

September 15, 2023

S.N. Nuclearelectrica (SNN RO)

Towards a sustainable future

Hold
(from buy)

Target price (Yield %):	RON 50.5 (7.9%)
Current price:	RON 46.8
Market Cap.:	RON 14,117 million
Average liquidity (RON/EUR)	1.66m/0.33m

- We update the valuation with a hold recommendation and a target price of 50.5 RON/share (from 54.6 RON/share) and a potential return of 7.9% from the September 14, 2023 price of 46.8 RON/share.
- Nuclearelectrica reported revenues from the sale of electricity of RON 3.7 billion as of June 30, 2023 (latest financial statements published at the time of this analysis), up 20% compared to the same period last year, at an average price of 748.45 RON/MWh, significantly higher than the average price of 615.83 RON/MWh recorded in H1 2022. For 2023 we estimate that revenues from electricity sales could reach over RON 7.3 billion, corresponding to an average price of 713 RON/MWh. For 2024 and 2025 we estimate decreasing revenues for SNN, as we expect the electricity price to return to a lower level. The increase in newly installed renewable energy capacity we anticipate will contribute to price stabilisation.
- The operating result for H1 2023 was RON 1.3 billion, down 7% compared to H1 2022. Of the total operating expenses, about 60% is represented by the additional tax expense, amounting to RON 1.5 billion in H1 2023. Of the total electricity produced, 43% was sold at the regulated price of 450 RON/MWh. By GEO no. 153/2022, for the period 1 January 2023 - 31 March 2025, a centralized electricity purchase mechanism was introduced, whereby the single purchaser - OPCOM, buys quantities of electricity from designated producers at the price of 450 RON/MWh and sells the purchased electricity to electricity suppliers who have contracts with final customers, the electricity transmission and system operator and electricity distribution operators, to cover their own technological consumption of the networks operated by them, at the same price of 450 RON/MWh.
- The net profit reported as at June 30, 2023 was RON 1.3 billion, up by 6% compared to the same period of the previous year, influenced by the positive financial result of RON 210 million, which is significantly higher than the RON 50 million recorded in H1 2022.
- Potential risks to our recommendation are related to the occurrence of unplanned outages of Units 1 or 2, which could lead to an increase in expenses for electricity purchased to cover contractual obligations, the postponement of the investment plan, coupled with an increase in costs, as well as legislative changes in the energy market, are factors that could negatively affect the company's results.

Key indicators	S1 2022	2022	S1 2023	2023E	2024E
Electricity sold (GWh)	5,024	10,554	4,958	10,308	10,300
Revenue from electricity sales (RON million)	3,094	6,361	3,711	7,343	7,022
Average price (EUR/MWh)	124	122	151	144	138
Total revenue (RON million)	3,140	6,534	3,780	7,489	7,162
EBITDA (RON million)	1,708	3,591	1,627	2,990	2,652
EBITDA margin (%)	54.4%	55.0%	43.1%	39.9%	37.0%
EBIT (RON million)	1,405	2,986	1,311	2,373	2,000
EBIT margin (%)	45%	46%	35%	32%	28%

Source: SNN, BRK

Share data

52-week price low/high (RON/share)	38.85 – 52.2
Dividend 2022 (RON/share)	4.25
Total number of shares (million)	301.6

Shareholders

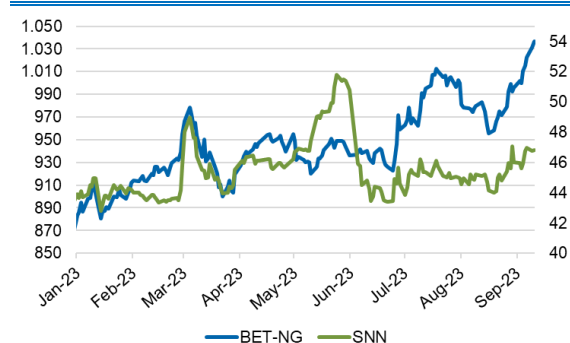
Romanian State through the Ministry of Economy, Energy and Business Environment	82.5%
Free Float	17.5%

Share performance (%)

	YTD	1w	1m	6m	1y
Variation	9.4	0.1	3.8	3.0	4.2
Relative to BET-NG	-13.2	-2.8	-2.5	-6.9	-12.8

