

Mackenzie Greenchip Team

Europe in transition

On-the-ground insights from two weeks of company visits across Germany and Switzerland, amid transformation and uncertainty.

Europe has long represented the largest geographical allocation in the Greenchip portfolio. Due to a combination of progressive politics, high population density and the majority of infrastructure pre-dating the era of the automobile, the European continent has led the way in developing the policies and making the business investments and consumer choices to advance the energy transition.

At the same time, in today's turbulent political and economic environment, Europe is struggling with social divisions, geopolitical conflict, its place in a declining western empire, industrial and economic changes led by emerging Asian competition, and volatile and uncertain energy dynamics at home.

The result of this combination of energy transition leadership and political and economic uncertainty is that we have generally been able to find transition leaders at attractive valuations, even with the macro risks taken into account. I last visited Europe in 2022, and, while our analyst team has made several visits since then, I felt like it would be a good time to check in again after so much has transpired.

On this trip, I visited the Germanic countries of Central Europe, not just the geographic centre but in many ways the centre for that continent's advanced capital equipment industry. In the first week, I had the opportunity to meet with 15 German companies and visit seven Swiss companies involved in a range of industries producing goods such as autos, industrial robots, electric meters, transformers, turbochargers and components, such as pumps, valves and actuators. In the second week, I was able to meet with the management and visit the facilities of two portfolio holdings: Andritz, an Austrian maker of hydro turbines, pulp and paper manufacturing machinery, and environmental water treatment equipment; and AGCO, an American agricultural equipment company whose largest operations are in Germany, involving leading tractor brand, Fendt, and the development of precision agriculture technologies.



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Graz, Austria. Plant tour at Andritz headquarters.



Pelton wheel/runner used for hydro power generation.



Paper production machine at the Tissue Innovation and Application Centre.

German meetings

The energy situation

Of all the changes Europe is currently experiencing, the changing energy landscape may be the most dramatic, and Germany is experiencing this more than most. Many of the companies I met in Germany are directly engaged in this energy transition, including distribution utility E.ON, offshore wind and thermal energy generator RWE, solar inverter producer SMA, wind turbine producer Nordex, and wind and electricity equipment producer Siemens Energy (the latter two are Greenchip holdings).

Germany's feed-in tariffs,¹ introduced in the first decade of this century, were arguably the most important policy initiative to launch the major capital deployments that

have led renewables adoption in the time since. As a consequence of these and other policies, among large countries, Germany has the greatest percentage of non-hydro renewable energy in its generation mix.

Like the rest of Europe, Germany is taking a pause to assess the results of two decades of breakneck renewable energy development and more than three years of growing energy sanctions against Russia. Leading all major European countries, Germany expects to have 80% renewable electricity by 2030, as per legislative targets. The same legislation also targets net-zero electricity generation by 2045 and specifies



Renewable electricity generation by country

Country	All renewables	Renewables ex hydro
Germany	53%	49%
UK	47%	45%
Spain	51%	42%
Brazil	89%	29%
China	31%	18%
US	23%	17%
France	27%	16%
Japan	22%	15%
Canada	67%	9%

Source: Ember, Yearly electricity data, 2023

targets for minimum amounts of solar, onshore and offshore wind capacities. However, even amounts built so far are proving increasingly difficult to integrate into the electricity grid.

Total electricity demand in Germany has not grown much this decade, as the economy has faced first the pandemic and then an energy crisis. Demand growth from electric vehicles and heat pumps, while significant, has fallen short of policy expectations and not offset declining industrial demand.

Peak demand in Germany, depending on weather, can range between 75 and 85 GW (gigawatts). Yet, the amount of solar already installed in the country is over 100 GW, while wind amounts to more than 60 GW. In full midday sun, solar generation is often curtailed, and spot electricity prices hover near zero. Similar conditions are present for wind, though not as dramatic and not as predictable. As system planners continue to target still greater new renewable energy capacities, further curtailment can only be avoided by increased grid interconnections and electricity exports, or with investments in storage.

It is storage that is generating the most excitement presently. RWE has deployed 0.4 GW across Germany, Netherlands and the UK, and has 3.5 GW in combined construction and development projects. They highlight that the large gaps in intraday power prices provide a

storage arbitrage opportunity that can lead to payback periods on investment of less than five years, even without capacity payments or government incentives.

It is still very early in the rollout for storage, and the supply chain is, for now, virtually entirely dependent on China. Nevertheless, a 100% renewable future with electrification is only possible with massive investments in a combination of storage and transmission networks. The consequent economic vulnerability will have to be at first accepted and over time reduced with growing — and more expensive — local industrial capacity. Meanwhile, after going through several years of widespread inflation and a general energy crisis, awareness of inflation in electricity costs is building again.

