

The Case for Nuclear Energy

INVESTMENT CASE

Range Nuclear
Renaissance Index ETF
NUKZ

The nuclear industry is undergoing a global renaissance as the world recognizes the importance of reliable, zero-emission power generation. Energy security concerns following Russia's invasion of Ukraine have made nuclear power strategic for many countries. The rise of artificial intelligence and its power-hungry data centers is also driving investment in nuclear.

Global nuclear capacity, which was essentially flat for the last 25 years, is modeled to grow by at least a third to 2035. Over 30 countries plan to triple their nuclear capacity by 2050.

The Range Nuclear Renaissance Index ETF (NUKZ) seeks to track the performance, before fees and expenses, of the VettaFi Nuclear Renaissance Index (NUKZX), which aims to track the performance of a portfolio of stocks involved in the nuclear energy industry.

The Range Nuclear Renaissance Index ETF (NUKZ)

The Range Nuclear Renaissance Index ETF (NUKZ) seeks to track the performance, before fees and expenses, of the VettaFi Nuclear Renaissance Index. The index aims to track the performance of a portfolio of stocks that are involved in the nuclear fuel and energy industry.

Why Nuclear Matters Now

Energy Security is National Security

The U.S. Department of Homeland Security defines national security as the security and defense of a nation state, including its citizens, economy, and institutions. It includes "energy security" as one element of national security.

Energy security entails two vital components: availability and affordability of supply. Both components were compromised during the energy crisis that unfolded after Russia invaded Ukraine. While Russia has long weaponized its natural gas supplies, the events of 2022 put a finer point on the importance of energy security, particularly for Europe.

“Energy Security is Part of National Security.”

– US DEPARTMENT OF
HOMELAND SECURITY

Even the US with its abundant domestic supplies of natural gas has put an emphasis on energy security. In a May 2025 executive order, the need for resilient, secure and reliable energy supply for defense facilities and artificial intelligence capabilities were discussed as a national security imperative.

Nuclear has an important role to play in energy security given its reliable, baseload power. While uranium is necessary as fuel, strategic uranium reserves can support energy security in the event of supply shortages. The US established strategic uranium reserves in 2020.

Nuclear Power is Clean, Safe, and Efficient

Nuclear represents a unique solution to the world’s conflicting demands for more power and less emissions. Nuclear offers zero-emission, reliable baseload power generation and plants can operate for upwards of 80 years. Nuclear power’s reliability and clean qualities can be an important complement to intermittent renewables.

Clean

- Nuclear power plants produce no greenhouse gas emissions during operations
- Over the course of its lifespan, nuclear power produces the same amount of carbon dioxide-equivalent emissions per unit of electricity as wind and one-third that of solar

CLEAN AND EFFICIENT

92.5%

capacity factor

Zero

carbon emissions

Reliable

Nuclear power plants are more efficient and reliable than renewable energy sources. Capacity factor is a ratio that compares the electrical energy produced by a generating unit for some period of time relative to the electrical energy that could have been produced at continuous full power operation during the same period. More conversationally, capacity factor represents the percentage of time that power plants generate maximum power. A typical nuclear power plant has a capacity factor of 92.5%. This means that most nuclear power plants are operating at full capacity 92.5% of the time, compared to 35.4% for wind and 24.9% for solar.

Safe

Nuclear energy is one of the safest sources of energy, and safety standards for nuclear facilities are extremely high. Energy source safety considers environmental hazards - like the energy source's creation of greenhouse gases - and also production-related safety hazards.

One study showed that nuclear had 0.03 deaths per terawatt hour (TWh) of electricity produced compared with 18.43 for oil, 2.82 for gas, 1.3 for hydropower, and 0.04 for wind. Only solar, at 0.02, was lower.

Renewed Interest in Nuclear Power Globally May Drive Demand

Governmental policy is becoming more favorable toward nuclear energy. Over 30 countries have signed a declaration to triple nuclear energy by 2050 since the COP 28 climate conference in 2023, including the US, France, UK, Japan, and South Korea.

Below are some country- and region-specific examples of nuclear power policy improvements that point toward trending acceptance of nuclear power production globally.

