NUCLEATION
CAPITAL

Nucleation, verb [nuː.klɪˈeɪ.ʃᵊn]: *initiating the transformation from one physical phase to another, in this case catalyzing the transition away from the combustion of fossil fuels and towards a clean energy and carbon-managed economy.*

Nucleation Capital : FUND I

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A low-cost venture fund investing into ventures innovating within the advanced nuclear and deep decarbonization sectors, aimed at enabling the global decarbonization of economies.

The Problem

Energy is society's lifeblood.
But burning fossil fuels is
threatening our planet's livability.

Our Vision

Nuclear power emerges redesigned to solve humanity's conundrum — providing enormous amounts of energy to power 21st Century lives free CO_2 emissions — while reducing the risks of catastrophic climate change.

Fund I Overview

Headquarters – Silicon Valley, California
Investment Team – Valerie Gardner and Rod Adams

> **Valerie Gardner |** 2x tech entrepreneur, $.5B exit from MSFT acquisition. Co-founder of $300M investment advisory firm, now 20+ years. Sought to decarbonize portfolios by investing in next-gen nuclear in 2018, but there were no vehicles. Decided to launch the investment vehicle needed.
>
> **Rod Adams |** Former Navy Commander with eleven deployments, early advanced nuclear entrepreneur, nuclear industry veteran and respected visionary with more than 35 years of industry and policy engagement.

Launched 2020 – Started investing in Q3-21, now in its 4th year
Fund Structure – Quarterly subscription-based evergreen fund that is accessible online, with accredited investor-friendly minimum, fees and terms enabled by a low-cost venture tech platform by Angellist.
Minimum and Fees – Subscriptions start at $5,000/quarter and can be as high as $500,000. Standard fees of 2%/20%, reduced by 25% for terms of 8 quarters or more.
Portfolio Investments – Fund I invested in 15 deals over our first 14 quarters, with checks ranging from $100,000 to $750,000.
Co-Investors – Include Union Square Ventures, DCVC, The Engine, Capricorn, Boost, TPG, Pulse, Alumni Ventures, Decisive Point

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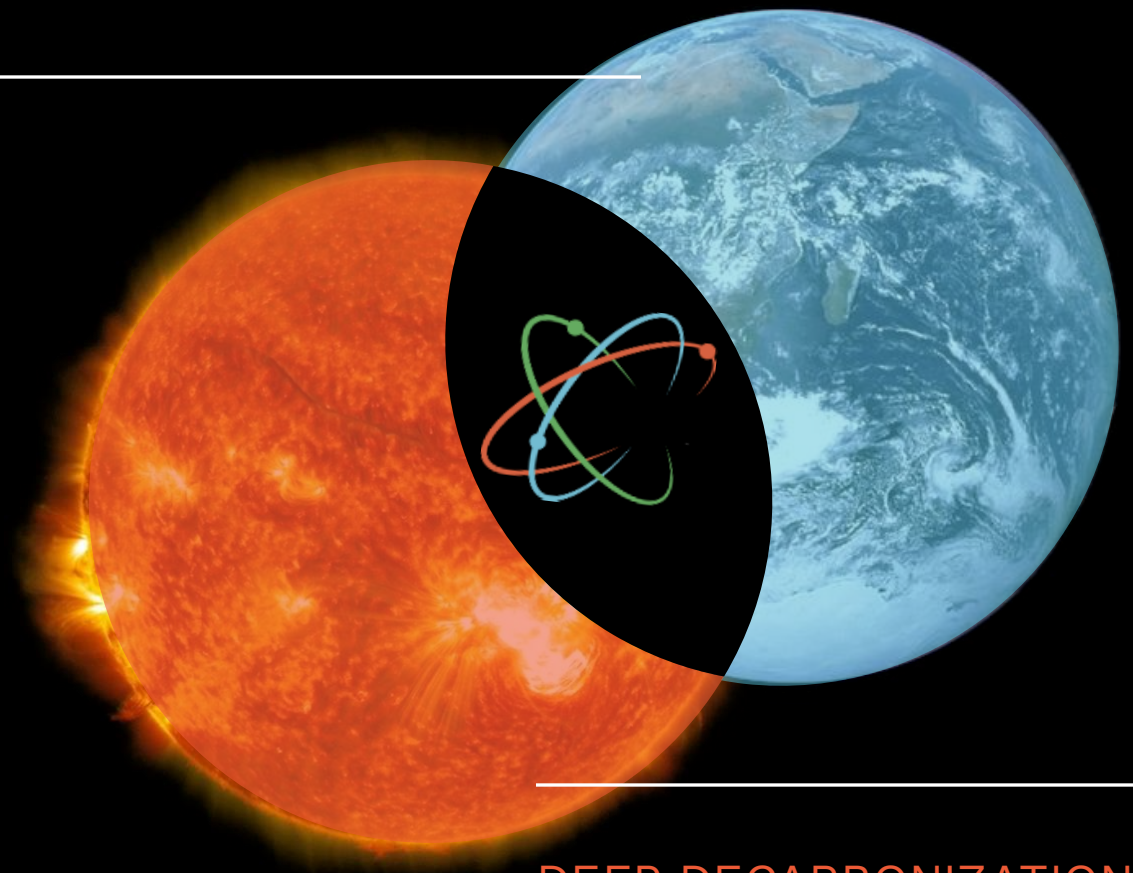
OUR THESIS

