Virtus Duff & Phelps Clean Energy ETF

NYSE ARCA | NAV Symbol VCLN | IOPV Symbol VCLN.IV | CUSIP 92790A702

MARKET REVIEW

The S&P Global Clean Energy Index finished up over 7% in the fourth quarter, celebrating the sector's first positive quarter for 2023. While the direction of interest rates has been a predominant topic throughout the entire year, one might be surprised that the U.S. 10-year Treasury yield finished 2023 at 3.88%, nearly unchanged from the end of 2022.

Meanwhile, despite the macro uncertainty around the direction of interest rates, underlying demand for the equipment used to facilitate the energy transition remains robust. For example, recent capital investment forecasts from the U.S. utility sector showed that demand for energy transition equipment not only remains strong, but in some cases is actually increasing as companies continue to allocate capital towards fleet transition and grid resilience in an environment of increasing electrification. Furthermore, a report by Rhodium Group and the Massachusetts Institute of Technology (MIT) showed that the U.S.'s commitment to a clean energy transition continues to strengthen, with total investment in clean energy, clean transportation, building electrification, and carbon management reaching $213 billion over the period from July 1, 2022, to June 30, 2023.

PORTFOLIO REVIEW

The top contributor to performance was Vestas Wind Systems. Vestas was strong after reporting a positive adjusted EBIT margin for the third quarter. This performance was well received by the market after Vestas previously faced multiple quarters of margin headwinds due to supply chain constraints. Furthermore, the company's U.S. order intake in the third quarter of 2023 exceeded the whole of 2022, an indication of continued strong demand for clean energy despite higher costs of capital. Sunrun Inc. was another top contributor to performance. As the U.S.'s largest rooftop solar developer, Sunrun's customers rely on lease-style financing arrangements to have their solar systems installed. A pullback in the U.S. 10-year Treasury yield from an intra-quarter high of ~5% is a help towards lowering the overall cost of installation. Sunrun has also observed strong demand for its home battery storage product, which can be paired with existing rooftop solar systems.

The primary detractor from performance in the quarter was SolarEdge Technologies Inc., which continued to face weakness due to a solar equipment oversupply situation in Europe. Accordingly, the company issued guidance for the fourth quarter of 2023 that was below consensus estimates. Plug Power was another detractor from performance after the company announced lower fuel cell deliveries, continued gross margin pressure, continued construction delays at its new green hydrogen production plant, and going concern language in its 10-Q due to continued heavy cash burn. Plug was further pressured in the quarter due to new IRS guidance on the treatment of the Inflation Reduction Act's (IRA's) hydrogen production tax credit. If the guidance is implemented as recommended by the IRS, Plug's new hydrogen production plants, which are still under construction, will face hurdles in achieving eligibility for the full $3/kg tax credit. This could be a risk to Plug if competing plants are structured in a way to garner the full tax credit. Importantly, the portfolio had underweight positions in both SolarEdge and Plug Power on average throughout the quarter.

INVESTMENT OUTLOOK

The macro backdrop is signaling interest rate cuts for 2024, which has positive implications for clean energy valuations. As 2024 progresses, we believe the market could switch from the "bad news is good news" stance regarding rates, inflation, and the Federal Reserve's actions to a "bad news is bad news" view as rate decreases may also be the reaction to real economic deterioration. Fundamentally, the clean energy sector maintains attractive long-term investment characteristics regardless of rate directions.

In the U.S., clean energy expenditures continue to see strong momentum among utility and industrial companies. Utilities are expecting another bump in capex with more spend dedicated to renewable power while addressing grid upgrades. Renewable capital deployment continues to be viewed as both profitable for investor-owned utilities and necessary from a customer, regulatory, and societal perspective. For the residential segment, consumers may take more time to adjust as the most recent net-metering remuneration in California (NEM 3.0) and the current level of interest rates may be prohibitive for household rooftop solar adoption. Lower solar module prices and higher residential utility rates are providing offsets to the noted headwinds. The IRA remains key and has already led to a pickup in clean energy investment activity. Further clarity from the U.S. Treasury has yielded mixed results thus far, with solar parameters coming in as expected while hydrogen guidelines are more restrictive.