While affordability issues were commonly acknowledged, the plans I heard gave little cause to expect any near-term resolution. E.ON is asking for significantly higher returns on equity (8% versus current levels of 5.7%) in its upcoming regulatory review, approaching the high levels enjoyed by utilities in the U.K. and U.S., in order to compete for the capital needed for ambitious grid transformation and expansion plans.

The challenge of escalating needs for electricity systems against inflating costs and declining affordability may differ in degree but is common across the entire western world. It will require difficult conversations about sharing the burden between utility operators, rate payers and governments. In general, we believe European utilities are more favourably positioned for these difficult negotiations because they have not historically “over earned”, unlike their counterparts in the U.K. and U.S., with the high regulated returns to which E.ON aspires.

Whether the energy transition is completed or not, the investments in new generation and improved networks do not seem optional to meet society’s needs, as electricity becomes ever more integral to people’s daily lives, and increasing parts of industry look to shift their energy needs towards electricity. What does seem more optional (and is currently putting unnecessary pressure on an already tight situation) is the breakneck investment in AI and energy-hungry data centres.



Unsurprisingly, given the unprecedented investment boom in the last several years, AI was a common topic of conversation. Companies I met were, in many cases, excited about the energy and cooling system needs for this incredible surge in demand, for example, Siemens Energy, Siemens and Infineon in Germany, and ABB, Belimo and Accelleron in Switzerland. They also highlighted how the arms race to build data centres was leading to suboptimal choices for energy systems, such as opting for multiple small gas turbines in place of a more efficient larger turbine, solely due to availability.

While companies I met were nearly universally promoting how AI could change their business operations and product offerings, in most cases the proposals I heard sounded more like a natural evolution of IT that pre-existed the AI excitement. For example, better procurement or logistics planning, communication modules and autonomous driving in cars, and sensor-driven precision applications in agriculture. Yet, as the data centres are piling up by the GW, they seem less tailored to serve such industrial improvements and rather more to serve the knowledge economy, and, above all, to generate more digital content for a world that already seems to be drowning in it.

During my time in Europe, OpenAI, the owner of ChatGPT, was making announcements seemingly daily. One of these that stood out was a grand plan for 250 GW of new data centres, equivalent to roughly one-quarter of the power used by the entire United States. The ambition for these data centres was “large vision models” that could interpret computationally-intensive video data and “artificial general intelligence”. While not a specifically European issue, my visits and meetings there reinforced our view that the corporate sector is getting carried away with AI hype and not taking the consequences of exacerbated inflation and energy system fragility seriously enough.

The industrial situation

While the end markets discussed in my meetings covered a diverse range of customers, products and geographical regions, the most common theme I heard was uncertainty. The pandemic period, with its turbulence and unprecedented supply chain disturbances, has, in many cases, not fully normalized.

Inventories in some areas, such as agricultural equipment or industrial power semiconductors, are still estimated to be in excess of normal, but nobody is even that confident about what normal looks like.

Companies are looking for a new leg of growth to drive general industrial demand, beyond the electricity storage and networking equipment mentioned above, yet most were at a loss, pointing to industries already facing overcapacity in China, such as solar or electric vehicles. Meanwhile, end-consumer demand seems challenged in most markets, as inequality and inflation are reducing consumers’ willingness and ability to pay.

As new industrial growth engines are hard to identify, regional areas of relative strength, as identified by management teams, also seem to be shifting fairly rapidly, with little confidence in enduring trends. Stabilization in China, identified by companies earlier in the year, was starting to look a little shakier, after inventories had cleared, and government focus had turned policy towards tackling industrial overcapacity. Europe, long the weakest region in the pandemic era, maintained more stability at a relatively low level, though hope sprung eternal there with new German industrial and defence spending in the offing. Meanwhile, there were indications that in America, long touted as the strongest region for overall economic conditions, demand had, in fact, notably weakened. Specialty chemicals producer Evonik noted a trading down and general reduction in demand for consumer basics, such as laundry detergent, while braking equipment producer Knorr-Bremse noted lower freight volumes on U.S. rail and trucking networks.

An obvious extra irritant for lack of visibility that I heard about was the tariff situation and President Trump’s penchant for frequently changing the rules so far in his second term. Most companies I heard from were making short-term adjustments where possible but were unwilling to make the kind of large investments Trump envisions will result from his policies. Investments take far too long with far too little certainty, and American high-cost structures and lack of available skilled labour often make the economics prohibitive. Steel dust recycler Befesa, which builds large industrial facilities to handle waste from electric arc furnaces for steelmaking from scrap, noted in particular the cost of capital equipment and engineers.



In terms of passing through tariff costs into prices, more consumer-oriented companies, such as BMW, were assessing what the market could bear in terms of increased prices. However, most industrials/B2B companies or producers of commodified products had already passed through, or were expecting to pass through, most of the cost to the importers, as no excess capacity existed in the United States to satisfy demand free of tariffs.

