

# **BERENBERG** *Funds and Solutions*

# SPOTLIGHT - EQUITIES

### The accelerated future of the energy transition

It has been about a year since we looked at the renewable energy market in the sixth edition of our Spotlight series (The return dilemma of investments in renewable energy). Putin's war is putting a strain on Europe's energy supply and production, as well as the economy in several areas. As a result, energy supply has become of increasing geopolitical importance and calls on politicians to act quickly. Renewable energies, which create independence from Russian commodities through their local production, play a key role here. This also supports decarbonisation, a long-term goal of counteracting climate change. Renewable energies thus have significant advantages over alternatives such as temporarily switching on coal or importing energy from other countries. This spotlight edition examine the renewables energy sector under the current circumstances and to place recent market changes in our investment context.

The use of renewable energy has become an important pillar for national security in Europe. The European Commission, in response to the escalating climate crisis and the war in Ukraine, has adopted the RE-PowerEU plan to drive the transition of the European energy system. The German government also reacted to the current situation with an even more comprehensive package of energy measures compared to their previous plans (e.g. the "Easter Package"). A consideration that increasingly underpins the expansion of renewable energies is national security, in addition to the advancing climate crisis. The overarching goal of the package is to switch the electricity supply in Germany almost completely to renewable energies by 2035. With 41.4%, renewable energy is already among the most important sources of gross electricity consumption in Germany (Federal Environment Agency, March 2022).

#### Fig. 1: Proportion of renewable energy in total energy consumption and targets in the EU from 2010 to 2030



Source: Eurostat, June 2022

However, electricity supply is only one component of the final energy consumption, along with fuel and heat. If we take a look at the total energy

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consumption in Germany as a representative of Europe, the result is quite disappointing: renewable energies contribute only 16 % of the total energy consumption<sup>\*</sup>. The largest share, 32 %, is covered by mineral oil - followed by natural gas with a share of 27 % (Fig. 2).



Source: German Working Group on Energy Balances, March 2022

In order to achieve the ambitious goal of substituting fossil energies with renewable energies as the source of domestic energy consumption, a lot still has to happen. European governments are called upon to act more quickly in order to: (i) compensate for the reduction in Russian energy supplies, (ii) protect consumers from high energy prices and (iii) secure energy supplies, in addition to the environmental considerations. After all, Russia was the world's largest exporter of mineral oil and natural gas in 2021.

The emerging political dynamics could systematically change the market's structure and support the simplification of processes. The problem is not the political goal or the corresponding capital, but rather the implementation. The construction of an onshore wind farm (i.e. wind turbines on land) can sometimes take up to eight years to complete. The issue is not the central overarching legislation and expansion targets at a state level, but the slow and complex project approval procedures at the local level. To address this problem, Spain and Germany, for example, have legislative initiatives and acceleration laws in the planning stages to improve and speed up local processes in the long term. In addition, the European Commission has developed a digital mapping tool to enable EU Member States to easily identify areas with lower environmental risks, thus simplifying the permitting process and reducing permitting time. Overall, progress is visible.

Society's acceptance of the expansion of renewable energies could also change. In the past, citizens' initiatives often caused construction delays or halted wind energy projects. Public opposition to wind energy was mainly based on nature conservation concerns such as bird protection or the rights of local residents. In some cases, this significantly impeded the expansion of wind power. Of course, these social objections will continue to exist when wind farms are built. However, fears of potential energy shortages and high price increases suggest that the attitudes of part of the

<sup>\*</sup>Energy consumption refers exclusively to primary energy.

population towards such projects may change which could lead to greater acceptance of wind farms. In addition, legislation is also being planned that will make disproportionate objections in court more difficult and fewer delays in the process. Further this could require more personnel in the authorities, which is already being discussed.

The competitive position of renewable energies in the international market is strengthened. In response to large energy price increases and the expected supply shortages of energy, electricity prices have also increased. This places a heavy burden on private households, especially those with low incomes, alongside energy-intensive companies. This is exacerbated by the European gas price, which is relevant for both electricity and heat generation, but also for the industries which use gas as a raw material. Between 2017 and the first half of 2021, European gas prices were usually quoted around EUR20 per megawatt hour. Since the second half of last year, the price has risen exponentially, peaking at EUR212 per megawatt hour on the 7<sup>th</sup> of May 2022. Currently, the price is settling back at a historically high level (see Fig. 3). Due to geopolitical tensions and sanctions, if demand does not drop significantly, it is highly unlikely in the current environment that we will witness a drop to the usual value of around EUR20 in the short to medium term. We are currently in an environment where prices drop to below EUR20 is unlikely in either the short or medium term. While this is at the expense of consumers and poses challenges for the energy market, long-term opportunities for the energy transition are also developing. The close correlation of energy markets leads to higher profits for energy or electricity producers. Accordingly, additional capital is available that can flow into renewable energy generation projects. In this environment of high electricity prices, investments in solar and wind parks become more attractive.