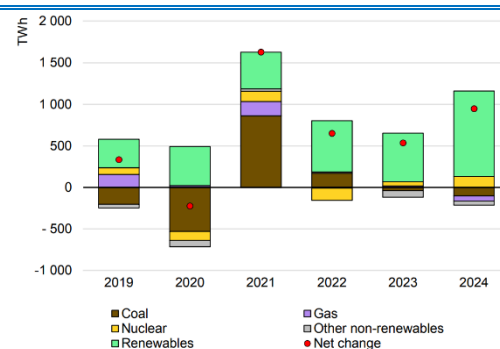
Source: BVB

SNN - BET-NG price performance



Source: Bloomberg

Global annual change in electricity generation by source, 2019-2024



Source: IEA

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Valuation update

In the table below we present the discounted cash flow method (DCF) valuation update. The estimated target price is 50.5 RON/share, with a potential upside of 7.9% from the September 14, 2023 price of 46.8 RON/share. The discount rate (WACC) used to estimate the present value of SNN's future cash flows is 13.1%.

The company's future plans will play a significant role in its development. The implementation of the Unit 1 refurbishment project will ensure the operation of Unit 1 with an additional 30-year cycle. The Units 3 and 4 project will be an important pillar for Romania's energy independence and the achievement of Romania's decarbonisation targets. Regarding the small modular reactor project, under the agreement between SNN and NuScale, NuScale will support Nuclearelectrica in the evaluation of this technology and together the two companies will take steps to develop SMR in Romania. Nuclearelectrica also announced that it has signed a Letter of Intent with the Three Seas Initiative Investment Fund to explore the possibility of collaboration in the renewable energy generation sector in Romania to achieve common strategic objectives.

- ♦ EU countries are committed to achieving climate neutrality by 2050, in line with their commitments under the Paris Agreement. To achieve this goal, the European Green Pact is the EU's key strategy, comprising a series of policy initiatives to lead the EU towards a green transition and a modern and competitive economy

Figure 1: DCF

mil. RON	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Net operating profit	1,993	1,680	2,133	2,473	-468	-978	-258	444	2,641	4,951	4,342
Plus: Depreciation and amortization	617	652	699	757	845	976	1,094	1,157	1,195	1,219	1,239
Minus: CAPEX	-700	-1,400	-1,400	-2,100	-3,150	-4,725	-2,363	-1,418	-851	-595	-595
Minus (increase)/plus decrease in working capita	-780	133	542	-85	1,203	-13	-627	-639	-1,403	-1,431	-54
FCFF	1,130	1,065	1,974	1,045	-1,571	-4,740	-2,153	-455	1,582	4,144	4,932
Discount rate	13.1%										
Discount factor	1.00	0.94	0.83	0.74	0.65	0.58	0.51	0.45	0.40	0.35	0.31
Updated FCFF	1,130	1,002	1,642	769	-1,022	-2,727	-1,096	-205	630	1,458	1,535
Discounted FCFF amount	3,116										
Terminal value	10,678										
Company value	13,795										
Plus: Cash	2,708										
Minus: Total Debt	1,264										
Company value	15,239										
Number of shares (mil.)	302										
Value per share (RON/share)	50.5										
Current price (RON/share)	46.8										
Growth potential	7.9%										

Source: BRK

Figure 2: Sensitivity analysis and terminal value calculation (RON million)

		Residual growth rate					
		0.0%	0.5%	1.0%	1.5%	2.0%	
WACC	11.5%	58.4	60.3	62.3	64.6	67.1	
	12.5%	51.4	52.8	54.4	56.1	58.0	
	13.1%	47.9	49.2	50.5	52.0	53.6	
	14.5%	40.9	41.8	42.7	43.8	44.9	
	15.5%	36.9	37.6	38.4	39.2	40.1	
	Net operating profit						4,342
	x (1+ Residual growth rate)						1,010
	Terminal value of net operating profit						4,386
	Plus: Normalised depreciation and amortisation						1,251
	Minus: Normalised CAPEX						1,439
	Minus: Normalized working capital						54
	Cash flow terminal value						4,144
	/ Discount rate						8.28
	x Discount factor						0.31
	Terminal value						10,678