United States

- President Biden signed into law the ADVANCE Act in July 2024, which passed with significant bipartisan support. The legislation was intended to enhance and modernize the US Nuclear Regulatory Commission.
 - In May 2025, President Trump signed four executive orders to further accelerate the adoption of nuclear power and address some challenges facing the industry. For example, one of those orders intends to bolster the nuclear workforce through new educational programs. The executive orders reinforced the goal of tripling US nuclear capacity from ~100 GW today to 400 GW by 2050.
-

- In October 2025, the Department of the Army launched the Janus Program to support the use of next-generation microreactors at military bases. The initiative is also intended to help support the broader nuclear and uranium supply chain.

Europe

- The European Union (EU) enacted legislation that included nuclear energy in its clean energy taxonomy. This Act opens the nuclear energy industry to low-cost "green funding" opportunities.
- Belgium decided to extend the operation of two existing reactors from 2025 to 2035.
- France announced that it will build at least six new nuclear reactors with an option to build an additional eight.
- The United Kingdom's 2022 Energy Security Strategy targets eight new large nuclear reactors and small modular reactors (SMRs) to achieve 24GW of nuclear power by 2050, an estimated 25% of projected electricity demand.
- In July 2025, the UK government decided to proceed with the new Sizewell C reactor, of which it owns 44.9%. In September 2025, the US and UK signed an agreement to collaborate on civil nuclear technologies.

China

China continues to lead in nuclear power capacity additions, adding to its 58 GW of operable capacity. China is building about half of the roughly 70 gigawatts (GW) of nuclear capacity under construction as of 2025.

BY THE NUMBERS (AS OF DECEMBER 2025)

438

operable nuclear
reactors

397 GW

capacity

09%

of global electricity

71

reactors under
construction

– WORLD NUCLEAR
ASSOCIATION, DECEMBER 2025

Projecting the Global Need for Greater Nuclear Power

With its ability to provide a baseload source of zero-emission energy, nuclear may play a prominent role in the future of energy, helping fill the need for clean energy and filling in the gaps in power supply resulting from the intermittent nature of renewables.

- McKinsey estimates that electricity demand will triple by 2050. As a result, up to 800 GW of new nuclear capacity could be necessary to reach net-zero targets. These additions would put nuclear at 10%-20% of total electricity produced in 2050.
 - In its World Energy Outlook 2025, the International Energy Agency models global nuclear capacity increasing by at least a third to 2035.
-

Nuclear Technology is Advancing

Newer technologies are making nuclear energy more affordable, efficient, and safer, enhancing its potential appeal.

Small Modular Reactors

SMRs tend to be in the early stages of development but represent an exciting opportunity. The first SMR in North America began construction in Canada in May 2025 and is expected to be operational by the end of the decade. Technology companies have been particularly interested in SMRs to support data centers. In late 2025, the International Energy Agency estimated that technology companies had agreements or had expressed interest in 30 GW of SMRs.

Additional Safety Measures

Research has led to safer, more efficient nuclear reactors. For example, new nuclear plants utilize passive cooling systems, meaning no power supply is needed to cool the core in the event of a malfunction.

Additionally, newer reactors produce more power from the same amount of input sources, creating less waste. At the same time, better encasement and cooling systems have also helped improve safety at nuclear reactors.

How May Investors Gain Exposure to Companies in the Nuclear Energy Sector?

The Range Nuclear Renaissance Index ETF (NUKZ)

The Range Nuclear Renaissance Index ETF (NUKZ) looks to provide exposure to companies in the nuclear energy sector by tracking the VettaFi Nuclear Renaissance Index (NUKZX).

The Investment Process

The fund seeks to own companies that have or are expected to have a significant part of their business operations related to the nuclear industry. Companies are analyzed based on their relationship to four key areas of the nuclear power supply chain.



**Advanced
reactors**



Utilities



**Construction &
services**



Fuel

The methodology for the underlying index weights stocks based on market cap within the four buckets listed. Diversified securities are capped at 3%, while other securities are capped at 10%. The index includes a single security floor of 1%. The index is reconstituted and rebalanced semi-annually.

Allocating to NUKZ

NUKZ may be appropriate for a portion of your portfolio's equity allocation. With its focus on nuclear energy, the fund may be suitable for investors seeking exposure to the energy or utilities sectors. NUKZ is designed to provide thematic exposure to the potential growth of the nuclear energy industry.

