

The ISE Clean Edge Global Wind Energy Index

2021 Research Update

Mark Marex, Product Development Specialist

The ISE Clean Edge Global Wind Energy Index (GWE) was launched on December 16, 2005. GWE currently consists of 47 components, each meeting the following constraints: minimum market capitalization of \$100MM; average daily trading volume of at least \$500,000 over the most recent three months; and a minimum equity float factor of 25%. Clean Edge - a leader in cleanenergy indexing and research - determines the universe of constituents, using primary and secondary sources to select only companies that are "engaged and involved in some aspect of the wind energy industry such as the development or management of a wind farm; the production or distribution of electricity generated by wind power; or involvement in the design, manufacture or distribution of machinery or materials designed specifically for the industry." As part of its research, Clean Edge further segments the index's constituents into Pure Play and Diversified categories, with a more stringent set of conditions for the former including at least "50% or more of revenues and/or generating assets (energy capacity and/or production) coming from wind-related activities." The index is modified market capitalization-weighted such that Pure Play constituents as a group comprise 60% of index weight, with the remaining 40% allocated to Diversified. Pure Play constituents are individually capped at 8% (for the Top 5) and at 4% (for the remaining) at each semiannual index rebalance, while Diversified names are capped at 2% each.

Investors can access this index through the First Trust Global Wind Energy ETF (Ticker: FAN).

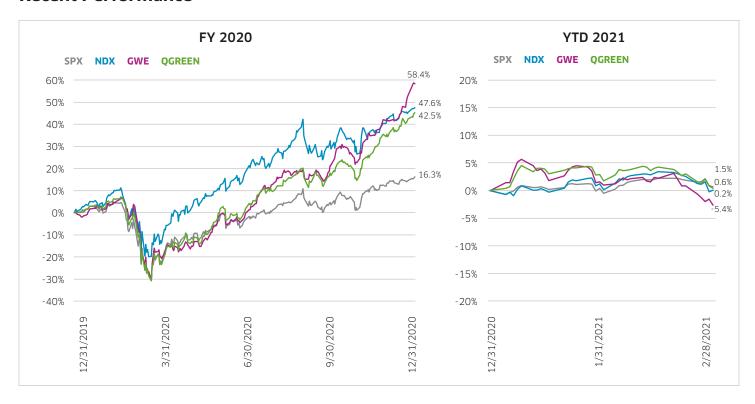
Unlike oil, which saw massive, unprecedented disruption as a result of the Covid-19 pandemic, wind energy experienced a banner year - in the US and globally.

Recent Performance

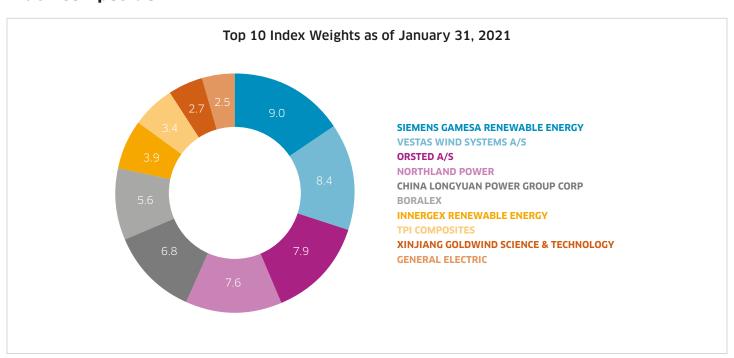
GWE was up an impressive 58.4% on a price-return basis in 2020, besting the S&P 500 by more than 40 percentage points. It also outperformed the Nasdaq-100 (NDX), which recorded one of its best annual returns ever. The similarly solid performance of QGREEN, the Nasdaq OMX Green Economy Index of 300+ companies across multiple areas of green energy and sustainability, indicates that 2020 was a uniquely strong year for the broader sector. So far in 2021, GWE is down nearly 5% as of February 28.

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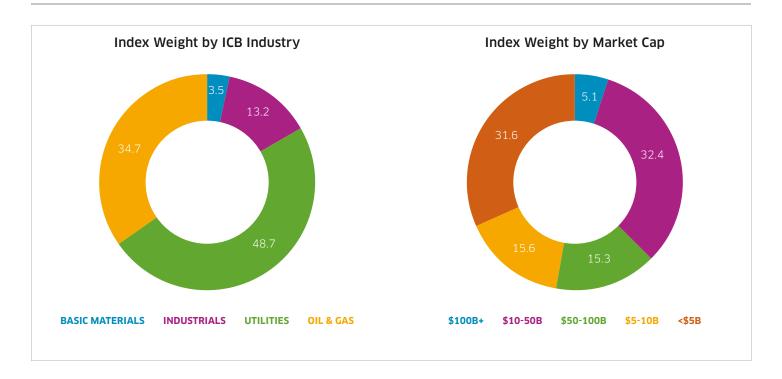
Recent Performance



