

ENERGIE
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SCHWEIZ

Investments in new renewable energy production outside Switzerland by Swiss energy providers and institutional investors

Report - update 2021



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The present update 2021 is a short version (with updated data as per November 2021) of the original report «Investitionen in Erneuerbare-Energie-Anlagen Schweizer Energieversorger und institutionelle Investoren» from September 2016 which is downloadable at: www.ezs.ch -> über uns -> Dokumentation

Energie Zukunft Schweiz AG (EZS), February 2022, V1.2

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Disclaimer

The disclosures of this report are a snapshot of the most important Swiss investments in renewable energy known to us. This report is based on online published and publicly available information and can contain estimates by EZS (in certain cases). Every included company with an estimated portfolio of over 50 MW installed capacity has been given the opportunity to comment and, if necessary, correct the proposed capacity/production values. The investment portfolios of the companies listed may since have changed as a result of purchases and sales of investments or shares. The listing does not claim to be complete. Double counts cannot be ruled out due to the occasionally complex participation structures. Smaller holdings of investors not included in research or not listed in the sources may be missing from the listing. There are investors who explicitly do not wish to be named in this report. Their investments are not included in these figures.

Summary

Energie Zukunft Schweiz (EZS) has researched investments in European new renewable energy production (particularly PV, wind, small hydro) by major Swiss energy providers as well as important institutional investors.

Swiss energy providers and institutional investors invest heavily in new renewable energy production, especially in Switzerland's neighboring countries. To date (fall 2021), they have invested in *non-Swiss* production facilities with an annual production of about **10.9-19.7 Terawatt-hours (TWh)** electricity – about **4.6-13.1 TWh more** than counted in our first report (September 2016). The uncertainty here is due to Swiss investors who also raise foreign capital, see fig. 1.

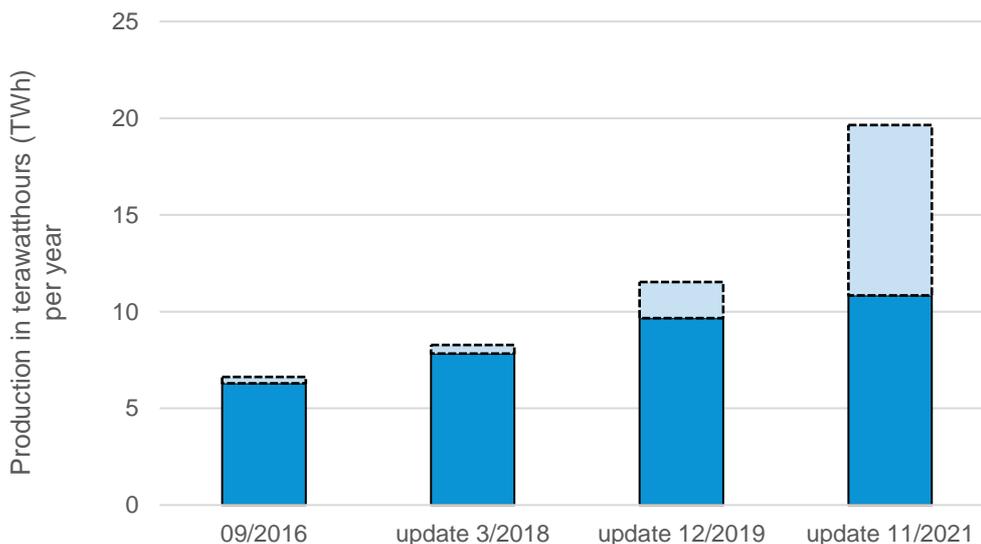


Figure 1: Growth trend in renewable electricity production through Swiss investments in Europe outside of Switzerland as reported in the investment reports from EZS. Part of the bars with dashed contours: investors raising foreign capital (exact breakdown into Swiss and foreign capital not available)

These numbers are likely to grow further over the next years, according to the plans and/or project pipelines of various energy providers and in line with the general development of the energy industry.

The new Renewable Energy infrastructure within Switzerland (subsidised plants, plants financed but not yet built included) has an annual production capacity of approx. 8.4 TWh as of September 2021¹. Thus, the total “Swiss-financed” nRE production accounts for over 19.3-28.1 TWh (8.4 TWh + 10.9-19.7 TWh). By Comparison: 2021, the net annual electricity production of Swiss nuclear power plants was approx. 18.6 TWh². The overall production capacity of Swiss-financed nRE plants therefore exceeds the annual production of Swiss nuclear power plants. This is shown in Figure 2.

