Schroders greencoat

INVESTING IN EUROPE'S ENERGY TRANSITION

Market Update

September 2024

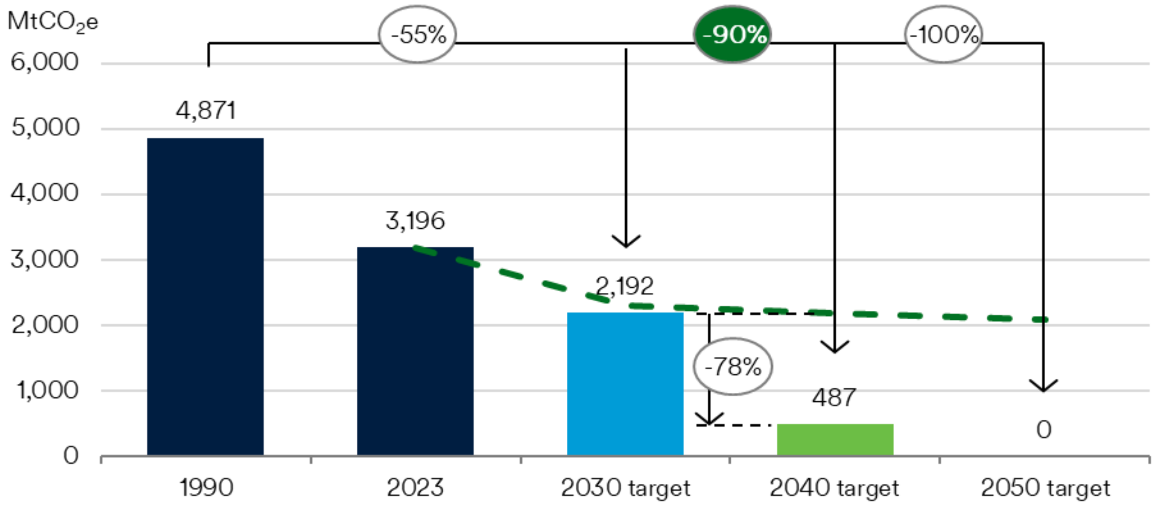
Key Market Insights and Opportunities

Introduction

As the energy transition in Europe gathers momentum, there are three fundamental drivers shaping this shift: the commitment to net-zero emissions, the need for energy security, and the pursuit of affordability. These factors create a dynamic environment for investors, offering both opportunities and challenges.

1. Commitment to Net-Zero Emissions

Europe is firmly on the path to achieving net-zero emissions by 2050, a goal central to the European Green Deal. The recent re-election of Ursula von der Leyen as President of the European Commission underscores this commitment. Despite a general rightward shift in the European Parliament, von der Leyen's election was supported by the Green Party, ensuring that ambitious climate targets remain in place. This support also resulted in her reinforcing the Commission's goals, including the existing carbon dioxide reduction targets for 2030 and 2050, and introducing a new target for a 90% emissions reduction by 2040.



[1]

This commitment is critical for two main reasons: it aims to decarbonize the existing electricity mix and drive the electrification of sectors still reliant on fossil fuels, such as transportation, heating, and heavy industry. As such, achieving net-zero emissions means a substantial increase in renewable energy generation across the continent.

2. Energy Security: Gas Supply and Power Demand Dynamics

The second critical driver is energy security, closely linked to the dynamics of gas supply and power demand. Over the past two years, Europe has dramatically reduced its dependence on Russian gas, replacing it with Liquefied Natural Gas (LNG) imports from the United States and North Africa. As a result, European gas storage levels are at a record high, exceeding 90%[2]

[1] Aurora Energy Research, 2024
[2] Entsog platform (2024)

capacity, due to a mild winter and sluggish industrial demand stemming from a slow economic recovery.

However, mid-term challenges are emerging. Global LNG supply is expected to tighten due to rising demand, particularly from Asia. On the domestic front, Europe's gas production is expected to decline because of aging gas fields in Norway and the UK, and the imminent shutdown of the Groningen gas field in the Netherlands. From January onwards, Ukraine will cease all Russian gas transit through its territory.

