

BBGI CLEAN ENERGY 100 USD INDEX AND STRATEGY

A BBGI Exclusivity since 1999

December 2023

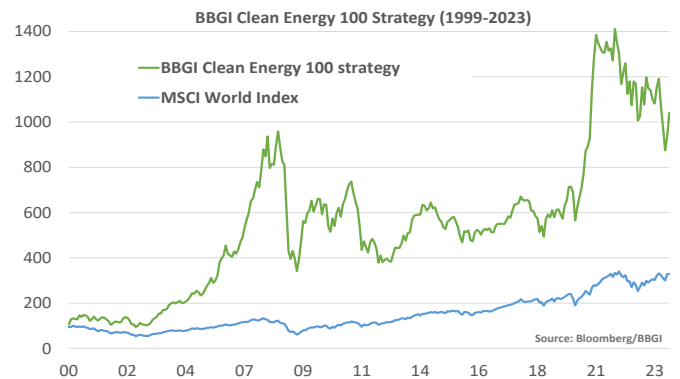
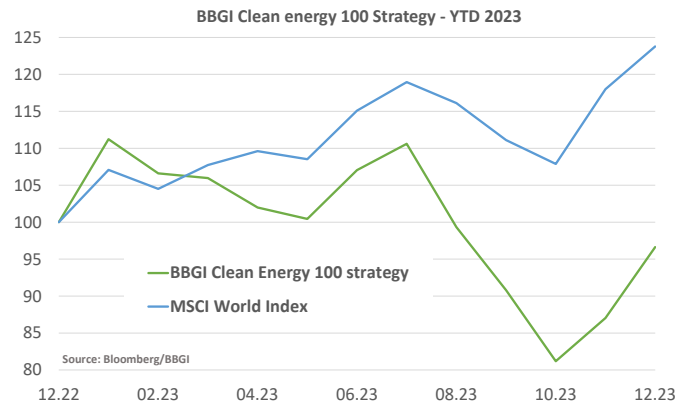
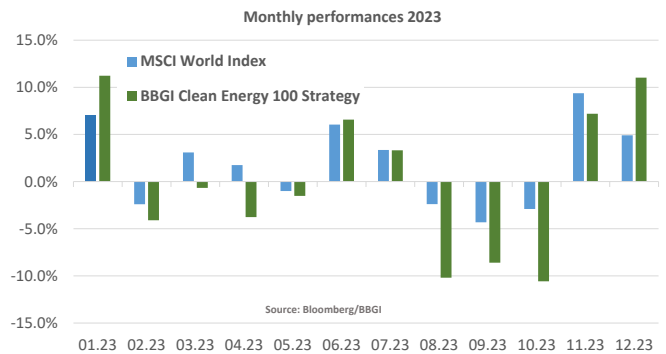
Annualized performance of
+10.25% since 1999

Renewable energies continue to rebound

	Dec	YTD
BBGI Clean Energy 100 strategy:	+11.03%	-3.36%
BBGI Solar Sector:	+14.81%	-16.03%
BBGI Wind Sector:	+15.63%	-1.05%
BBGI Biofuel Sector:	+8.84%	+0.97%
BBGI Energy efficiency Sector:	+7.83%	+2.44%

The BBGI Clean Energy 100 strategy ended 2023 with a positive performance, gaining +11.03% over the month of December. Since the beginning of the year, we have observed that the renewable energies theme has been heavily penalized by the Fed's restrictive monetary policy, the rise in interest rates and the resulting increase in financing costs. However, in our view, the cycle of interest rate hikes in the USA is well over, and inflation is back in a more acceptable zone than in the past. We believe that, during 2024, we will continue to see an improvement in inflationary conditions and, in particular, a change in monetary policy on the part of the Fed.

This new, more favorable environment should be the first to benefit companies with high exposure to external financing, such as those in our renewable energies theme. The fundamentals are still very good for sustainable finance and renewable energies. Major action plans such as Fit 55 in Europe, the Inflation Reduction Act in the United States and, more broadly, the Net Zero Goal for 2050 are still active and, in this new, more favorable environment, could support the growth of renewable energies in 2024.