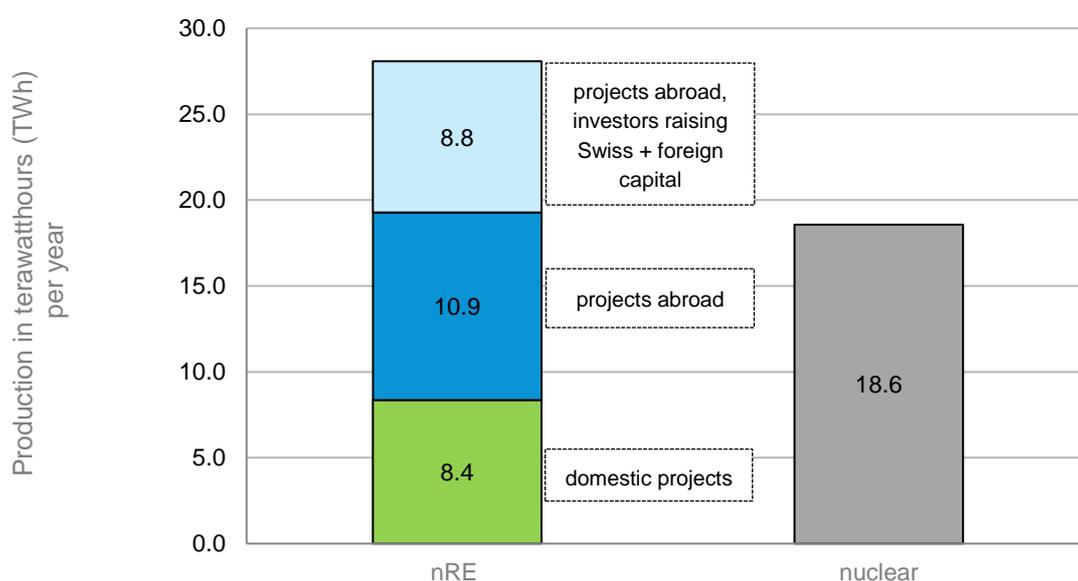


Figure 2: Swiss financed new renewable energy (nRE) vs. Swiss nuclear power: approximate production 2021 (nuclear) / built or financed production capacity 2021 (nRE) - includes domestic projects not yet in operation (see footnote 1) and some projects abroad that are currently under construction.

It can be stated that the trend towards Swiss investments in new renewable energy plants abroad has continued over the last two years. This is partly due to the lengthy approval process and the difficult political framework conditions within Switzerland for wind power and ground-mounted photovoltaic plants, which make the building of a portfolio of such power plants in our country very difficult.

¹ Source: Pronovo Cockpit 1.9.2021 (KEV (EVS) + EIV (KLEIV + GREIV) in Betrieb + positiver Bescheid/verpflichtet

² Source: <https://www.swissnuclear.ch>, 9.2.2022

Investments by investor

Figure 3 shows which Swiss investors have invested in renewable energy production facilities outside Switzerland and the amount of the yearly production in gigawatt hours (GWh) respectively. The total production sums up to around **10.9-19.7 Terawatthours (TWh)**, per annum, the total installed power capacity to about **5.1-9.0 Gigawatts (GW)**. For detailed data please go to the appendix.

Remark: There are investors who explicitly do not wish to be named in this report. Their investments are not included in these figures.

