mature, incumbent vehicle manufacturers (Toyota, Volkswagen, Daimler, Ford, and General Motors to name a few) increasing capital spending to shift their focus to vehicle electrification with limited outsized growth potential.

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On the other hand, the pure play constituency without legacy auto DNA consists primarily of early-stage companies (Nikola, Workhorse, Lordstown, and QuantumScape to name a few). While there are investment opportunities in both categories, it is difficult to establish a sizable core position on a percentage of assets basis in a GDP plus growth name or an early-stage name exhibiting significant volatility.

Another challenge of note is geographic concentration as a percentage of total assets in core holdings related to vehicle

electrification. The mature names in the pure play compartment are largely beneficiaries of China's electrification initiatives (BYD, Kandi, Nio, Xpeng to name a few). Even Tesla, which is the bellwether in the sector, is increasingly a China growth story. It can be challenging to navigate this properly based on the flexibility of the investment mandate.

Consistent with our intersection of Graham-Doddsville and growth investing strategy, we focus on investment opportunities that catalyze vehicle electrification with an embedded margin of safety. We achieve this by investing in utilities catalyzing the electricity availability needed to support vehicle electrification and investing in the built environment governing vehicle electrification adoption through real estate investment trusts. We currently own NextEra Energy Partners on the power side and Prologis on the real estate side. NextEra has announced plans to roll out 1,000+ charging ports across 100+ locations in Florida, complete a school bus fleet electrification conversion of 43,000 buses, and has acquired eIQ Mobility, which is a software company focused on the vehicle electrification space. Prologis has an agreement in place with E-ON Energia to advance the adoption of electric vehicles at Prologis locations, is testing solar paved tiles at its locations, and accommodating its tenant's fleet electrification plans. Both names offer an appropriate level exposure to vehicle electrification for any sustainability focused mandate in addition to a well-covered dividend yielding in excess of comparable quality fixed income instruments, sophisticated capital allocation, and manageable share price volatility.

**SZ:** *What are the most strategic “picks and shovels” investments in the rapidly growing EV industry?*

**WN:** The charging/fueling infrastructure. As the rollout of alternatively powered vehicles continues, the means to fuel and charge them must be significantly increased. We believe this to be one of the most critical aspects of large-scale alternative vehicle adoption. We are beginning to see advancements in both rapid charging and onsite hydrogen reformation. As the rollout of these technologies accelerates, it will allow for longer distance trips without the need to return to base for refueling.

**NR:** It is prudent to reiterate that EVs are not that different from traditional ICE vehicles from a technical perspective. The bulk of the auto supplier complex will continue to oscillate with consumer discretionary spending and the health of the broader economy despite supplying the EV rollout. However, items such as charging infrastructure represent a “picks and shovel” angle that is part of a longer transitional trend that will not carry as pronounced of a correlation to consumer discretionary spending relative to the traditional auto supplier complex.

**SZ:** *Of the largest incumbent automakers that have started building their EV fleets, who is in the lead from a technology and production standpoint?*

**NR:** I don't think that any particular incumbent automaker has the lead in either category as it stands currently. However, we are seeing the incumbents take steps to enter the market strategically by utilizing their core

competencies. Each of the large automakers have years of technology sitting within their respective research and development departments that has ebbed and flowed in importance with consumer preference cycles. To name a few initiatives on electrification by the large automakers, General Motors is investing \$27B, Ford is investing \$12B, and Daimler is investing \$85B, and many others have announced similar initiatives. With this level of investment, I don't necessarily see technology being the key differentiator for the incumbent automakers.

**“Hydrogen is an interesting aspect of the new energy paradigm. It is lightest and most abundant element in the universe. It has many uses as an industrial gas and is bottled and shipped to facilities around the world.”**

However, I do see efficient allocation of these capital budgets to right size product offerings, manufacturing efficiency, and quality control to be a major differentiating factor. We have already seen a handful of significant prints go up with respect to this, one being General Motors' agreement to contract manufacture for Nikola. In addition to this, you have groups like Foxconn manufacturing electric vehicles on a contract basis, as was displayed in its agreement with Fisker. At the end of the day, the incumbent automakers are highly efficient manufacturing businesses with significant experience getting products

on the road and addressing quality control bugs in a timely and succinct manner. Many people have not covered the sector long enough to remember Tesla's growing pains when they started to manufacture at a reasonable scale. If they had not been the only pure play during the time of recall after recall, accident after accident, they probably would not exist today, and I think it will be exceptionally challenging for the smaller pure plays to achieve scale without doing a deal with one of the incumbents on the manufacturing and quality control end.