The systematic diversified strategy of the BBGI Clean Energy 100 Index has produced an annualized return of +10.25% since 1999 against +5.39% for the MSCI World

Comments by sector:

Solar: +14.81%

Global solar capacity additions grew by over +60% in 2023, and we expect solar power to remain the fastest-growing sub-segment of the energy sector in 2024, with our analysis suggesting that demand could increase by over +20%. Increasingly favorable economic conditions could help sustain growth in 2025-27. FirstSolar, Meyer Burger and Sunnova, among the fastest-growing companies in our peer group, could see their sales increase by more than +30% in 2024. The profitability parameters of these companies may improve thanks to lower input costs and strong political support, notably the Inflation Reduction Act. The share prices of companies in the photovoltaic industry contracted in 2023, largely due to the current restrictive monetary policy, which penalizes companies with high debt exposure. Nevertheless, the government's proposal to reduce greenhouse gas emissions by mid-century could increase global demand for solar panels to over 600 gigawatts by 2030, up from around 400 GW this year. This seems achievable, given growth trends, and we believe that annual solar demand could exceed 1terawatt (1,000 GW) worldwide over the next 10 years. Such a scenario would provide a significant sales advantage for Maxeon, Enphase, FirstSolar, SolarEdge and other global competitors, particularly in 2025-30. The industry would need to increase its production and installation capacity at a compound rate of around +13% per year until 2030 to meet the greenhouse gas emission reduction target until 2030 to reach this threshold, which is less than the +24% recorded in 2015-22.

Biofuel: +8.84%

Biofuels are expected to see slower growth in 2024, as existing policy leeway narrows and inflation concerns put pressure on emissions reduction requirements. Renewable diesel production exceeds mandates in the US, limiting margins in the absence of operational disruptions. Lower gasoline prices could reduce ethanol's high margins, while decarbonization looms on the horizon. Decarbonization is essential in view of the 2025 regulations. Liquid biofuels are a competitive solution for reducing transport emissions, particularly in aviation, heavy-duty and marine applications, but it is difficult to achieve profitable scale. Indeed, demand for bioenergy is dictated by the policy in place, and according to our analysis, demand is set to exceed the available RIN quota until 2025. At the end of 2023, we observed a production surplus of +7%, while in 2025 we expect a delta of +17%.

Energy Efficiency: +7.83%

In December, it was once again the hydrogen companies that took the lead in our energy efficiency segment. US company Fuel Cell posted a spectacular gain of +31.15, while Ballard Power also jumped +26.53%. However, the large-scale adoption of this energy source, essential to the decarbonization of heavy industries such as metallurgy, may have just run into a short-term problem. Indeed, the Biden administration will be releasing billions of dollars in tax credits, which will come with their own set of requirements. According to the recent proposal, the credits will be reserved for electrolyzers using electricity from renewable energies produced by projects created within the last 3 years. This rule, deemed far too restrictive by some in the industry, poses problems for older wind and solar projects, as well as for existing nuclear power plants and hydropower plants eager to adopt this new technology. The debate is raging in the United States, and the implementation of these rules could have a very negative impact on the economic viability of this technology.

Wind: +15.63%

Global wind installations are set to reach a new record in 2024, surpassing 110 gigawatts for the first time, up from around 103 GW in 2023, and we expect double-digit growth to continue in 2025-26. More than half of this year's capacity increases are expected to take place in China, with the country's largest wind turbine manufacturer, Goldwind, set to increase its peak capacity by +11% year-on-year. Growth forecasts are higher for European manufacturer Vestas, and the potential is higher than analysts' figures for 2025-26 for equipment suppliers. Group earnings, led by Vestas, could rise significantly in 2024 due to lower steel prices and higher wind turbine prices. As with many other renewable energies, the development of the wind power segment will depend on government incentives. We have seen the sector grow at a compound annual growth rate of +15% from 2005 to 2021, and we believe that double-digit growth is still possible. The IEA's main scenario sees annual installations of over 150 gigawatts by 2028, while its accelerated outlook sees over 200 GW in the same year. The LCOE has risen slightly to around \$50 per watt, taking high prices into account, which is about the same as a new solar installation and over 50% cheaper than a European natural gas or coal-fired power plant. Offshore wind power is less expensive, at around \$160 per MWh, but development conditions are tougher and more time-consuming than on land, which could penalize this niche.