

Monthly Solar Energy Market Report

November 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 31/10/2022

This report was written by, and is the opinion of the TANN index providers EQM Indexes

Key Takeaways

Global solar installations rose a +21% in 2021 and is on track to grow +49% in 2022. According to the International Energy Agency's (IEA) Trends in PV Applications 2022 report, the world installed around 174GW of solar PV in 2021, a 20% jump on the previous year, and is expected to deploy 260GW this year. This level is the highest ever recorded for PV installations, despite the pandemic related perturbations which have delayed market development in several countries.

Global polysilicon capacities to reach 536GW (+82% by year-end 2023): According to Clean Energy Associates (CEA). The projected increases follow sustained polysilicon price hikes this year, in part due to power rationing in China and silicon shortages. However, CEA research published in August said that polysilicon prices will drop throughout 2023 as sizeable manufacturing capacities come online.

Greece runs entirely on renewables for the first time in its history: On Friday October 7, for a period of around five hours, for the first time in the history of the Greek electricity system, the demand was covered 100% from renewable energy sources. Renewables made up 46% of Greece's power mix in the eight months to August this year, according to Greek climate think-tank The Green Tank, which was up from 42% in the same period in 2021.

Please remember that all performance figures are showing net data. Past performance is not indicative of future performance, and when you invest in ETFs your capital is at risk.

Macro Outlook

Solar projected to become 10 times cheaper than gas in Europe, according to a new study from Oslo-based energy research company Rystad Energy. Natural gas is presently very expensive in Europe, due to the plunge in Russian gas exports. Rystad Energy reports that spot prices on the Netherlands-based Title Transfer Facility (TTF) gas hub, the main reference for Western Europe, have risen from an average of €46 per megawatt-hour (MWh) in 2021 to €134 per MWh so far this year – an increase of 187%. However, with more than 50 GW of new solar and wind capacity expected to be commissioned in 2022, renewable energy will continue to play a significant role as a lower cost alternative. Rystad Energy forecasts that TTF prices will stabilize at around €31 per MWh by 2030, which puts the levelized cost of electricity (LCOE) of existing plants closer to €150 per MWh. That's still three times more than the LCOE of new solar PV facilities. For gas-fired plants to continue to be competitive, gas prices would need to fall closer to €17 per MWh and carbon prices would need to fall to €10 per metric ton, which is, according to Rystad, "currently unthinkable."

Solar Energy Performance

As of 31.10.2022

	1M	3M	6M	YTD	12M	SI
Solar Energy UCITS ETF	-6.07%	-17.86%	1.41%	-17.05%	-31.67%	-15.00%
<i>EQM Global Solar Energy Index</i>	<i>-6.02%</i>	<i>-17.66%</i>	<i>1.90%</i>	<i>-16.43%</i>	<i>-31.18%</i>	<i>-13.71%</i>

Please note that all performance figures are showing net data. Source: Bloomberg / HANetf. Data as of 31/10/2022
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 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. When you invest in ETFs and ETCs, your capital is at risk.

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	TANN.GE	IE00BMFNWC33	-	BL6KDT0	EUR	0.69%

Stephen Derkash



University.

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.

Important Information

Communications issued in the UK (ETFs and ETCs)

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Communications issued in the European Economic Area ("EEA") relating to ETFs

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Communications issued in the EEA relating to ETCs

The content in this document is issued by the relevant Issuer.

The Issuers

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.
2. HANetf ETC Securities plc, a public limited company incorporated in Ireland, issuing:
 - 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") and the final terms of the precious metals (together, "Metals ETC Prospectuses");
 - ii. the carbon securities ETCs under the terms in the base prospectus approved by the UK Financial Conduct Authority ("FCA") and the relevant final terms of the carbon securities (together, "FCA Carbon ETC Prospectus"); and
 - iii. the carbon securities ETCs under the terms in the base prospectus approved by the Central Bank of Ireland ("CBI") and the final terms of the carbon securities (together, "CBI Carbon ETC Prospectus").

Investors should read the latest versions of the relevant ETC prospectus before investing and should refer to the section of the relevant ETC prospectus 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 relevant ETC prospectus.

3. ETC Issuance GmbH, a limited liability company incorporated under the laws of the Federal Republic of Germany, issuing under the terms in the Base Prospectus approved by the Bundesanstalt für Finanzdienstleistungsaufsicht ("BaFin") and the final terms ("Cryptocurrency Prospectus") is the issuer of the ETC Group 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, Metals ETC Prospectus, FCA Carbon ETC Prospectus, CBI Carbon ETC Prospectus and Cryptocurrency Prospectus can all be downloaded from www.hanetf.com.

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