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BBGI CLEAN ENERGY 100 USD INDEX AND STRATEGY

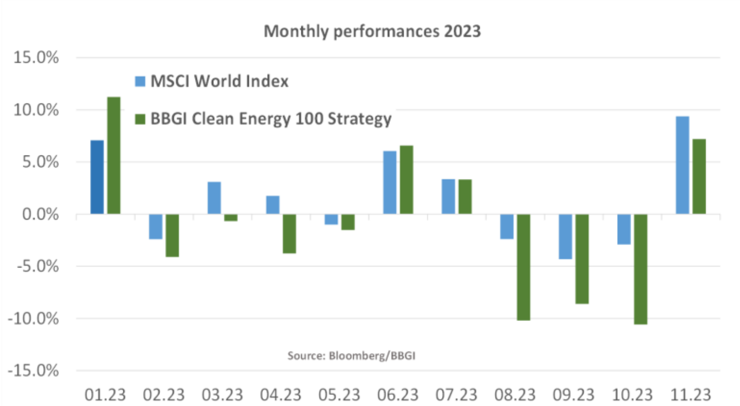
A BBGI Exclusivity since 1999

November 2023

Annualized performance of **+9.81%** since 1999

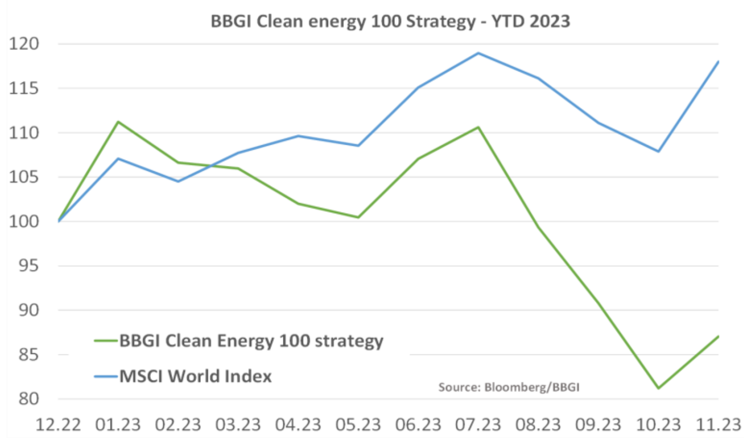
Renewable energies rebound in November

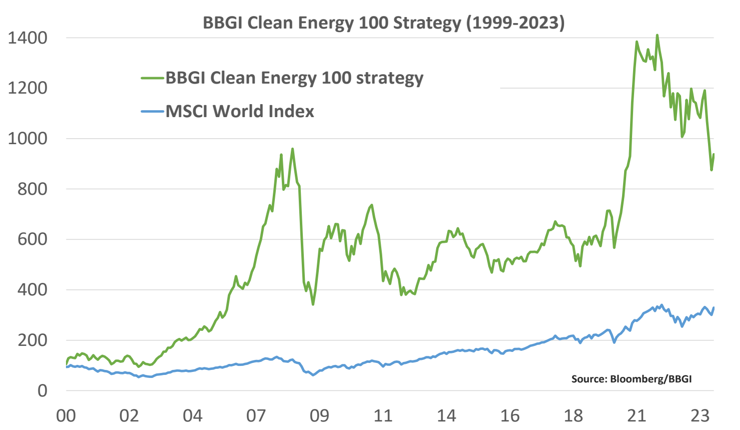
	Nov	YTD
BBGI Clean Energy 100 strategy:	+7.19%	-12.96%
BBGI Solar Sector:	+2.57%	-26.86%
BBGI Wind Sector:	+9.23%	-12.61%
BBGI Biofuel Sector:	+1.68%	-7.23%
BBGI Energy efficiency Sector:	+10.57%	-4.99%



After several months on a downward trend, the BBGI Clean Energy 100 strategy returned to the upside in November. Indeed, the easing of pressure on interest rates and the prospect of a change in US central bank policy benefited equity markets in November, and renewable energies in particular. As a result, the BBGI strategy rebounded by +7.19% this month. The segment that benefited most from these conditions was the energy efficiency segment, which climbed +10.57%, with the wind power segment following close behind with a gain of +9.23%. The photovoltaic industry returned to positive territory with a +2.57% rise, while the bio-energy segment also advanced by +1.68%. The solar sector suffered greatly during the year from the drop in residential demand, with EV-EBITDA ratios now 30% lower than a year ago, despite a very sharp rise in global demand for photovoltaic energy of +60% over the year 2023. The sector's big winner in November was Swiss company Meyer Burger. It is continuing its pivot within the industry towards the production of high-efficiency photovoltaic modules, and is forecasting an inflection point in 2024 to achieve its first positive year since the changeover.