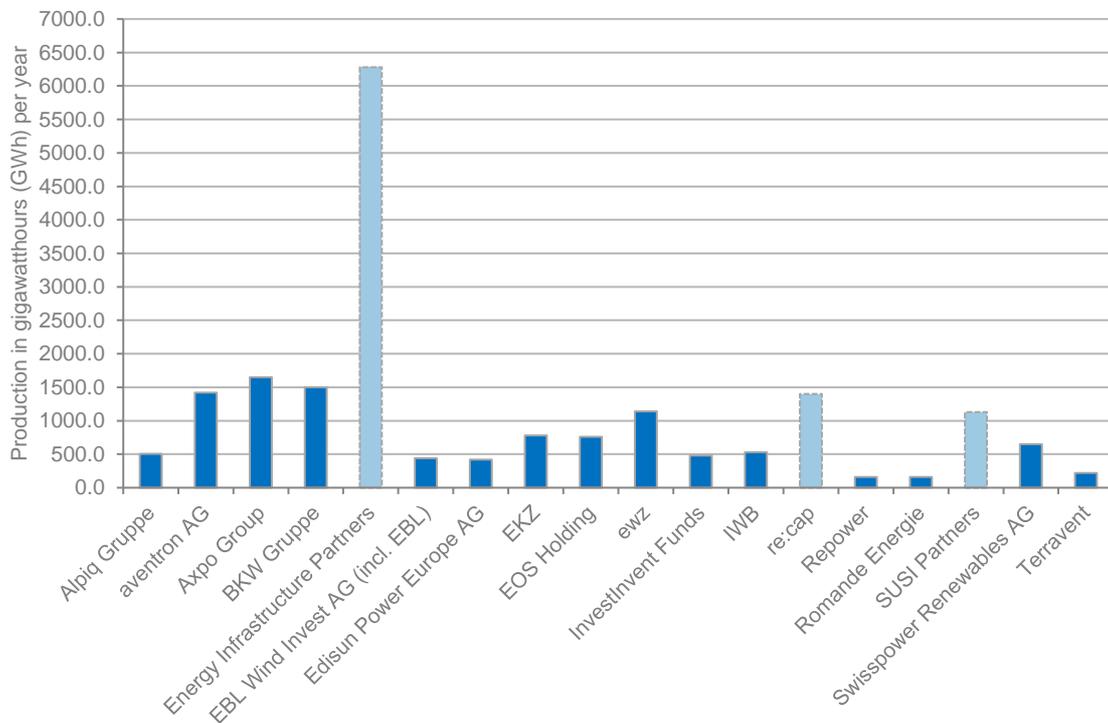


Figure 3: Annual electricity production of renewable energy facilities invested in by Swiss companies outside Switzerland (by share of investing companies). The group "various" is not included in this figure. Light blue bars with dashed contours: investors raising foreign capital.

Appendix / Data

A) Details Concerning Investments in European Renewable Energy Facilities by Swiss Energy Providers

Swiss Energy Providers			
Company / Investor ³	Invested Facilities: Total Installed Capacity in Megawatts ⁴ (MW)	Invested Facilities: Total Annual Electricity Production in Gigawatt Hours ⁴ (GWh)	Technology and/or Country Allocation of the Facilities (if possible, with the consulted source) F=France, D=Germany; I=Italy, NO=Norway, SE=Sweden, POR=Portugal, BG=Bulgaria, ESP=Spain, FIN=Finland, DK=Denm.
Alpiq Gruppe ⁱ	320	500	Wind Power BG 72.5 MW / 119.0 GWh F 10.5 MW / 22.6 GWh I 210.5 MW / 318.0 GWh Photovoltaics I 13.6 MW / 15.1 GWh Small Hydro F 2.6 MW / 12.3 GWh I 8.4 MW / 16.2 GWh
Axpo Group ⁱⁱ	820	1650	Wind Power various Countries 473 MW / 1195 GWh Photovoltaics various countries 347 MW / 451 GWh
BKW Gruppe ⁱⁱⁱ	670	1500	Predominantly wind power in various countries (I, D, F, No)
EBL	-> EBL Wind Invest		
EKZ ^{iv}	345	780	Wind Power in D, F, I, POR Photovoltaics in ESP, POR Solar Thermal in ESP

³ Investments of the mentioned utilities through the holdings Helvetic Wind, Terravent and Repartner are, if not stated different in the sources, attributed to the utilities.

⁴ By share of investing companies; calculated/researched totals are rounded to 5 MW/10 GWh. Unless stated otherwise, installed capacity and average annual production are according to the plant descriptions and/or information provided by the investing companies.