We invest in the critical technologies that will enable us to both reduce our carbon emissions and restore our planet’s atmosphere back to health in two primary ways:

ADVANCED NUCLEAR TECH

Can scale through manufacturing to better meet humanity's growing energy needs yet eliminate new CO_2 emissions.



DEEP DECARBONIZATION TECH

Draws down accumulated CO_2 emissions and utilizes it in a range of ways that either recycles it or prevent it from harming the climate.

We invest in all high-growth stages

STAGE	EARLY/SEED	VENTURE	STRATEGIC	LATE/PUBLIC
Funding Needs*	<$2-25	$25-$150	$150-500	$500-$2B
Valuation	<$10-100	$100-$1B	$1B-$5B	$5B+
Invest $ Range	<$1	$.5 - $2	$2.5-$5	$5-$15

BUSINESS GROWTH AREAS (BGA) (Remaining)

EARLY/SEED	VENTURE	STRATEGIC	LATE/PUBLIC
Liquidity	Liquidity	Liquidity	Liquidity
Competition	Competition	Competition	Competition
Sales Execution	Sales Execution	Sales Execution	Sales Execution
Testing/Regulatory	Testing/Regulatory	Testing/Regulatory	Testing/Regulatory
Business Model	Business Model	Business Model	Business Model
Design/Development	Design/Development	Design/Development	Design/Development
Team/Management	Team/Management	Team/Management	Team/Management

*In Millions or Billions ($B).
**Past BGAs (in blue) represent areas of reduced risk relative to active, remaining BGAs

BROAD INVESTMENT FOCUS

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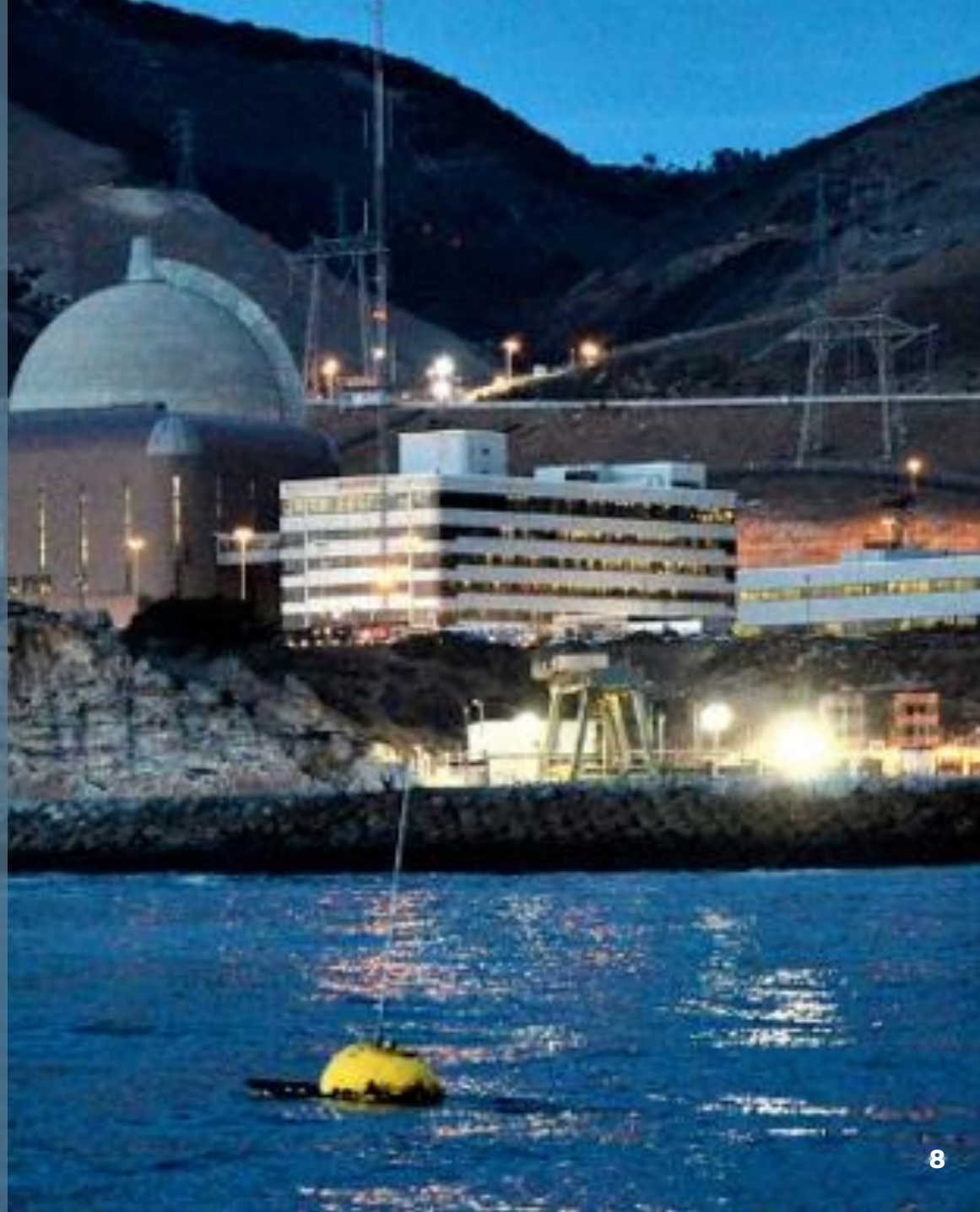
Nuclear power has produced the vast majority of our carbon-free (and toxin free) energy for decades but . . .