#### Fig. 3: Example European gas price in the last five years (Netherlands TTF Natural Gas Forward Month 1, EUR per MWh) 250



The changed market structure also favours this environment. Over the last few years, the renewable energy market has undergone much development: while it was previously largely dependent on state subsidies, electricity contracts between producers and direct consumers (so-called power purchase agreements (PPAs)) now play a major role. In a PPA, Amazon or Microsoft for example, put in place a power delivery contract with individual contract structures for several years directly with the power producer for their data centres. PPAs thus create a more flexible marketing of electricity and enable local procurement outside of state programmes.

In summary, European policy aims to reduce the stumbling blocks to the approval of renewable energy projects and has once again increased the expansion targets. In addition, the current elevated energy prices provide additional capital, and the changed market structure, helps the market structurally.

Given the positive conditions that renewable energies are facing, the question for investors is how to profit from this structural trend. A first consideration would be to invest in manufacturers of plants and machinery that produce renewable electricity - such as wind turbine manufacturers. For us as long-term investors who prefer to invest in structural trends, competitive advantages and pricing power are integral components in the investment decision.

The wind turbine manufacturer market is relatively concentrated and made up of a handful of large players. Over the years, several companies have exited the market due to an aggressive price war among competitors who undercut each other on price.





The competitive environment can be described very well using the example of the market leader Vestas. In terms of sales and installed capacity, Vestas is the world's largest manufacturer of wind turbines - in 2021, 33% of global onshore and offshore capacity (excluding China) was installed by Vestas (see Fig. 4). Between 2013 and 2021, Vestas significantly expanded its market position and almost tripled its sales. Thus, Vestas has strongly benefitted from the shift towards renewable energies in terms of increasing sales and additionally the current order books are also well filled.

Source: Vestas, May 2022



#### Fig. 5: Development of Vestas' revenues and EBITDA margins

However, a contrary development can be observed with regards to profitability: After an expansion of the EBITDA margin from 10% to just under 17% between 2013 and 2017, the EBITDA margin has since fallen to a level of below 10% (see Fig. 5). Despite strong growth, profitability declined due to the structurally tense competitive environment. The prices of wind turbines have only experienced one direction in recent years - downwards. Due to the low product differentiation and the partly aggressive price war, Vestas also faces this difficult price environment. Currently, there is an additional burden of record commodity costs. In the last five years, commodities such as steel, aluminium and copper have seen price increases of around 70% (see Fig. 6).



Fig. 6: Price development of selected commodities from 2017 to 2022

In addition to price pressures triggered by Putin's war, international supply chains remain disrupted by the pandemic and ongoing lockdowns in China, leading to bottlenecks and disruptions in global transport and supply chains, as well as supply shortages of certain modules and components.

Since the construction of these projects require a certain lead time, wind turbine manufacturers for example, give commitments and price guarantees over several years. On the other hand, since the prices for commodities were not fully hedged and if renegotiation is not possible, manufacturers are currently bearing the full brunt

Source: Bloomberg, May 2022

Source: Bloomberg, 24.05.2017-24.05.2022

of commodity price inflation. Due to the strong competitive environment, the increase in prices are only gradually passed on to customers, but this can hardly mitigate the current commodity headwind.

Thus, in addition to Vestas and Siemens Gamesa, Nordex, another major European manufacturer, has also revised its annual forecasts downwards. Nordex expects an EBITDA margin of minus 4 to 0 percent for this year. The main reasons cited are primarily the direct and indirect effects of the Russia-Ukraine war.

The decisive criteria for an investment are a company's pricing power and unique selling propositions in a competitive environment. In a challenging market environment like the current one, it becomes clear how important it is to have some room for manoeuvre in pricing. Therefore, one should act cautiously in this tight, competitive environment.