Swiss Energy Providers			
Company / Investor³	Invested Facilities: Total Installed Capacity in Megawatts⁴ (MW)	Invested Facilities: Total Annual Electricity Production in Gigawatt Hours⁴ (GWh)	Technology and/or Country Allocation of the Facilities (if possible, with the consulted source) F=France, D=Germany; I=Italy, NO=Norway, SE=Sweden, POR=Portugal, BG=Bulgaria, ESP=Spain, FIN=Finland, DK=Denm.
ewz ^v	355 (327+29 under construction)	1140 (1051+86 under construction)	Wind Power in D, F, NO, SE Solar Thermal in ESP
IWB ^{vi}	205	530	Wind Power D 67.8 MW / 145.0 GWh F 127.1 MW / 289.1 GWh Photovoltaics F 4.8 MW / 7.4 GWh Biogas D 5.8 MW / 90 GWh
Repower ^{vii}	95	160	Wind Power D 16.8 MW / 28.6 GWh I 61.3 MW / 108.7 GWh Photovoltaics I 16.7 MW / 24.2 GWh Small Hydro I 1.5 MW / 3.1 GWh
Romande Energie SA ^{viii}	70	160	Wind Power F 24.1 MW / 53 GWh Solar F 23 MW / 28 GWh Small Hydro F 21.8 MW / 76.2 GWh
Various (min.) ^{ix}	> 35	> 70	Various

B) Details concerning investments in renewable energy facilities abroad by affiliates and institutional investors

Affiliates and Institutional Investors			
Company / Investor	Invested Facilities: Total Installed Capacity in Megawatts (MW) ⁵	Invested Facilities: Total Annual Electricity Production in Gigawatt Hours (GWh) ⁵	Technology and/or Country Allocation of the Facilities (if possible, with the consulted source) F=France, D=Germany; I=Italy, NO=Norway, SE=Sweden, POR=Portugal, BG=Bulgaria, ESP=Spain, FIN=Finland, DK=Denmark, IR=Ireland
aventron AG ^x	630	1420	<p>Wind Power</p> <p>D 83.0 MW / 179.6 GWh ESP 112.0 MW / 215.5 GWh F 68.3 MW / 164.6 GWh I 18.0 MW / 37.5 GWh NO 19.0 MW / 72.4 GWh</p> <p>Photovoltaics</p> <p>ESP 57.1 MW / 107.8 GWh F 44.9 MW / 49.0 GWh I 38.2 MW / 50.3 GWh</p> <p>Small Hydro</p> <p>F 42.4 MW / 123.4 GWh I 2.0 MW / 7.6 GWh NO 144.3 MW / 415.2 GW</p>
EBL Wind Invest AG + EBL ^{xi}	180	440	<p>Wind Power</p> <p>D 156.3 MW / 407.7 GWh I 5.3 MW / 11.5 GWh</p> <p>Solar Thermal</p> <p>ESP 18.9 MW / 25.2 GWh</p>
Edisun Power Europe AG ^{xii}	240 (82 + 156 under construction)	420 (128 + 292 under construction)	<p>Photovoltaics</p> <p>D 5.7 MW / 5.7 GWh ESP 21.3 MW / 33.4 GWh F 4.8 MW / 5.3 GWh I 1.0 MW / 1.3 GWh POR 49 (+156) MW 82 (+292) GWh</p>

⁵ By share of investing companies; calculated/researched totals are rounded to 5 MW/10 GWh. Unless stated otherwise, installed capacity and average annual production are according to the plant descriptions and/or information provided by the investing companies.

Affiliates and Institutional Investors			
Company / Investor	Invested Facilities: Total Installed Capacity in Megawatts (MW)⁵	Invested Facilities: Total Annual Electricity Production in Gigawatt Hours (GWh)⁵	Technology and/or Country Allocation of the Facilities (if possible, with the consulted source) F=France, D=Germany; I=Italy, NO=Norway, SE=Sweden, POR=Portugal, BG=Bulgaria, ESP=Spain, FIN=Finland, DK=Denmark, IR=Ireland
EOS Holding ^{xiii}	450	760	Wind Power , D and F Photovoltaics , POR and F
InvestInvent Funds ^{xiv}	235	480	Wind Power D 156.8 MW / 334.0 GWh F 40.1 MW / 88.0 GWh Photovoltaics ESP 39.75 MW / 60.0 GWh
Swisspower Renewables AG ^{xv}	310	650	Wind Power D 200.0 MW / 345.0 GWh I 38.0 MW / 60.0 GWh Small Hydro I 73.0 MW / 242.0 GWh
Terravent ^{xvi}	90	220	Wind Power F 61.2 MW / 151.4 GWh D 27.6 MW / 71.1 GWh
Various (min.) ^{xvii}	> 15	> 30	Various