- Traditional plants are beginning to **age out**
- Advanced designs will provide **higher-quality heat and superior performance**
- New designs will serve a **broader range of customers' energy needs, be more cost effective and deploy more rapidly.**



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New Gen IV designs are on their way, in a variety of *sizes and configurations, to fill a far broader range of energy needs.*

(Artist concept of a 4th generation micro-reactor being delivered to an installation site.)

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Nucleation Team

EXPERIENCE, FOCUS AND VISION

Our team is comprised of thought leaders and experts connected in the mission of investing in and supporting entrepreneurs seeking to expand deployments of next-generation nuclear power.

> Climate and energy investors have long ignored nuclear—the source of the majority of our clean energy. Since 2016, we have watched entrepreneurs transform nuclear into an innovative cleantech sector. With not a single vehicle providing investor access, we decided to launch the fund to meet the need we saw the market.
>
> **— Valerie Gardner**

Valerie Gardner
Managing Partner

Rod Adams
Managing Partner

Rick DeGolia
Managing Member

Dr. Jonathan Tiemann
Chief Financial Officer

NUCLEATION CAPITAL

Our unique vision

Capitalizing on next-gen nuclear's unparalleled role in enablilng decarbonization.

Investors expect their wealth to endure yet climate change poses an existential threat to all that we care about. By investing in the most reliable and scalable clean energy solution there is, investors can meaningfully reduce that risk and increase overall portfolio alpha.

Valerie Gardner, Founder, Managing Partner

FORMER TECH ENTREPRENEUR AND LONG-TIME INVESTOR

- Co-founder and Principal of Tiemann Investment Advisors, a RIA with $300 million in AUM.
- CFO & General Counsel of WebTV Networks Inc., acquired by Microsoft.
- Co-Founder, CFO & General Counsel of Willow Peripherals Inc.
- Yale University MBA and JD from Northeastern University School of Law
- Co-founder, Climate Coalition, a U.S. non-profit advocating for nuclear-inclusive low-carbon climate solutions globally

Rod Adams, Managing Partner

FORMER NAVY COMMANDER, INDEPENDENT ATOMIC ENERGY EXPERT & VISIONARY

- Founder and President of Adams Atomic Engines, an early advanced nuclear startup.
- Patent-holder of a gas turbine control system for a nuclear heating process.
- Served 11 deployments in the US Navy, supporting nuclear power operations.
- Worked on the M-Power advanced nuclear reactor venture of B&W's (now BWXT).
- Founder and host of Atomic Insights and The Atomic Show podcast, which explore nuclear technology, companies, regulation, competition and public opinion.

Rick DeGolia, Managing Member

FORMER ATTORNEY, SERIAL ENTREPRENEUR, NOW CLEAN ENERGY LEADER

- Co-Founder and/or CEO of Genesys Telecom, Apptera, Ip2use, Green Wireless Systems, Invism and Cimbal, and holder of several related patents.
- Wilson Sonsini attorney who represented growth ventures, venture capital firms and investment banks and who participated in more than 100 financings and 25 IPOs.
- Current Chair of the Peninsula Clean Energy, a CCA; Atherton City Council member.