The clean energy backdrop for Europe remains attractive. Political and regulatory pressure has eased following the 'energy crisis,' and visibility for the continent's main renewable developers is much improved. In addition, we believe wholesale electric power prices are structurally higher given that Russian gas was essentially fully replaced by more expensive imported LNG. Policy actions across the EU continue to support clean energy deployment, including fast-tracking renewable permitting, improved offshore wind support, and an ambitious power grid overhaul plan. Local and country-level action also continues.

Sector valuation is the most attractive we have seen in years. Coupled with downward pressure on interest rates, the clean energy equity outlook is quite compelling. Still, we highlight the importance of active management for clean energy investors given the technological, regulatory, political, and geographic nuances intra-sector. The Virtus Duff & Phelps Clean Energy ETF seeks to invest in businesses with strong growth outlooks, scale to maintain pricing power, and the ability to generate attractive returns.

INVESTMENT ADVISER

Virtus ETF Advisers LLC

INVESTMENT SUBADVISER

Duff & Phelps Investment Management Co.

INVESTMENT PROFESSIONALS

Benjamin Bielawski, CFA
Industry start date: 1995
Start date as Fund Portfolio Manager: 2021

Eric Fogarty, CFA
Industry start date: 1997
Start date as Fund Portfolio Manager: 2021

AVERAGE ANNUAL TOTAL RETURNS (%) as of 12/31/23

	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception (08/03/21)
NAV	7.20	-17.38	-17.38	n/a	n/a	n/a	-12.36
Market Price	7.05	-17.43	-17.43	n/a	n/a	n/a	-12.50
Index	7.45	-20.36	-20.36	n/a	n/a	n/a	-13.87

Returns for periods of less than one year are cumulative total returns.

Performance data quoted represents past performance. Past performance does not guarantee future results. Investment return and principal value will fluctuate so that shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data quoted. Please visit virtus.com for performance data current to the most recent month end.

The fund class gross expense ratio is 0.66% The net expense ratio is 0.59%, which reflects a contractual expense reimbursement in effect through 11/28/2024.

The Total Expense Ratio represents the Fund's Total Annual Fund Operating Expenses, which includes the management fee and other expenses where applicable, except for certain payments that are paid directly by the Fund, as described in the Prospectus. The Adviser has agreed to waive a portion of the management fee equal to 0.07% through at least November 28, 2024, which will have the effect of reducing the Fund's total expenses to 0.59%, excluding certain expenses as discussed above.

The Fund is an exchange-traded fund ("ETF"). The "net asset value" (NAV) of the Fund is determined at the close of each business day, and represents the dollar value of one share of the Fund; it is calculated by taking the total assets of the Fund, subtracting total liabilities, and dividing by the total number of shares outstanding. The NAV of the Fund is not necessarily the same as its intraday trading value. Fund investors should not expect to buy or sell shares at NAV because shares of ETFs such as the Fund are bought and sold at market price (not NAV) and are not individually redeemed from the Fund. Thus, shares may trade at a premium or discount to their NAV in the secondary market. Brokerage commissions will reduce returns. NAV returns are calculated using the Fund's daily 4:00 pm NAV, and include the reinvestment of all dividends and other distributions (reinvested at the Fund's NAV on distribution ex-date). Market price returns are calculated using the 4:00 pm midpoint between the bid and offer, and include the reinvestment of all dividends and other distributions (reinvested at the 4:00 pm bid/offer midpoint on distribution ex-date). Market price returns do not represent the return you would receive if you traded at other times.

