Monthly Solar Energy Market Report

January 2022

HANetf & EQM Indexes

Solar Energy UCITS ETF
TANN
69bps
IE00BMFNWC33
Product Inception Date: 09/06/2021

For Professional Clients Only. Capital at risk.
All data as of 31/12/2021
This report was written by, and is the opinion of the TANN index providers EQM Indexes

Key Takeaways

Despite some headwinds, U.S. solar industry growth is still strong. In 3Q21, U.S. installed capacity jumped 33% year-on-year to 5.4 GW, marking the most additions on record for the three-month stretch between July and September. This comes despite expectations that the U.S. solar industry will grow 25% less than previously forecast during 2022, according to a report released by the Solar Energy Industries Association and Wood Mackenzie. The lower growth estimates are due to supply chain constraints and rising raw material costs according to the report. In addition to general supply chain issues, solar shipments have been disrupted for months after an anonymous group filed a petition with the U.S. Department of Commerce asking tariffs to be extended to Thailand, Malaysia and Vietnam. The petition was dismissed in November.[1]

EU solar installs beat record in 2021 and growth continues. A new report by SolarPower Europe shows 2021 was the best year for solar installations in the EU with a record-breaking 25.9 GW of photovoltaic (PV) capacity connected to the grid. This is a 34% year-on-year jump. The EU Market Outlook for Solar Power 2021-2025 report, released in December, predicts that the expansion will continue. By 2025, the EU will reach a cumulative PV capacity of 327.6 GW, doubling from 164.9 GW today, under the most likely Medium Scenario in the report. By 2030, the forecast is for a total capacity of 672 GW. In 2021, Germany remained the top solar market in the EU with expected installations of 5.3 GW for an 8% on-the-year increase. The leader in installations per capita is the Netherlands with 765 W/capita, a jump of 42% from 2020. SolarPower Europe also reviewed EU member states' National Energy and Climate Plans (NECPs) and concluded that all would reach their solar goals by 2030 or earlier. Estonia and Latvia have actually met their targets, and Poland, Ireland, and Sweden will do so next year.[2]

US trade agency promotes four-year extension of Section 201 solar tariffs. The US International Trade Commission recommended that President Joe Biden extend import tariffs on solar cells and modules for another four years. The commission, known as the USITC, said in a Dec. 8 report that while domestic solar manufacturers have made a "positive adjustment" to foreign competition since the tariffs were imposed in 2018 by former President Donald Trump, companies in the U.S. continue to require trade protection "to prevent or remedy serious injury." It is up to Biden to decide whether to maintain the tariffs, which are set to expire in February. The Solar Energy Industries Association, or SEIA, a trade group that opposes the duties, urged Biden to let the tariffs expire. The Biden administration has also made it a priority to boost domestic manufacturing. The Build Back Better Act, which is being negotiated in the Senate, includes tax credits for domestic solar manufacturing. However, the USITC said production incentives are not a substitute for the safeguard tariffs it is

[1] https://www.cnbc.com/2021/12/14/us-solar-industry-will-grow-25percent-less-than-expected-in-2022-report-finds.html?__source=iosappshare%7Ccom.apple.UIKit.activity.Mail
[2] https://www.solarpowereurope.org/new-market-report-2021-the-best-year-in-european-solar-history-2022-europe-set-to-hit-30-gw-installation-level/

recommending. US production of crystalline silicon solar modules increased 371.8% between 2018 and 2020, to 2.2 GW, according to the commission report. That is a fraction of the 19.2 GW of solar capacity the country installed last year.[3]

Macro Outlook

If passed, the Biden Administration's Build Back Better Act would be a major market stimulant for this solar industry, establishing a long-term driver for continued solar growth in the U.S. Should the bill be signed into law, energy consultant firm Wood Mackenzie forecasts that the U.S. will install an additional 43.5 GW of solar capacity over the baseline forecast between 2022 and 2026. This would bring cumulative solar capacity in the United States to over 300 gigawatts, which is triple the amount of solar deployed today, according to the report.[4]