Jonathan Tiemann, PhD, Chief Financial Officer

INVESTMENT MANAGER, FINTECH INNOVATOR, FINANCIAL EXPERT & HISTORIAN

- Co-Founder, President and Chief Investment Officer of Tiemann Investment Advisors, an institutional-caliber 23 year-old quantitative investment firm, with $300 million in AUM.
- Former fintech developer, CEO, CIO, Chief Investment Strategist for up to $200B in AUM.
- Served on the Economic Advisory Board for FINRA, expert at valuation analysis and has taught US history for the Global History of Capitalism program at Oxford University.

Why advanced nuclear is highly competitive

MINIMAL ECOLOGIC IMPACT

- Dense fuel and small, compact land footprint
- Zero GHG emissions and zero toxic emissions in operations
- Can reuse retired coal or gas plant sites, save on build costs, while restoring communities
- WIll be able to use nuclear waste as fuel, reducing waste stores

RELIABLE, FLEXIBLE, RESILIENT, CLEAN

- Nuclear efficiency and capacity factors keep improving over time
- Flexible generation provides electricity, process heat, grid stabilization services, energy storage and load following, as needed
- Fully enclosed systems will operate reliably in a changing climate with extreme weather

SMALLER, MODULAR, TRANSPORTABLE

- Will be factory-made and so achieve cost reductions
- Smaller modules will be easily transported to build locations
- Reduced construction time reduces costs and financing needs
- System automation will reduce operating costs, augment safety

SIZED FOR TODAY BUT GROWS TOMORROW

- Scalable designs allow capacity to be added incrementally and cost-effectively, as needed
- Diverse designs will meet a wider array of distinctive customers' energy needs
- Carbon credits and support of revenue-generating "climate services" will improve project economics

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Simultaneously, we must expand our ability to *capture carbon dioxide, use it and/or sequester it to restore long-term safe CO2 levels in our atmosphere.*

The excess 1.5 trillion metric tons of CO_2 already forcing global warming to dangerous levels, will continue causing extreme weather events unless we can reduce the GHG levels.

Capturing CO_2 and sequestering large amounts are the only way to restore the climate to "normal" bounds but the scale needed to make a difference is enormous. The U.S. Government has appropriated billions to support CCUS.

Dozens of companies are developing technologies to capture CO_2 and more are working to convert it into useful products. Considerable know-how already exists: the challenge is achieving commercial designs that can cost-effectively scale (without adding new emissions).

The emerging CCUS industry will introduce a wide range of carbon-neutral products from liquid fuels to synthetic proteins. For all, the availability of low cost, 24x7 nuclear energy is an essential enabler of these technologies.

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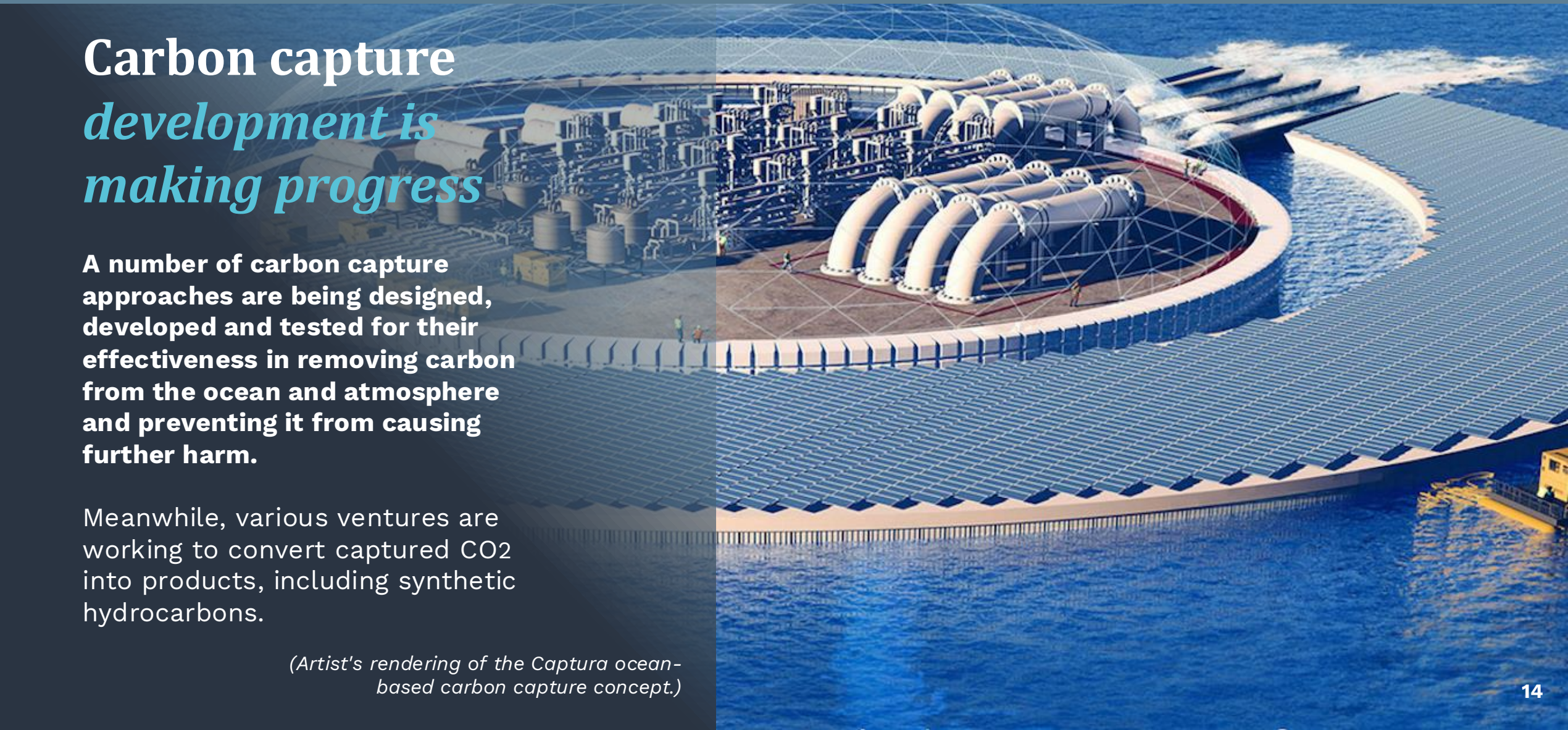
The Future of Carbon Capture