TOP TEN HOLDINGS

TOP TEN HOLDINGS	% Fund
First Solar Inc.	4.58
Vestas Wind Systems A/S	4.37
Enphase Energy Inc.	4.25
EDP - Energias de Portugal SA	3.91
Iberdrola SA	3.36
Sunrun Inc.	3.25
Fortum Oyj	3.22
Rwe Ag	3.16
Prysmian Spa	2.99
The AES Corp.	2.98

Holdings are subject to change. To view the full list of holdings, please visit virtus.com.

TOP FIVE CONTRIBUTORS

TOP FIVE CONTRIBUTORS	% Contribution
Vestas Wind Systems A/S	1.63
Sunrun Inc.	1.14
EDP-Energias de Portugal SA	0.96
The AES Corp.	0.92
Fortum Oyj	0.80

BOTTOM FIVE CONTRIBUTORS

BOTTOM FIVE CONTRIBUTORS	% Contribution
SolarEdge Technologies, Inc.	-1.19
Meyer Burger Technology AG	-0.99
Plug Power Inc.	-0.98
Array Technologies Inc.	-0.76
Chart Industries, Inc.	-0.47

% Contribution: Absolute weighted contribution.

To obtain the top/bottom holdings calculation methodology, call 800-243-4361.

The Fund is an actively managed exchange-traded fund and does not seek to replicate the performance of a specified index. The Fund may have a higher portfolio turnover than funds that seek to replicate the performance of an index.

IOPV, or Indicative Optimized Portfolio Value, is a calculation disseminated by the stock exchange that approximates the Fund's NAV every fifteen seconds throughout the trading day.

Benchmark: The **S&P Global Clean Energy Index (net)** is designed to measure the performance of companies in global clean energy-related businesses from both developed and emerging markets, with a target constituent count of 100, calculated on a total return basis with net dividends reinvested. The index is unmanaged, its returns do not reflect any fees, expenses, or sales charges, and is not available for direct investment.

Notes on Risk: Exchange-Traded Funds (ETF): The value of an ETF may be more volatile than the underlying portfolio of securities it is designed to track. The costs to the fund of owning shares of an ETF may exceed the cost of investing directly in the underlying securities. **Equity Securities:** The market price of equity securities may be adversely affected by financial market, industry, or issuer-specific events. Focus on a particular style or on small, medium, or large-sized companies may enhance that risk. **Clean Energy Industry:** Developments in the clean energy segment could adversely affect the price and valuations of portfolio holdings. These developments include swift price and supply fluctuations caused by events relating to international politics, the success of project development and tax and other governmental regulatory policies. There could also be weak demand for clean energy company products or services, the obsolescence of existing technology or short product cycles, and falling prices and profits due to the supply of, and demand for, oil and gas along with competition from new market entrants. **Limited Number of Investments:** Because the portfolio has a limited number of securities, it may be more susceptible to factors adversely affecting its securities than a portfolio with a greater number of securities. **Foreign & Emerging Markets:** Investing in foreign securities, especially in emerging markets, subjects the portfolio to additional risks such as increased volatility, currency fluctuations, less liquidity, and political, regulatory, economic, and market risk. **Non-Diversified:** The portfolio is not diversified and may be more susceptible to factors negatively impacting its holdings to the extent the fund invests more of its assets in the securities of fewer issuers than would a diversified portfolio. **Market Price/NAV:** At the time of purchase and/or sale, an investor's shares may have a market price that is above or below the fund's NAV, which may increase the investor's risk of loss. **Market Volatility:** The value of the securities in the portfolio may go up or down inresponse to the prospects of individual companies and/or general economic conditions. Local, regional, or global events such as war or military conflict, terrorism, pandemic, or recession could impact the portfolio, including hampering the ability of the portfolio's manager(s) to invest its assets as intended. **Prospectus:** For additional information on risks, please see the fund's prospectus.

Please consider a Fund's investment objectives, risks, charges, and expenses carefully before investing. For this and other information about any Virtus Fund, contact your financial professional, call 800-243-4361, or visit virtus.com for a prospectus or summary prospectus. Read it carefully before investing.

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