This historic legislation features the most ambitious and transformational clean energy policies ever considered by the U.S.[5] It includes a 10-year extension of the solar Investment Tax Credit (ITC) with direct pay, significant domestic manufacturing incentives, tax credits for energy storage and transmission, workforce development provisions and a suite of additional policies that will help America lead the world's transition to a clean energy economy. The Build Back Better plan would increase the investment tax credit (ITC)--a subsidy for solar installations--from its current 26 percent rate to 30 percent, meaning more savings for residents who install solar panels. It will also ensure the ITC stays in place for at least 10 years. Previously, the ITC has been extended for only a handful of years at a time.[6]

The Solar Energy Industries Association's (SEIA.org) latest U.S. Solar Market Insight shows that passing the Build Back Better Act will spark an avalanche of solar development and economic activity in every state across the country. The report forecasts that the amount of solar deployed in the U.S. will triple to 300 gigawatts (GW) in just the next five years if the bill becomes law. This would drive $234 billion into the economy and require at least 450,000 American workers. This jolt of clean energy investment will not just flow to large solar markets. Smaller, less established markets will see significant increases in solar deployment and the jobs and private sector investment that come with it. The number of states with over 1 GW of solar installed will double from 21 to 42. States like Oklahoma, Wisconsin, Kansas, Iowa and Montana will see their small solar markets grow into robust industries that are vital to the state economy, while large solar markets such as Texas, California, Nevada and New York will continue to flourish.[7]

Solar Energy Performance Table
As of 31.12.21

	1M	3M	6M	YTD	12M	SI
Solar Energy UCITS ETF	-9.45%	-2.89%	-11.37%	2.47%	NA	2.47%
EQM Global Solar Energy Index	*-9.56%*	*-2.86%*	*-10.82%*	*3.25%*	*-16.41%*	*3.25%*

Please note that all performance figures are showing net data.
Source: Bloomberg / HANetf. Data as of 31/12/2021

Performance before inception is based on back tested data. Back testing is the process of evaluating an investment strategy by applying it to historical data to simulate what the performance of such strategy would have been. Back tested data does not represent actual performance and should not be interpreted as an indication of actual or future performance. Past performance for the index is in USD. Past performance is not an indicator for future results and should not be the sole factor of consideration when selecting a product. Investors should read the prospectus of the Issuer ("Prospectus") before

[3] https://www.spglobal.com/platts/en/market-insights/latest-news/energy-transition/120921-us-trade-agency-favors-extending-solar-tariffs-despite-developer-opposition
[4] https://www.cnbc.com/2021/12/14/us-solar-industry-will-grow-25percent-less-than-expected-in-2022-report-finds.html?__source=iosappshare%7Ccom.apple.UIKit.activity.Mail
[5] https://www.renewableenergyworld.com/policy-regulation/whats-in-the-latest-build-back-better-budget-deal-for-renewable-energy/#gref
[6] https://www.inc.com/kevin-j-ryan/build-back-better-biden-budget-infrastructure-plan-green-tech-sustainability.html
[7] https://www.seia.org/blog/build-back-better-solution-solar-supply-chain-problems-and-price-increases

investing and should refer to the section of the Prospectus entitled 'Risk Factors' for further details of risks associated with an investment in this product. **Please note that all performance figures are showing net data.**

Product Details

Solar Energy UCITS ETF (TANN) is a UCITS compliant exchange traded fund domiciled in Ireland.

The Solar Energy UCITS ETF 'TANN' seeks to offer pure-play exposure to the rapidly growing global solar industry.

The TANN Solar ETF tracks the EQM Global Solar Energy Index (SOLARNTR) which is focused on companies that derive significant revenue from solar energy-related business operations including manufacturing of photovoltaic, solar cells, and systems; producers of solar power generation, equipment, and components; providers of solar power system installation, development, and financing; and/or manufacturing of solar-powered charging and energy storage systems.