Carbon capture *development is making progress*

A number of carbon capture approaches are being designed, developed and tested for their effectiveness in removing carbon from the ocean and atmosphere and preventing it from causing further harm.

Meanwhile, various ventures are working to convert captured CO2 into products, including synthetic hydrocarbons.



(Artist's rendering of the Captura ocean-based carbon capture concept.)

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Our Portfolio*

* Portfolio as of Q3-2024.

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Portfolio Details

CORE-POWER	SUPPORTING CONVERSION OF MARINE TRANSPORT SHIPPING TO ADVANCED NUCLEAR	FISSION, MOLTEN SALT, REACTOR, URANIUM, MARINE TRANSPORT, SUPPLY & SUPPORT
RADIANT	FORMER SPACEX TEAM DESIGNS RAPIDLY DEPLOYABLE, REMOTE-CONTROLLED MICRO-REACTOR	FISSION, REACTOR, TERRESTRIAL, MOBILE, URANIUM, MICRO, MODULAR, TRISO
DEEP ISOLATION™	SOLVING NUCLEAR WASTE WITH LOW-COST DEEP-GEOLOGIC WELL BORES AND IMPERMEABLE CANISTERS	FISSION, WASTE STORAGE, TRADITIONAL NUCLEAR, DEEP GEOLOGIC, SUPPLY & SUPPORT
SYNERGETIC	APPLYING DEEP PROJECT INTEGRATION EXPERIENCE TO ACHIEVE EXPEDITED DEVELOPMENT OF SYNFUEL SOLUTIONS	SYNTHETIC FUELS, FISSION, TERRESTRIAL, SUPPLY & SUPPORT, MODULAR, CARBON DIOXIDE REMOVAL

Note: *This summary information is being provided to showcase investment selections made by Nucleation Capital in prior quarters. New subscribers do not get equity in prior deals, only in those deals closed during the quarters to which they subscribe.*

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Portfolio Details (Cont.)

FOCUSED ENERGY	ADVANCE LASER-BASED FUSION MODELED ON NIF BUT IMPROVED WITH MASS-PRODUCED LASERS	FUSION, INERTIAL, LASER, TERRESTRIAL, SUPPLY & SUPPORT, MATERIALS DETECTION
ULTRA SAFE NUCLEAR	PROPRIETARY TRISO FUEL WITH AN ULTRA-SAFE HIGH-TERMPERATURE GAS MICROREACTOR DESIGN	FISSION, REACTOR, TERRESTRIAL, MOBILE, SPACE, MICRO, MODULAR, TRISO, ENERGY STORAGE
copenhagen atomics	THERMAL BREEDING REACTOR USING MOLTEN SALTS, THORIUM AND MODULAR CONSTRUCTION	FISSION, REACTOR, TERRESTRIAL, SUPPLY & SUPPORT, MODULAR, MICRO, THORIUM, BREEDER, WASTE-TO-FUEL
PLANETARY	MARINE-BASED CARBON DIOXIDE REMOVAL USING EXISTING OCEAN-SITED PLANTS AND MRV MODEL	CARBON DIOXIDE REMOVAL, WASTE REPROCESS, MARINE OAR, SUPPLY & SUPPORT, MODULAR, TERRESTRIAL

Note: *This summary information is being provided to showcase investment selections made by Nucleation Capital in prior quarters. New subscribers do not get equity in prior deals, only in those deals closed during the quarters to which they subscribe.*

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Portfolio Details (Cont.)