The international competitive pressure also causes domestic manufacturers to struggle. Competitors from China - a market that is protected from international competitors by its government - are now also supplying European projects for the first time. In April, for example, the Chinese manufacturer Ming-Yang Smart Energy agreed to supply an offshore wind farm in Italy. If this project is successful, it could put further pressure on the competitive environment.

Despite challenges in the market, the accelerated trend of the energy transition offers opportunities for companies that we consider attractive. Companies in the field of project development are benefitting in particular. These companies focus on planning, approval and, in some cases, the operation of plants and are specialised in complex application procedures. The development of an integrated project pipeline serves as a significant competitive advantage and creates room for manoeuvre in a challenging competitive environment.





Source: Energiekontor, December 2021. \*German Federal Immission Control Act

A breakdown of the value added between the individual phases of the project pipeline using the example of a project developer for wind power on the mainland illustrates the profitable stages in wind power projects. Between 80 and 90% of value created is achieved through the planning application and approval. In contrast, the construction of the project contributes only about 5% to the total value added (see Fig. 7). The main value creation is therefore achieved before construction.

It is comparatively easy to identify a suitable area and agree on a lease with, for example, a farmer. The approval procedures are locally bound, so a good relationship with stakeholders is relevant. The ability to regularly bring projects to the construction phase is a structural competitive advantage. Capital and political ambition are more than sufficient, but attractive projects and a substantial pipeline are a rare asset. Accordingly, the effectiveness of the management team, the local expertise and also the long-term strategy are of central importance in order to realise profitable projects even in times of increased uncertainty.

One example is the German wind and solar park developer **Energiekontor**. Enegiekontor's business units cover the entire value chain - from acquisition to commissioning and sales, including repowering of wind and solar park projects. Repowering involves replacing old wind turbines with more powerful ones. Likewise, as an independent power producer (IPP), Energiekontor generates income by selling the electricity generated when it takes fully developed projects into its own portfolio and operates them. The company uses this capital to drive the expansion of the company's pipeline and finance future growth. Energiekontor has strong expertise in regulations at a local level, but also within individual construction regions. Involving the municipalities, for example through citizen participation, is an important part of their approach. Due to its many years of experience and its size, Energiekontor can also take advantage of opportunities in the PPA market.

But we also must take a closer look at the producers of renewable electricity, because not all companies can exploit their local expertise and generate attractive returns. The challenging competitive environment of offshore wind farms has already been highlighted in our sixth *Spotlight* edition (The return dilemma of investments in renewable energies) with reference to Ørsted, a Danish world market leader in the field of offshore wind energy.

#### **Our conclusion:**

Even in a phase with structural tailwinds, the energy transition is shaping up to be a major development that will continue to evolve in Europe over the next few years. The supportive market environment can be summarised into four main drivers:

- Increased political commitment, leading to supportive measures and targets
- More acceptance in society (citizens' initiatives led to construction delays in the past)
- Change in the market where there is less dependence on state subsidies through the establishment of PPAs
- The current market environment with increased energy prices creates higher returns for attractive investments

It is difficult to judge whether the German government's goal of obtaining electricity exclusively from renewable energies by 2035 is feasible. The current speed of expansion alone makes it extremely ambitious, thus, missing the target is also a possible scenario. However, this changes little about the fact that the renewable energy sector is experiencing, and will continue to experience, a strong structural tailwind. Even if the target is missed, we see sufficient structural growth over the next few years, which should provide attractive growth prospects for some companies' profits. Of course, the sector also faces challenges and risks for certain business models. We therefore do not expect a general positive development of all companies' share prices in the renewable energy sector despite the general market growth. This growth must also translate into attractive returns on capital and positive cash flows, which requires an attractive competitive environment and high barriers to entry. Accordingly, one should go into detail when investing and remain true to one's own general investment criteria. A fundamental analysis of the business models is elementary in order to identify which companies will benefit from the energy transition in the long term. Due to the market situation, we see new opportunities and have increased our weighting in the portfolio accordingly.

#### Fig. 8: Our conclusion



### Investment criteria

- Pricing power
- · Outstanding competitive advantages

## Challenges

- Problems in the supply chains
- · Increased input costs

In this paper, we have focused primarily on the investment opportunities for wind and solar park project developers and wind turbine manufacturers. Of course, the energy transition and the market for renewable energies encompasses a large number of areas that have not been covered here. The following chart is intended to give you an overview of other topics in the renewable energies sector, which we may report on at a later date:

## Fig. 9: Selection of possible investment themes relating to energy transition



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