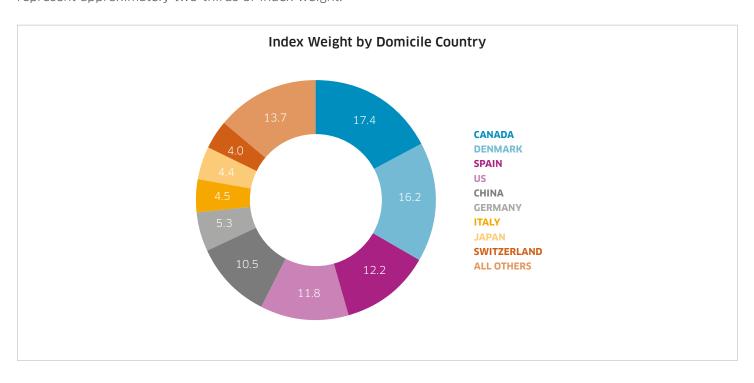
Index Composition



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GWE's composition is fairly concentrated, with the Top 5 constituents comprising 39.6% of index weight and the Top 10 at 57.7%, as of January 31, 2021. Composition is also fairly concentrated from an industry perspective (per ICB), with more than 80% of index weight coming from Utilities and Oil & Gas companies. From a size perspective, index weights are more balanced: firms with market capitalizations under \$5B contribute nearly one-third, as do firms between \$10-50B. Megacap firms (>\$100B) contribute only 5%, with the remaining split equally across the \$5-10B and \$50-100B buckets. Finally, from a country perspective, Canada/Denmark/Spain contribute a substantial amount of weight relative to the size of their economies; along with the US & China, the top 5 country exposures represent approximately two-thirds of index weight.



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All in all, GWE's performance has been driven by broad strength in its constituent pool, with only 10 of 52 companies held throughout 2020 contributing a negative return. 8 of its Top 10 holdings by weight throughout the year were also Top 10 contributors to returns. As a group, the Top 10 contributors generated 52.9% of the index's 62.4% total return, and averaged a total return of 150.9% each (corresponding to their time spent in the portfolio in 2020). Of the current crop of Top 10 constituents by weight, only General Electric registered a negative return in 2020, down 3.2%. Just outside of the Top 10, CS Wind Corp – a South Korea-based manufacturer of wind towers and platforms – was a standout, up 425% on a total return basis in 2020.

Wind Energy Industry Update

Unlike oil, which saw massive, unprecedented disruption to both its supply and demand as a result of the Covid-19 pandemic, wind energy experienced a banner year – in the US and globally. Per the US Energy Information Administration (EIA), wind generation set new daily and hourly records towards the end of 2020, reaching a peak of 17% of total electricity generation on December 23.¹ For the year overall, the EIA estimates wind's share in the US electricity market increased from 7.4% in 2019 to 8.8%, on its way to exceeding 10% in 2021.² Approximately 21 gigawatts (GW) of wind turbine generating capacity came online in 2020, blowing past the previous record of 13.2 GW added in 2012. Further capacity additions of 12.2 GW are expected in 2021, representing 31% of the total renewable generating capacity to be added in the US.³ A robust combination of tax credits, declining costs, increasing efficiency, cheaper project funding, and an overall societal shift towards preferring renewables over fossil fuels heralds a continuation of wind's recent momentum.

Beyond the US, the Global Wind Energy Council (GWEC) expects a compound annual growth rate of 3% for new wind installations from 2020-2024. China is leading the way after announcing 71.7 GW of new wind capacity installed in 2020, almost double the global total of 39 GW added in 2010. Adjusting for latent volume that was installed in 2019 but connected in 2020, the true figure becomes 45.5 GW – still a record year for the Chinese wind market. Globally, an estimated 82.3 GW of new capacity came online in 2020, growing 36% year-over-year and representing a new record.⁴

As the power source offering the greatest carbon mitigation potential per MW of all the renewable energy technologies, wind energy seems to have indeed entered a golden age – and GWE offers the purest index strategy to track the industry's growth. While a myriad of competitor products may provide broader exposure to clean energy technologies, the ISE Clean Edge Global Wind Energy Index is the only one that specifically tracks companies specializing in wind.

- 1 https://www.eia.gov/todayinenergy/detail.php?id=46617
- 2 https://www.eia.gov/todayinenergy/detail.php?id=45856
- 3 https://www.eia.gov/todayinenergy/detail.php?id=46416
- 4 https://gwec.net/a-gust-of-growth-in-china-makes-2020-a-record-year-for-wind-energy/

ETFs currently tracking GWE include the First Trust Global Wind Energy ETF (Ticker: FAN). Sources: Nasdaq Global Indexes, FactSet, Bloomberg, EIA, GWEC.

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