NuclearN	PROVIDING SUPERIOR NUCLEAR OPERATIONAL PERFORMANCE AND SAVING WITH NUCLEAR AI SERVICE	FISSION, TRAINING, ARTIFICIAL INTELLIGENCE, OPERATIONAL EFFICIENCY, SUPPLY & SUPPORT
twelve	COMBINING CAPTURED CO2, WATER AND CLEAN POWER TO MAKE SYNTHETIC KEROSENE	SYNTHETIC FUELS, REACTOR, DECARBONIZATION OF ICE, MODULAR, TERRESTRIAL, SUPPLY & SUPPORT
BLUE ENERGY	DEVELOPMENT OF GEN 3.5 ADVANCED REACTOR MODULES IN CLOSE-IN, OFF-SHORE SITES	FISSION, TRADITIONAL NUCLEAR, MARINE SITED/COOLED, OFF-SHORE, SUPPLY & SUPPORT
Blykalla	DEVELOPMENT OF SIZE OPTIMIZED REACTORS UTILITIZING MOLTEN LEAD AS COOLANT / MODERATOR	FISSION, REACTOR, TERRESTRIAL, MODULAR, LEAD-COOLED, BREEDER

Note: *This summary information is representative and does not include deals completed in Q3 or Q4 of 2024.*

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Advisory Team

We are honored to have the support of a diverse and growing community of experts allied with our vision and mission.

(Partial listing. Additional advisor bios are available on our website.)

Ray Rothrock
Venrock / Investor

Meredith Angwin
Grid Expert & Author

Todd Allen
University of Michigan

Laura Smoliar
Cria Innovation Fund

Ross Koningstein
Google / Nuclear

Eugene Grecheck
Nuclear Energy Expert

Charles Peterson
Covington

Charles Oppenheimer
Oppenheimer Projects

Rani Franovich
Former NRC Staff

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Fund I Terms

Easy and affordable access through Angellist's online venture platform

Angellist Ventures serves as our Fund I custodian, providing client dashboards, back-end admin services, customer service and tax reporting. This powerful, automated, state-of-the art platform allows Nucleation to afford to give more investors access to advanced nuclear in an affordable format.

Subscription through a more traditional closing process is available, if preferred.

** Terms may be waived at GP's discretion.*

RECOMMENDED MINIMUMS*

Accredited Investors: $5,000 per quarter, 8 quarters
Qualified Investors: $50,000 per quarter, 8 quarters
Family Offices: $250,000 per quarter, 12 quarters
Institutional LPs: (Investments over $3M, see Fund II)

FEES & TERMS

Standard: 2% management/yr and 20% carried Interest.
Discounts: Discount available for 8 quarter terms or more and/or subscriptions of $50,000 or more per quarter.
Fund expenses: All ordinary fund expenses, including the Angellist Admin Fee, are covered by Nucleation Capital.

INVESTOR RIGHTS

Pro-rata equity participation in every deal closed for all quarters subscribed.
No GP carry paid until all invested capital for the entire term has been fully repaid from investment proceeds.
Fully-featured account portal for funding and reporting.
Priority access and discounted carry on all Nucleation Capital syndicated offerings (SPVs).

About Nucleation's evergreen structure

Technology-supported interface improves fund accessibility

- Fast and easy online subscription.
- Track reports and deals in one place.
- Online accreditation enables broader democratization as well as suitability.
- Standard terms reduce closing costs.
- Automation allows more investors to participate with very low minimums.
- Quarterly capital payments simplify both LP and GP cash management.
- Reduced fund administrative costs means reduced management fees.

How evergreen funds differ from standard (traditional) venture funds

- Investors may subscribe any time, with only past quarters closed to new LPs.
- investors may select the period over which to subscribe, minimizing risks.
- Flexible and automated electronic funding simplifies payment handling.
- No unexpected expenses or capital calls.
- The fund grows with its LPs, so investors can increase, decrease or cancel their subscriptions over time within one fund.
- Online portal tracks returns, K1s, etc.

Advanced Nuclear is now in demand

Growing energy demand from expanding Artificial Intelligence usage, manufacturing, blockchain, crypto, electrification of transportation, digitization, automation, quantum computing and robotics has inspired large energy buyers — including Google, Amazon, Microsoft, Meta and Nucor — to purchase nuclear power. This trend will grow even stronger as global warming worsens and human costs escalate.