Source: BRK

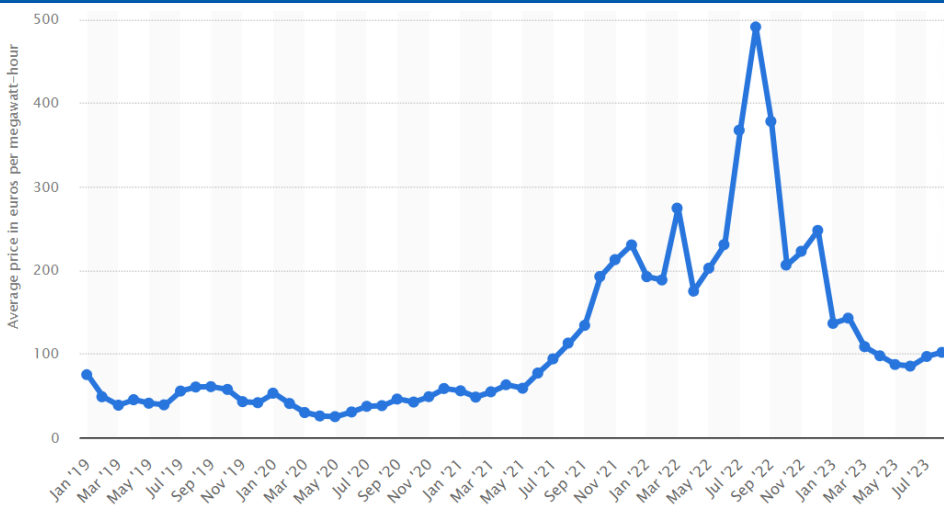
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Estimated revenue

In terms of revenues, Nuclearelectrica recorded in the first half of this year revenues from the sale of electricity amounting to RON 3.7 billion, up 20% compared to the same period of 2022, at an average price of 748.45 RON/MWh, significantly higher compared to the average price of 615.83 RON/MWh recorded in H1 2022. The average sales price on bilateral contracts during this period was 1,113.51 RON/MWh, an increase of 108.3% compared to the average price recorded in H1 2022 of 534.46 RON/MWh. The average energy sales price on the spot market (PZU and PI) achieved by SNN in H1 2023 was 532.65 RON/MWh, down from 1,029.63 RON/MWh in H1 2022.

In August 2023, the average electricity price in Romania (PZU) was around 101.7 euro/MWh, one of the lowest values in the last two years. The price of electricity in the country and in Europe in general increased almost steadily between 2021 and summer 2022. In August 2022, the average price of electricity in Romania exceeded 490 euro/MWh.

Figure 3: Average monthly electricity prices in Romania from January 2019 to August 2023 (day-ahead prices)



Source: Statista

The evolution of electricity prices in Romania has been characterized by significant fluctuations, with notable increases and decreases, in the last period. The increase in Nuclearelectrica's revenues in the first half of 2023 reflects the continuing increasing demand for electricity, but the decrease in the PZU price in July 2023 suggests a return to more moderate price levels. However, it is important to note that the evolution of the electricity market is influenced by the existing demand and supply in the market, but also by a number of other factors, such as government regulations, making it more difficult to forecast future trends in the sector.

We anticipate a significant increase in Nuclearelectrica's revenues in 2023, probably over RON 7.3 billion, with an average price of 713 RON/MWh. This result exceeds the previous estimate, which assumed an average price just above 500 RON/MWh and more electricity sold at 450 RON/MWh. We anticipate that SNN will sell 45% of its power at a price of 450 RON/MWh by Q1 2025, in line with the level in the first half of 2023. In the first six months of 2023 the average electricity selling price was 748 RON/MWh. Thus, the company was able to sell at a much better price the energy produced, which will give it a stronger position to support future investments, for which we estimate a higher cumulative CAPEX.