While uncertain end-market demand and geopolitical conditions were the common themes, my meetings did confirm that bloated post-pandemic inventories were greatly reduced, even if they couldn't be conclusively identified at a bottom level in some cases. As noted in the introduction, many European industrial companies have attractive valuations, and even a stabilization with no more inventory destocking could provide positive share price performance. For example, Greenchip holding Infineon, a maker of power semiconductors, is expected to return to growth in their current fiscal year after two years of declines. It is realizing better margins than in prior trough periods of demand and has cash flow and earnings multiples below 10x and 20x, respectively.

Swiss tour

I toured a fairly small part of the Zurich region, which is nevertheless a fairly large portion of the densely inhabited area of Switzerland. This is a completely mountainous country of only nine million people but it has achieved amazing economic success, with industry leaders in financials, pharmaceuticals, luxury goods, food and beverage, and industrials. I visited many of the latter.

Driving around one corner of the country, it was hard not to be impressed, as with much of Central Europe, with the beautifully proportionate mixture of land uses among agriculture, residential, commercial, industrial and infrastructure. Land scarcity and a long period of political stability has incentivized patient and careful land stewardship. I saw little evidence of the giant warehouses or data centres so common in the Toronto or North American suburban landscape.

The country's disproportionate economic success, in addition to the political vendettas that have commonly driven Trump policy (in this case reacting to a tough

negotiating stance from cabinet member Karin Keller-Sutter), has made Switzerland, for now, a tariff outlier, suffering a rate of 39% versus 15% for the rest of the continent. The fact that many of the companies I met have local manufacturing with relatively high local employment and are able to pass through the tariff cost to their customers, is a testimony to the uniqueness and value-added strength of Switzerland's industrial companies.

I saw such local employment at factories for turbochargers (attached to gas turbines or engines) at Accelleron, and for valves and actuators for cooling systems at Belimo. The latter was in the midst of investor questions when I visited, as Microsoft had just announced plans for its own liquid cooling system for new AI chip designs (microscopic cooling within the chips themselves, as opposed to in pipes). Microsoft's intentions represent a shift in value that may not yet be fully appreciated by the market: one of the titans of the digital future and associated value add felt compelled to allocate research and development investment to the real-world issues of energy and cooling.

Switzerland's industrial achievements are visible in impressive industrial clusters in small towns, such as Baden, where Accelleron's headquarters are located. Accelleron was spun out from electrical/industrials giant ABB. Across the same street as Accelleron HQ were also the operations of Hitachi, Ansaldo and a different division of ABB: all but Accelleron have been or are currently owned within the Greenchip fund.

ABB is not the only Swiss company that has restructured and continues to do so. Corporate reorganization plans of two of the companies I visited provide a sign of the times, reflecting the disproportionate valuation gap between the U.S. and the rest of the world. Cement maker Holcim had recently spun off its American division (which has much higher carbon intensity), largely in order to realize greater valuation from the American market but also to divest the Swiss parent of its environmental obligations. Meanwhile, electric metering and utility data systems company Landis+Gyr divested its European operations while I was there and intends to shift its listing from the Swiss to an American exchange, even while remaining a Swiss domiciled company. Similar to Holcim, the allure of premium valuations in America is driving significant corporate strategic decisions.



Conclusion

My trip to Central Europe provided good examples of both why our fund remains heavily allocated to the European continent and of the mounting risks that our invested companies face.

The leadership in advanced manufacturing, still based on robust local employment ecosystems, starting from apprenticeship on the factory floor to STEM education in research and development, is inspiring from a Canadian perspective. The high-quality, high-value capital goods produced by the companies I visited are still able to compete with Chinese mass production and American attempts to tariff and reshore. Additionally, the utilities have so far managed a dramatic transition in the electricity sector, along with a sanctions-driven energy crisis, without compromising the social contract they have with customers and regulators.

If European businesses have managed to navigate these threats admirably so far, it does not mean the battle is won; these threats will continue to grow and

challenge our companies (and the nations in which they are headquartered) to respond. Chinese competition will continue to improve quality and sophistication. European cost structures will continue to be pressured higher by energy and labour costs. The energy transition — and electricity grids in particular — will be more challenging to manage with greater renewables penetration. And political challenges emanating largely from its American “ally” seem set to continue and likely grow, from direct tariff exposure to being caught in the middle of ever-building attempts by the U.S. to contain the development and power of both Russia and China.

As stated in the introduction, it is owing to these challenges that we find good value in many European companies as investments in the energy transition. We will continue to visit and communicate with management teams to monitor whether Europe and its industries can continue to rise to these challenges and remain our largest regional allocation.

1 Feed-in electricity tariffs were introduced in Germany to encourage the use of new energy technologies such as wind power, biomass, hydropower, geothermal power and solar photovoltaics. Feed-in tariffs are a policy mechanism designed to accelerate investment in renewable energy technologies by providing them remuneration (a “tariff”) above the retail or wholesale rates of electricity.

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