Simultaneously, Europe's electricity demand is set to rise significantly after a decade-long decline caused by the financial crisis, the COVID-19 pandemic, and the energy crisis. We anticipate an average 3% annual growth in electricity demand over the next years, amounting to a total increase of 65% by the middle of the century. This growth will be driven by the electrification of heating, transportation, industrial processes, and the production of green hydrogen – sectors that currently account for nearly half of Europe's $CO2$ emissions.

Digitization is another significant demand driver. Europe hosts approximately 15% of global data centers, which currently represent 2-3% of total electricity consumption. As artificial intelligence and other digital services expand, some estimates suggest that data centers' electricity consumption in Europe could reach the level of Spain's total consumption by 2030.

Combining the tightening gas supply with accelerating power demand points to an increased need for renewable capacity across Europe. Today, European renewables capacity stands at around 500 gigawatts (GW) and is projected to grow to 2 terawatts (TW) by 2050.[1]

3. Affordability: Challenges and Investment Opportunities

While the growth prospects for renewables are strong, the sector has been facing short-term challenges. Capital expenditure for new projects remains high, and current power prices are relatively modest, slowing the pace of new developments. The wind sector, in particular, is experiencing a shortage of component supply. For example, Germany has achieved less than 2 GW of new wind capacity from January to August this year, against an annual target of 6.2 GW.

However, these supply constraints are contributing to an uplift in medium-term power prices, reaffirming the value of acquiring operating assets. We believe this creates a compelling investment environment.

Investment Outlook: Four Key Themes

To capitalize on these market dynamics, we have identified four key themes that guide our investment strategy:

1. **Acquisition of Renewable Assets**: The European renewables market is set to grow to 2 TW, representing 85% of electricity generation. Achieving this target will require approximately €2 trillion in CapEx by 2050.[1] We remain focused on investing in

renewable assets that offer attractive risk/return profiles, with returns for operating assets currently approaching double digit returns.

2. **Growing Demand for Green PPAs**: The rising demand for green Power Purchase Agreements (PPAs) is driven by corporate decarbonization efforts, particularly among industrial users. Certain markets are already seeing a significant price premium for green corporate PPAs. Last year, we secured one of Germany's largest offshore PPAs, and we recently completed a solar farm in Ireland to supply electricity to a major data center provider under a PPA-based model.
3. **Increasing Flexibility through Battery Investments**: As renewable penetration rises, the need for flexibility in the grid becomes more pressing. We have been cautious with battery investments due to revenue volatility but are now seeing more stable revenue streams emerging. For example, Germany and Italy are introducing capacity markets, which will provide payments for battery availability rather than just for power trading. We are also seeing new trading markets for curtailed electricity, where batteries and electrolyzers can purchase surplus power. Several utility-scale battery projects are coming to the market in the coming months, which we are actively exploring.
4. **Advancing Hydrogen Projects**: While Europe's hydrogen rollout has been slower than the UK's, we see significant progress. The European Hydrogen Bank released its first auction results this spring, and Germany has just unveiled its hydrogen power plant strategy. Several large-scale hydrogen projects have reached final investment decisions this year, including a 200 MW facility in the Netherlands and a 740 MW green steel project in Northern Sweden. We believe we have a competitive edge in this market based off our experience in the UK, with a strong pipeline of industrial applications across the continent.

Conclusion: A Promising Time for Investment

In summary, the European energy transition is gaining momentum, driven by the dual forces of decarbonization and energy security. The rise in renewables, coupled with growing demand for flexibility and the potential of hydrogen, presents a compelling investment landscape. Our European business has been at the forefront of these developments, and we are excited to capitalize on this environment of strong returns.

We look forward to discussing these opportunities further and welcome any questions you may have. Thank you for your interest, and we are excited to partner with you in driving Europe's clean energy future.

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