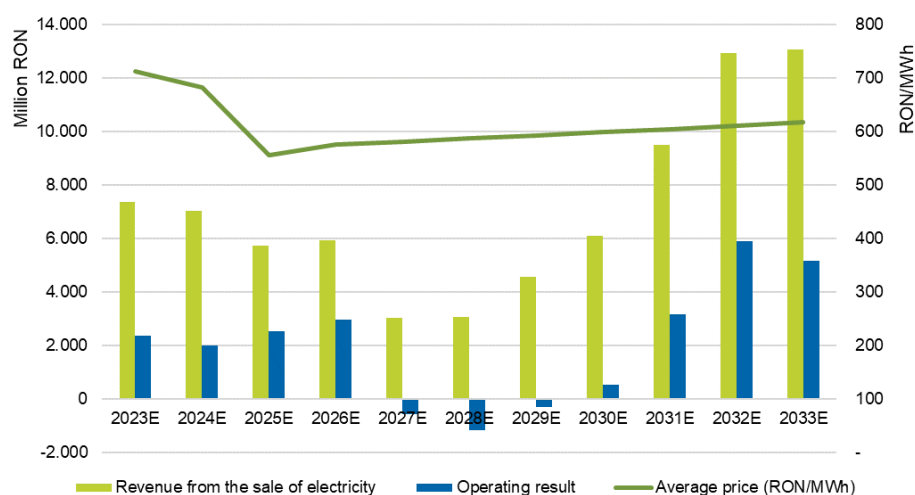
Starting in 2024 and 2025, however, estimated revenues decrease as we have assumed a return of electricity prices to a lower level. Increases in newly installed renewable energy capacity will also help stabilise prices. After Q1 2025, SNN will no longer need to sell a significant part of the energy produced by MACEE, and thus we expect a slight increase in the sales price thereafter. Once the U1 refurbishment and the construction of U3 and U4 are completed, the company's expected revenue increases considerably.

- ◆ The evolution of electricity prices in Romania has been volatile. Nuclearelectrica recorded high revenues in H1 2023 due to higher electricity prices. Our forecasts indicate revenues of over RON 7.3 billion in 2023.

- ◆ The refurbishment project and the construction of new units will generate significant revenues for SNN. Also, the development of the small modular reactor project, as well as exploring the possibility of a collaboration in the renewable energy generation sector in Romania with the Three Seas Initiative Investment Fund could help strengthen revenues in the long term.

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Figure 4: Estimated financial data



Source: BRK estimates

Market background

As of September 1, 2022, the additional income tax on electricity producers has been replaced by a contribution to the Energy Transition Fund, equivalent to 100% of the difference between the monthly sales price and the ceiling of 450 RON/MWh, according to GEO no. 119/2022. GEO No 153/2022, published on November 11, 2022, introduced a centralised electricity purchase mechanism between January 1, 2023 and March 31, 2025, in order to limit the revenues of electricity producers. During the period of use of this mechanism, the single buyer purchases electricity from electricity producers at a price of 450 RON/MWh and sells the quantities of electricity purchased to electricity suppliers who have contracts with final customers, the electricity transmission system operator and electricity distribution operators at the same price of 450 RON/MWh.

According to data published by Eurostat, over the last three years the EU energy sector has faced significant challenges and fluctuations, with a particular impact on the nuclear energy market. Following the economic recovery in 2021 after the COVID-19-induced bottlenecks, gas prices increased significantly at the end of 2021 and throughout 2022, due to sanctions imposed on imports from Russia, disruptions in gas supply and possible concerns about declining gas availability. These issues, together with lower output from nuclear power plants, have caused significant price increases in the European electricity market.

Preliminary data for 2022 show an increase in supply for all products except nuclear power and natural gas, which have seen a sharp drop. The reduction in nuclear supply was largely due to maintenance and extended outages. In addition, an unusually hot and dry summer in 2022 reduced hydropower production, further affecting primary sources of electricity generation in many EU countries.

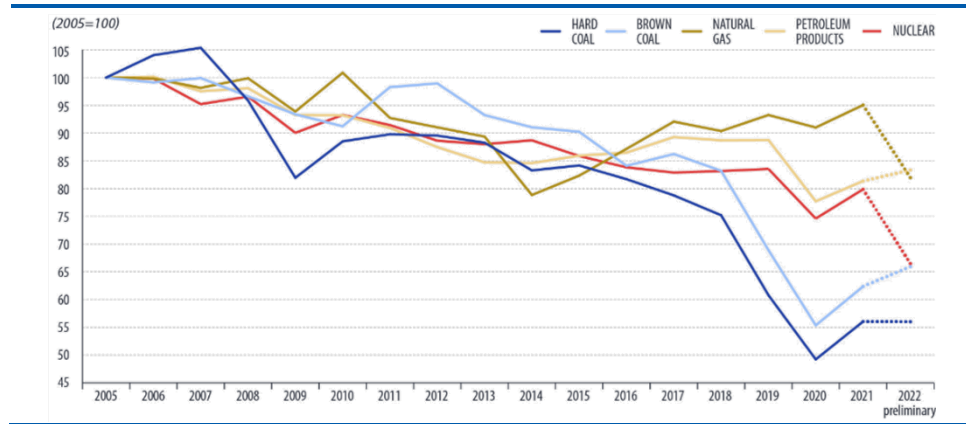
Rapid growth in renewable energy generation capacity suggests that, under favourable weather conditions, renewable energy generation could overtake coal-fired generation as early as 2024. By 2024, renewable electricity will account for more than a third of global electricity supply for the first time, data published by the IEA show.