Sources

- IEA World Energy Outlook 2025, World Nuclear Association
- Homeland Security Defined, United States Environmental Protection Agency website, Retrieved 12/1/23
- WhiteHouse.gov
- Geophysical Constraints on the Reliability of Solar and Wind Power Worldwide, Nature Communications, 10/22/21
- How Can Nuclear Combat Climate Change, World Nuclear Association website, Retrieved 12/2/23
- Nuclear Energy Is The Most Reliable Energy Source And It's Not Even Close, Office of Nuclear Energy, U.S. Department of Energy, 3/24/21
- Ritchie, Hannah, What Are the Safest and Cleanest Sources of Energy, Our World in Data, 2/10/20
- Clifford, Catherine, What the Climate Bill Does for the Nuclear Industry, CNBC, 8/22/23
- Lopez, Nadia, Feds Allow Diablo Canyon to Stay Open While Seeking 20-Year Extension, Cal Matters, 3/2/23
- Nuclear Power Overview, International Energy Agency website, Retrieved 11/17/23
- Six More Countries Endorse the Declaration to Triple Nuclear Energy by 2050 at COP29, World Nuclear Association, November 2024
- United States Nuclear Regulatory Commission
- U.S. Army
- Reuters
- World Nuclear Association
- International Energy Agency
- What Will It Take for Nuclear Power to Meet the Climate Challenge, McKinsey & Company, March 2023
- Nuclear Power, International Energy Agency website, Retrieved 11/17/23
- World Nuclear Association, August 2023
- GE Verona
- VettaFi, ETF Trends
- Nuclear Power and Secure Energy Transitions, International Energy Agency, June 2022

Carefully consider the Fund's investment objectives, risk factors, charges and expenses before investing. This and additional information can be found in the Fund's full or summary prospectus, which may be obtained by visiting www.rangeetfs.com/nukz. Read it carefully before investing or sending money.

Risk Disclosures:

Investing involves risk, including possible loss of principal. There is no guarantee the Fund will achieve its stated investment objectives.

The Fund is non-diversified. Its concentration in an industry or sector can increase the impact of, and potential losses associated with, the risks from investing in those industries/sectors.

Investments in the energy industry are subject to significant volatility due to changes in commodity prices. Additional risks include changes in exchange rates, government regulation, world events, economic and political conditions in the countries where energy companies are located or do business, and risks for environmental damage claims.

Nuclear companies may be subject to substantial government regulation and contractual fixed pricing, which may increase the cost of doing business and limit the earnings of these companies. A significant portion of revenues of nuclear companies depends on a relatively small number of customers, including governmental entities and utilities. As a result, governmental budget constraints may have a material adverse effect on the stock prices of companies in this sub-industry.

International investments may involve risk of capital loss from unfavorable fluctuation in currency values, from differences in generally accepted accounting principles or from social, economic or political instability in other nations. Emerging markets involve heightened risks related to the same factors as well as increased volatility and lower trading volume. Investments in smaller companies typically exhibit higher volatility.

The Fund may invest in securities denominated in foreign currencies. Because the Fund's NAV is determined in U.S. dollars, the Fund's NAV could decline if currencies of the underlying securities depreciate against the U.S. dollar or if there are delays or limits on repatriation of such currencies. Currency exchange rates can be very volatile and can change quickly and unpredictably.

Because the Fund is new, investors in the Fund bear the risk that the Fund may not be successful in implementing its investment strategy, may not employ a successful investment strategy, or may fail to attract sufficient assets under management to realize economies of scale, any of which could result in the Fund being liquidated at any time without shareholder approval and at a time that may not be favorable for all shareholders. Such liquidation could have negative tax consequences for shareholders and will cause shareholders to incur expenses of liquidation.

The Fund is a recently organized investment company with no operating history. As a result, prospective investors have no track record or history on which to base their investment decision. Moreover, investors will not be able to evaluate the Fund against one or more comparable funds on the basis of relative performance until the Funds has established a track record.

Exchange Traded Concepts, LLC serves as the investment advisor of the funds. The Funds are distributed by SEI Investments Distribution Co. (SIDCO), which is not affiliated with Exchange Traded Concepts, LLC or any of its affiliates.

