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http://www.nasdaq.com/article/a-primer-on-alternate-energy-etfs-etf-news-and-commentary-cm451739 From Zack's

A Primer on Alternate Energy ETFs – …

Solar and wind are gradually transforming the way we produce and consume energy, driving the ongoing global energy transition. Although some better-established sources of alternative energy - hydro, wind, biomass and waste, not to mention solar photovoltaics ("PV") - are supported extensively, niche renewable energy sources such as geothermal and concentrated solar power are also on the rise, natural conditions permitting.

Per the latest report released by the Solar Energy Industries Association ("SEIA"), the U.S. solar energy industry grew 41% year over year to reach 1,354 megawatt ("MW") in the third quarter of 2014. This marked the second-largest quarter of solar installations in the history of the market, buoyed by the utility solar PV market. As of Sep 2014, more than 36% of all new electricity generation came from solar energy ….
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ETFs to Tap the Sector
For investors seeking to play this trend in ETF form, the following series of alternative energy ETFs could make interesting picks.

WilderHill Clean Energy Portfolio (PBW)
Launched in March 2005, PBW tracks the WilderHill Clean Energy Index and manages an asset base of $139.3 million which it invests in a portfolio of 53 stocks.

It is well diversified across various sectors. Information Technology takes the top spot with a 41.58% allocation followed by Industrials (24.16%) and Utilities (14.86%).

The fund's top 10 holdings jointly contribute 27.32%. The product invests almost 90% in companies that are involved in the generation of cleaner energy. It charges a hefty 70 basis points in fees.

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Global Clean Energy Portfolio (PBD)
This ETF follows the WilderHill New Energy Global Innovation Index, giving investors exposure to about 104 companies that are engaged in renewable sources of energy and technologies facilitating cleaner energy.

Assets under management are just over $64.6 million and the expense ratio is 81 basis points a year. In terms of performance, PBD has rewarded investors with returns of 30.29% in a 3-year span. The fund's top 10 holdings contribute 19.3% to it.

PBD is heavy in Industrials, as this represents 36.81% of the fund. This is followed by Information Technology (32.11%) and Utilities (20.15%). In terms of countries, the U.S. dominates with 32.07% followed by China with 15.25%.
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Bottom Line

The depletion of fossil fuel reserves, new and advanced technologies, accompanied with more competent alternative energy applications have made green power more feasible, injecting optimism into the sector. Yet, investors should closely track the political factors that could impact the sector. These include eco-friendly mandates and renewable energy agendas to see if potential benefits will spill over to the renewable companies and the sector ETFs.