Institutional Investors raising (partly) international capital			
Company / Investor	Invested Facilities: Total Installed Capacity in Megawatts (MW)⁶	Invested Facilities: Total Annual Electricity Production in Gigawatt Hours (GWh)⁶	Technology and/or Country Allocation of the Facilities (if possible, with the consulted source) F=France, D=Germany; I=Italy, NO=Norway, SE=Sweden, POR=Portugal, BG=Bulgaria, ESP=Spain, FIN=Finland, DK=Denmark, IR=Ireland
Energy Infrastructure Partners ^{xviii}	2220	6280	Wind Power 1622 MW / 5284 GWh Photovoltaics 475 MW / 790 GWh Solar Thermal 122.5 MW / 207 GWh
recap ^{xix}	970	1400	Wind power, various countries 363 MW / 900 GWh Solar power, various countries 607 MW / 500 GWh
SUSI Partners ^{xx}	720	1130	Wind Power D, DK, F, FIN, IR, NO and SE 585 MW / 983 GWh Photovoltaics F, I, NL 136 MW / 148 GWh

⁶ By share of investing companies; calculated/researched totals are rounded to 5 MW/10 GWh. Unless stated otherwise, installed capacity and average annual production are according to the plant descriptions and/or information provided by the investing companies.

Sources

- ⁱSource: Personal message, Guido Lichtensteiger, Communications & Public Affairs, Alpiq Gruppe, 4.12.2019; complemented with data for the new plant Monte Mele (Wind Italy) retrieved at www.alpiq.com, 5.11.2021
- ⁱⁱSource: Personal message, Martin Stutz, Senior Communications Manager, Axpo Group, 11.11.2021
- ⁱⁱⁱSource: Personal message, Markus Ehinger-Camenisch, Media Relations Manager, BKW, 21.11.2021
- ^{iv}Source: Personal message, Sophia Siegenthaler, Unternehmenskommunikation EKZ, 12.11.2021
- ^vSource: Personal message, Harry Graf, Leiter Media & Public Affairs, ewz, 11.11.2021
- ^{vi}Source: Personal message, Stefan Wittwer, CEO, IWB Renewable Power AG, 10.11.2021
- ^{vii}Source: Personal message, Stefan Bisculm, Leiter Medienstelle, Repower AG, 8.11.2021
- ^{viii}Source: Personal message, Michèle Cassani, porte-parole, Romande Energie, 11.11.2021
- ^{ix}Minimum invested capacity/production via further investments of Swiss energy providers, including ewb/HelveticWind.
- ^xSource: Personal message, Antoine Millioud, CEO, aventron, 8.11.2021
- ^{xi}Source: Personal message, Yves Grebenarov, CEO, EBL Wind Invest AG, 11.11.2021. Includes direct investments/shares of EBL and of EBL via HelveticWind.
- ^{xii}Source: Personal message, Rainer Isenrich, CEO Edisun Power Europe AG, 10.11.2021
- ^{xiii}Source: <https://eosholding.ch/de/unternehmen/strategische-ziele-und-taetigkeit>, as of 5.11.2021
- ^{xiv}Source: Personal message, Linh-Thu Le, InvestInvent, 10.12.2021 (InvestInvent Wind Energy Fund - Assets (investinventfund.com), as of 09.12.2021.
- ^{xv}Source: Personal message, Felix Meier, CEO, Swisspower Renewables, 10.11.2021
- ^{xvi}Source: Pressemitteilung Terravent, "Terravent erwirbt von BayWa r.e. den neu in Betrieb genommenen Windpark Le Grand Champ in Pays de la Loire", 16. Juli 2020; <http://www.terravent.ch/de/beteiligungen.html>, as of November 5, 2021. Without shares from Axpo and EKZ.
- ^{xvii}Minimum invested capacity/production via further investments of Swiss based investors, including SN Erneuerbare Energie AG/HelveticWind.
- ^{xviii}Source: Personal message, Genc Shala, ESG Specialist, Energy Infrastructure Partners, 26.11.2021
- ^{xix}Source: Personal message, Fabienne Fahrenholtz, Communications Manager, redRobin on behalf of re:cap, 9.11.2021
- ^{xx}Source: Personal message, Dimitri Schubiger, Communications Manager, SUSI Partners, 24.11.2021