The wind energy industry has had a tough few years and many headwinds. Indeed, rising production and materials costs and supply chain issues have been coupled with a high interest rate environment. We note that some major players in the offshore industry are considering refocusing on developing onshore projects that are less risky and quicker to implement (around 10 years for an offshore project). Nonetheless, a new, more positive interest rate environment from 2024 onwards and lower inflation could breathe new life into this segment, which has suffered greatly.





The systematic diversified strategy of the BBGI Clean Energy 100 Index has produced an annualized return of +9.81% since 1999 against +5.18% for the MSCI World

Special focus: Electricity market

Solar: +2.57%

The solar sector has suffered heavily from the drop in demand for residential photovoltaic installations, and now the industry's EBITDA ratios are -30% lower than at the same time last year, despite a very sharp increase in global demand for photovoltaic energy in 2023 (+60%). Nonetheless, a number of companies did well in November, most notably Meyer Burger of Switzerland. The Helvetian firm had initiated a pivot in its activity within the solar industry, moving towards the production of its own high-efficiency photovoltaic modules. Since this change, the company's production capacity has remained relatively low, but new partnerships and orders for photovoltaic modules could change the dynamic and support Meyer Burger's expansion plans. According to our analysis, production capacity could increase from 1GW in 2022 to 6.9GW in 2026, thanks to growth in photovoltaic demand, government support and newly concluded partnerships. Meyer Burger has signed purchase agreements with DE Shaw Renewable investment, Ingka investments and Baywa totalling 5.4GW, which will greatly increase the company's visibility. To achieve the production growth target, it is estimated that the company will need to spend around 800 million Swiss francs by 2026. Operating cash flow currently stands at around 150-300 million a year, which would mean that Meyer Burger would have to dip into its cash reserves to meet the target. In fact, the company has raised nearly 800 million between 2020 and 2022 through the issuance of green bonds and syndicated loans, which should make possible its expansion in the United States, supported by subsidies from the Inflation Reduction Act.

Biofuel: +1.68%

Biofuels stocks lagged the S&P 500 Index in 2023, as those with high exposure to carbon credits and project execution risks were the worst performers. RIN non prices in the U.S. have fallen by around 50% since the start of the year, and greenhouse gas allowance prices in Germany have more than halved, with LCFS (Low Carbon Fuel Standard) credit prices in California also still -30% below averages. Advances in carbon capture technology were a catalyst for the best-performing companies this year, although CO2 pipelines for ethanol suffered setbacks. The key differentiators to 2024 are low carbon intensity, balance sheet strength and distribution flexibility to withstand lower margins.

Energy Efficiency: +10.57%

The best performer in our Energy Efficiency segment was Bloom Energy, a US company active in the production of green hydrogen, whose share price jumped by +38.85%. Indeed, third-quarter results exceeded observers' expectations and, according to the company, put it well on track to achieve its sales targets for 2023. In addition, Bloom Energy very recently announced a 500MW agreement with SK Ecoplant, increasing their already existing partnership by 250M delivered between 2022 and 2023. The advantage of this new agreement is that a minimum of quarterly sales is included in the contract, which will help Bloom Energy to forecast its sales more accurately over the duration of the partnership. More broadly, we believe that Bloom Energy has a more attractive risk/return profile than its peers. The sale of fuel cells is a market that generates solid margins and should enable BE to generate free cash flow as early as 2025. Solid oxide technology should also enjoy a competitive advantage over PEM, which will also benefit the US company in the long term.

Wind: +9.23%

The Sales by Vestas, Goldwind and wind turbine manufacturers for 2024-25 may yet see double-digit growth, as high-profile cancellations of offshore wind projects in the US will have little effect on long-standing projects. Onshore wind farms will contribute to growth in 2026-30, as developers are likely to halt offshore projects and follow Orsted's example (two New Jersey sites halted on October 31). Offshore wind projects can often take more than a decade to develop. For this reason, we do not expect the recent cancellations to have a significant impact on sales in 2023-25. After the downturn in 2022, turbine sales are set to increase in 2023 and at an even faster pace in 2024 for the top five turbine producers: Vestas, Goldwind, Siemens Energy, GE and Nordex.