"To accelerate the clean energy transition across the U.S., we're signing the world's first corporate agreement to purchase nuclear energy from multiple small modular reactors (SMR) to be developed by Kairos Power. ." [Link]

—Michael Terrell, Senior Director, Energy & Climate, Google

"Nuclear is a safe source of carbon-free energy that can help power our operations and meet the growing demands of our customers, while helping us progress . . . to be net-zero carbon across our operations by 2040. One of the fastest ways to address climate change is by transitioning our society to carbon-free energy sources, and nuclear energy is both carbon-free and able to scale—which is why it's an important area of investment for Amazon. Our agreements will encourage the construction of new nuclear technologies that will generate energy for decades to come." [Link]

—Matt Garman, CEO, AWS

"Powering industries critical to our nation's global economic and technological competitiveness, including data centers, requires an abundance of energy that is carbon-free and reliable every hour of every day, and nuclear plants are the only energy sources that can consistently deliver on that promise." [Link]

—Joe Dominguez, President & CEO, Constellation

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Image from L.A.'s Altadena fire.

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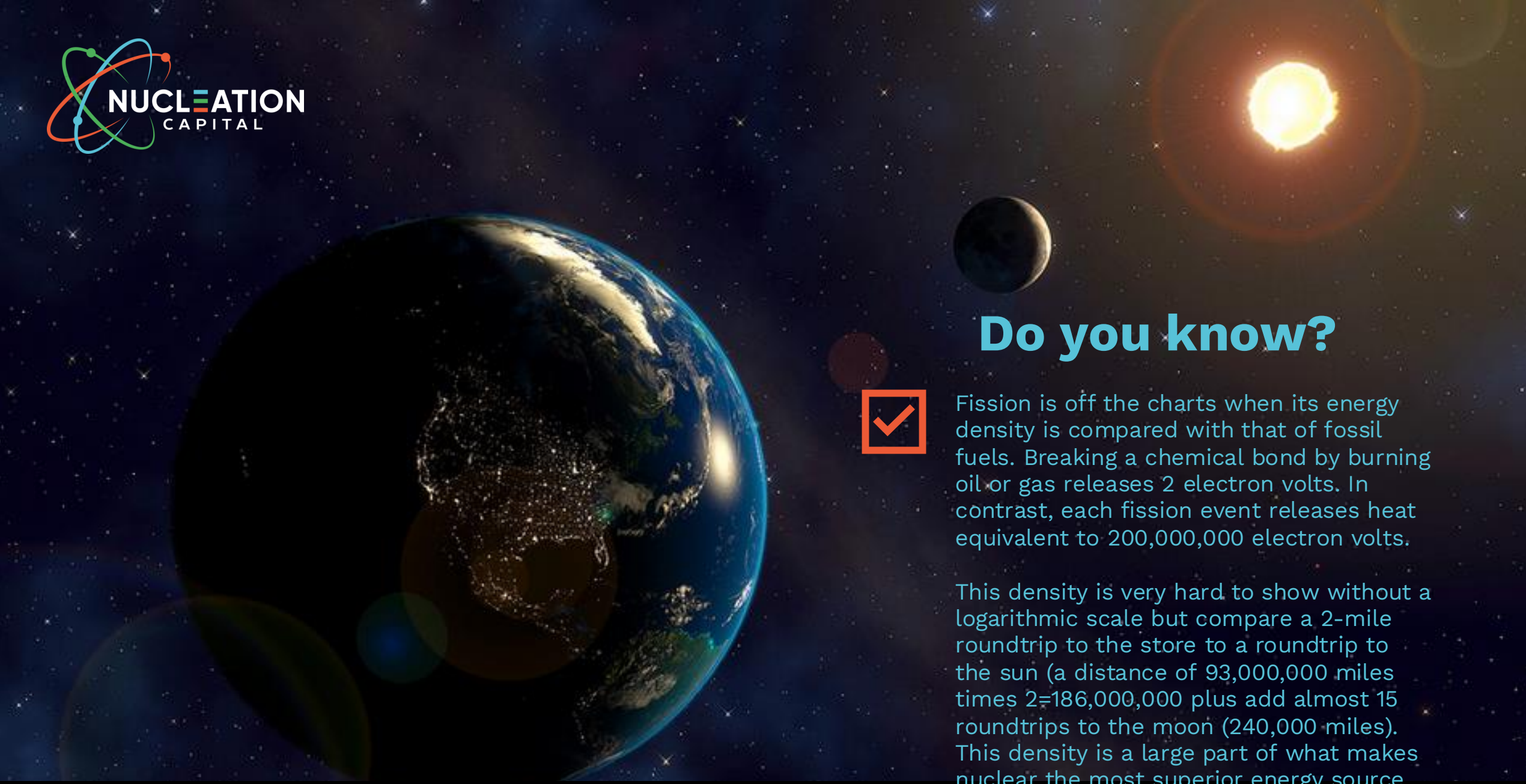

Do you know?