- Recent energy market regulations have had a noticeable effect on the market, bringing substantial changes. These measures have had a significant impact on producers' revenues, with the aim of limiting them in certain periods.

- The European Union's energy sector has been affected by significant challenges and fluctuations over the last three years, particularly in nuclear energy. At the same time, electricity from renewable sources will become increasingly important and could overtake coal generation from 2024 onwards.

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Figure 5: Fossil fuel and nuclear energy supply in the EU



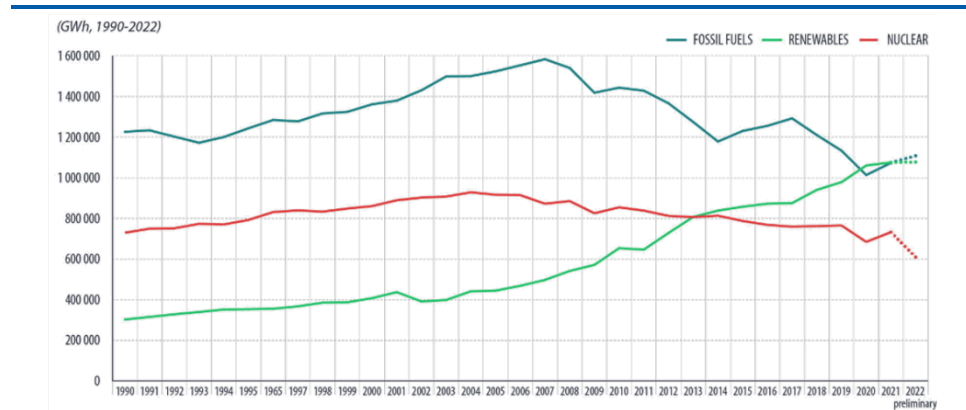
Source: Eurostat

- ◆ In 2022, electricity generation in the EU fell by 3%, with fossil fuels dominating for the second year in a row, while renewables saw minimal growth. Nuclear power saw a significant drop of 16.7%.

In 2022, EU gross electricity generation decreased by 3% compared to 2021 and was down 3.9% compared to the 2017-2019 average. Fossil fuels became the main source of electricity for the second consecutive year, generating 1.11 million GWh (+3.3% compared to 2021). However, renewables saw minimal growth and produced 1.08 million GWh (+0.1% compared to 2021). Notably, in 2022 compared to 2021, solar and wind generation saw substantial increases of 29.3% and 8.9% respectively, while hydro and biofuel generation decreased.

Nuclear generation in particular saw a significant decrease in 2022, down 16.7% compared to 2021, to 609 thousand GWh. At the same time, this represents a decrease of 20.1% compared to the 2017-2019 average

Figure 6: Electricity production in the EU



Source: Eurostat

- ◆ Nuclear power is an important source of low-emission electricity, accounting for about 10% of global electricity generation. In order to achieve the "zero net emissions by 2050" targets, it is essential to extend the lifetime of existing nuclear power plants and accelerate the construction of new units, as they contribute significantly to reducing global CO2 emissions.

Progress towards clean energy

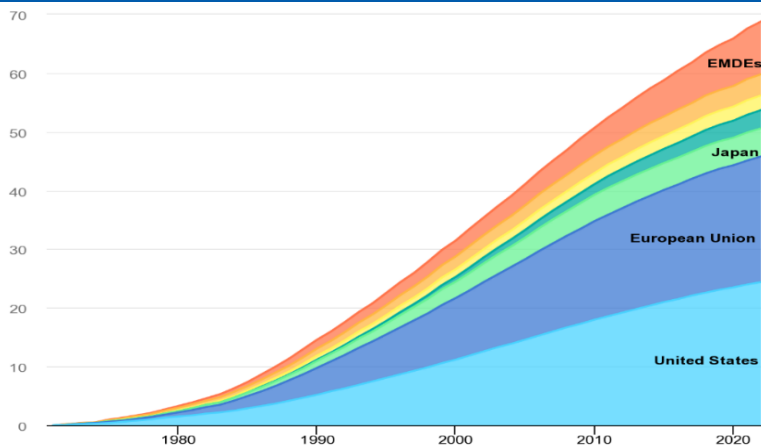
According to information published by the IEA, nuclear power is an important source of low-emission electricity, accounting for about 10% of global electricity generation. In countries where it is accepted, it can complement renewables in reducing emissions from the power sector.