***SZ:** Switching gears a bit, I want to make time to touch on hydrogen, which is often overshadowed by wind and solar. What are the primary use cases of hydrogen power and in laymans' terms, how does the energy conversion process occur?*

**WN:** Hydrogen is an interesting aspect of the new energy paradigm. It is the lightest and most abundant element in the universe. It has the atomic number 1 which means it has one proton, it also has one electron. Hydrogen has many uses as an industrial gas and is bottled and shipped to facilities around the world. A Proton Exchange Membrane (PEM) fuel cell use hydrogen as its fuel source. Consequently, as we begin the roll-out of fuel cell powered vehicles, a hydrogen fueling infrastructure needs to be installed on a national/global basis. However, as we begin the integration of hydrogen into the alternative vehicle fueling equation many new challenges arise.

Onsite reforming and storing of Hydrogen have been problematic up to this point as securing an abundant and steady feed



stock has been difficult. Whether using steam methane reforming (SMR) or electrolysis, there needs to be an adequate supply of material from which the hydrogen can be extracted. Upon reforming, the hydrogen then needs a safe, reliable, and easily accessed storage medium which would allow for the fueling of passenger vehicles.

It should be noted that we view these challenges as engineering issues rather than technology issues. It is our belief that engineering hurdles can be overcome in a much shorter timeframe than technology issues. We believe that the technologies exist today to adequately produce an abundant amount of hydrogen, but engineering roadblocks need to be overcome to streamline the reforming and storing processes.

**SZ:** *For an individual investor interested in gaining exposure to renewable energy, how do you recommend approaching the space and building comfort with some of the more technical aspects of these companies/products?*

**WN:** As with any technology driven sector it is incumbent upon an investor to get a working understanding of the technologies in which they wish to invest. I would think a step wise methodology would be best. Decide on the area you would like to be involved. Search for the top companies in that sector. Go the company websites and read as much as possible. Download company filings, 10K, 10Q, etc. These are good sources of both technology information along with company and market developments. If your research leads you to become comfortable with the risk profile of your target company, then you can develop an

investment scenario that fits your overall financial planning model.

**SZ:** *Finally, what are you most excited about in the clean energy landscape broadly?*

**WN:** Energy Storage. There is considerable work being done in this area. The base challenge revolves around the fact that you cannot store and electron as an electron. A conversion process needs to take place. Batteries are the most well-known storage medium. There is much work being done to both increase the storage capacity of batteries along with exploring other chemistries that would enable greater storage and density properties. However, as we discussed earlier, hydrogen also stores energy which can be converted to electricity. Flywheels, super conducting wires, compressed air energy storage (CAES), heat and steam are also methods of storing energy. Many of these solutions are suited for discrete applications such as frequency regulation, back-up and standby power, space or water heating and peak shaving.

We are also seeing advancements in tertiary areas of storage, such as battery management systems (BMS), electronic miniaturization, advanced material developments and overall efficiency in design protocols.



## ABOUT SUMZERO

SumZero is the world's largest community of investment professionals working with the industry's most prominent hedge funds, mutual funds and private equity funds. With more than 16,000 pre-screened professionals collaborating on a fully transparent platform, SumZero provides direct access to thousands of proprietary investment reports every year and fosters on-going communication within the network.

The research on SumZero cuts through the noise that pervades the industry and provides its community with in-depth, actionable investment research and data. SumZero offers several ancillary services in support of our research platform. These services include capital introduction, buy-side career placement, media placement and more.

## ABOUT CAP INTRO

Cap Intro is a passive, reverse-solicitation platform that offers firms direct exposure to a fast-growing group of pre-vetted, institutional allocators for the purpose of raising capital.

Cap Intro is a matchmaking forum built on the premise of idea exchange and transparency. For managers, it is a place to socialize your fund, enhance your marketing efforts, and gain the recurring, high-quality exposure needed to scale AUM. For allocators, Cap Intro is a place to uncover talented managers.

Since 2016, Cap Intro has catalyzed hundreds of inbound inquiries to funds from accredited institutional investors. These inbound inquiries have led to the placement of over half a billion dollars in allocations. SumZero is not a broker-dealer and collects no success-based fees in the event of an allocation. SumZero will, on occasion, highlight successful transactions catalyzed through the platform as a demonstration of efficacy. The following is one example.

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