- Fission is off the charts when its energy density is compared with that of fossil fuels. Breaking a chemical bond by burning oil or gas releases 2 electron volts. In contrast, each fission event releases heat equivalent to 200,000,000 electron volts.

This density is very hard to show without a logarithmic scale but compare a 2-mile roundtrip to the store to a roundtrip to the sun (a distance of 93,000,000 miles times 2=186,000,000 plus add almost 15 roundtrips to the moon (240,000 miles). This density is a large part of what makes nuclear the most superior energy source we have.

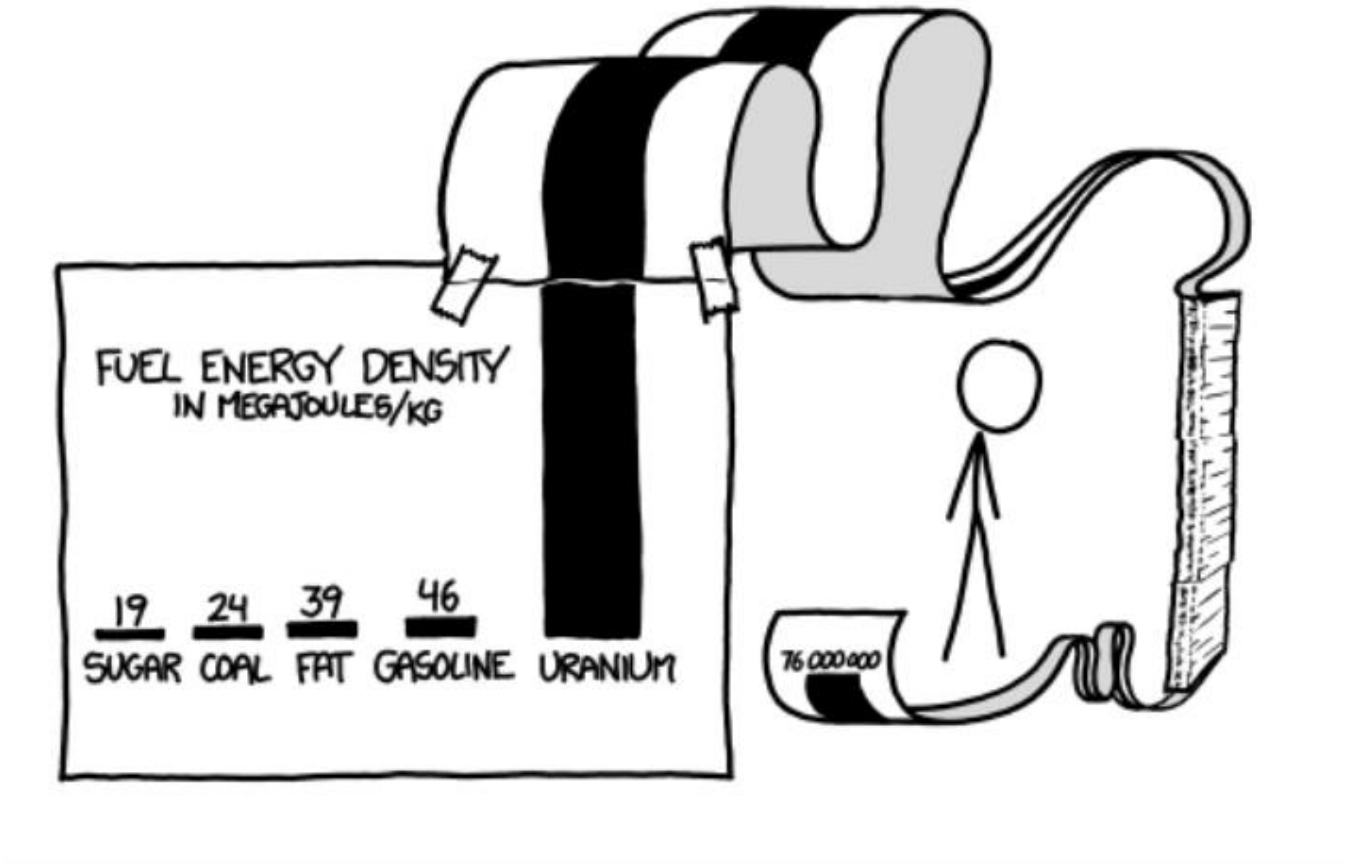

Image credit to xkcd.com