Further efforts are needed to bring nuclear power in line with the "zero net emissions by 2050" scenario. Extending the lifetime of existing nuclear power plants is one of the most cost-effective low greenhouse gas electricity generation solutions, and there have been several positive policy interventions in the United States, France and Japan to take full advantage of these opportunities. Further efforts are needed to accelerate new plant construction - 8 GW of new nuclear capacity was put into operation in 2022, but the Net Zero scenario projects an annual deployment more than four times higher by 2030. Supporting innovation in nuclear power, including small-scale modular reactors, will contribute to expanding the range of options for low-emission power generation

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Nuclear power has been an essential part of the energy mix for over 50 years and has contributed significantly to reducing global CO2 emissions, avoiding around 70 Gt of emissions, data published by the IEA shows. Without nuclear power, CO2 emissions from the energy sector in advanced economies such as the United States and the European Union would have been 60 Gt higher over the past 50 years. In order to achieve Net Zero targets, expanding nuclear power generation is crucial to reduce dependence on fossil fuels, while increasing renewable energy sources.

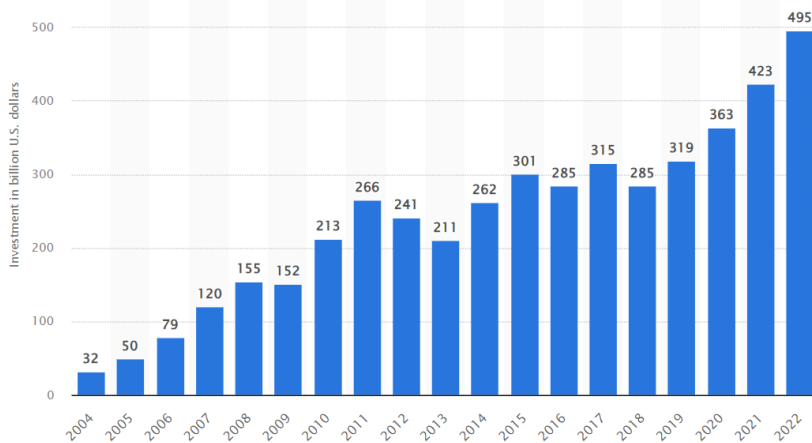
Figure 7: CO2 emissions avoided by nuclear power, by country or region, 1971-2022



Source: IEA

After Russia's invasion of Ukraine, concerns about energy security have grown. Several countries, including the United States, France, Belgium, Japan and Korea, have extended the life of existing nuclear reactors and announced plans to expand nuclear capacity. At the G7 summit in 2023, the United States, Japan, Korea and the United Arab Emirates announced support of up to USD 275 million for the SMR project in Romania, scheduled for implementation in 2029. These measures have been taken to strengthen energy security in the current geopolitical context. The SMR project in Romania represents a significant opportunity for the development of nuclear energy in Europe and a promising solution for the transition to cleaner and more resource-efficient energy. The partner companies, Nuclearelectrica, NuScale and E-Infra, have signed a Memorandum of Understanding to carry out engineering studies, technical analysis, licensing and permitting activities. According to data published by Statista, by 2022, total new investment in renewable energy is expected to amount to around \$495 billion globally. This represented an increase of 17% over the previous year.

Figure 8: New investment in renewable energy globally 2004-2022



Source: Statista

- Climate change and environmental deterioration are major threats to Europe and the world. The European Green Deal aims to make the EU a modern, resource-efficient and competitive economy.

- Investment in renewables has seen significant growth in 2022, reaching around \$495 billion globally, up 17% on the previous year.

- The evolution of the electricity market has been marked by significant fluctuations, with notable increases and decreases. These have been influenced by demand, supply, government regulation and investment in renewables. Increased attention to these issues is essential for adapting to changes in the energy sector.

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Company	Symbol	Explanatory note No.
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