TANN is scheduled under Article 8 under the Sustainable Finance Disclosure Regulation (SFDR). Companies will be ESG screened for compliance with UN Global Compact principles plus operational business involvement in the fields of oil sands, fossil fuel, or controversial weapons.

Visit the TANN Fund Page for more information.

Trade TANN

Exchange	BBG Code	RIC	ISIN	Valoren	SEDOL	Currency	TER
London Stock Exchange	TANN LN	TANN.L	IE00BMFNWC33	-	BMTR168	USD	0.69%
London Stock Exchange	TANP LN	TANP.L	IE00BMFNWC33	-	BMTR1D5	GBP	0.69%
Borsa Italiana	TANN IM	TANN.MI	IE00BMFNWC33	-	BL6KDR8	EUR	0.69%
Deutsche Boerse Xetra	TANN GY	TANNG.DE	IE00BMFNWC33	-	BL6KDT0	EUR	0.69%

Stephen Derkash

Mr. Derkash leads EQM's Global and ESG Product initiatives. He has over twenty years of global portfolio management, investment banking and equity research experience, and has worked as a Portfolio Manager at Millennium Management, a $40 billion hedge fund, and at UBS Asset Management. He is the Founder of BlueRunner Global Advisors, a boutique investment advisory firm focused on emerging markets equity investing, and prior to Millennium and UBS, Stephen worked with Nicholas-Applegate Capital Management, in sell-side research with a leading European bank in Brazil, and on the emerging markets investment banking team at Lehman Brothers in New York. He holds an MBA from Wharton, an MA in International Studies from the University of Pennsylvania's Lauder Institute, and a BA from Georgetown University.

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1. HANetf ICAV, an open-ended Irish collective asset management vehicle issuing under the terms in the Prospectus and relevant Supplement for the ETF approved by the Central Bank of Ireland ("CBI") ("ETF Prospectus") is the issuer of the ETFs. Investors should read the current version of the ETF Prospectus before investing and should refer to the section of the ETF Prospectus entitled 'Risk Factors' for further details of risks associated with an investment in the ETFs. Any decision to invest should be based on the information contained in the ETF Prospectus.

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   i. the precious metals ETCs under the terms in the Base Prospectus approved by both the Central Bank of Ireland ("CBI"), the UK Financial Conduct Authority ("FCA") ("ETC Prospectus") and the final terms of the relevant precious metals series (together, "ETC Securities Documentation"); and
   ii. the carbon securities ETCs under the terms in the Base Prospectus approved by the FCA ("FCA ETC Prospectus") and the final terms of the relevant carbon allowance (together, "FCA ETC Securities Documentation").

   Investors should read the latest versions of the ETC Securities Documentation and the FCA ETC Securities Documentation before investing and should refer to the section of the Base Prospectuses entitled 'Risk Factors' for further details of risks associated with an investment in the ETCs. Any decision to invest should be based on the information contained in the ETC Securities Documentation and the FCA ETC Securities Documentation.

3. ETC Issuance GmbH, a limited liability company incorporated under the laws of the Federal Republic of Germany, issuing under the terms in the Prospectus approved by the Bundesanstalt für Finanzdienstleistungsaufsicht ("BaFin") and the final terms ("Cryptocurrency Prospectus") is the issuer of the ETCM ETCs. Investors should read the latest version of the Cryptocurrency Prospectus before investing and should refer to the section of the Cryptocurrency Prospectus entitled 'Risk Factors' for further details of risks associated with an investment in the ETCs contained in the Cryptocurrency Prospectus. Any decision to invest should be based on the information contained in the Cryptocurrency Prospectus.

The ETF Prospectus, ETC Securities Documentation, FCA ETC Securities Documentation and Cryptocurrency Prospectus can all be downloaded from www.hanetf.com.
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- in any other circumstances falling within Articles 1(3), 1(4) and/or 3(2)(b) of the Prospectus Regulation (as may be locally implemented),

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