

Capitalizing on infrastructure opportunities

A deep understanding of the underlying businesses in question remains critical, in terms of underlying revenue, cost and value generation levers, as well as risks.

- _ Recent experiences in Germany are reminders of how essential infrastructure is, and how policies can help, instead of hinder energy supply diversification.
- _ If risks are properly managed, well-diversified portfolios of infrastructure projects have the potential to offer comparatively safe and predictable return streams.
- _ For retail investors seeking to enter an unfamiliar asset class, taking a cautious and selective approach makes sense.

Two megatrends continue to reshape infrastructure investing. As previously pointed out, Vladimir Putin's latest war on Ukraine and the resulting global cost of living crisis have boosted a variety of infrastructure investments, notably in renewable energy.¹ All over the world, investors and policymakers are trying to speed up the energy transition, as well as enhancing quantities and security of energy supplies. In turn, the need for accelerating private infrastructure investments is making it easier for traditionally less active groups, including retail investors, to gain better access to the asset class. These policy responses deserve to be welcomed, but only cautiously.

Winter has been extremely challenging in Europe, despite significant progress in preparations throughout 2022. These have been surprisingly speedy, especially in Germany. To assess what has changed, and what else will be required, projects aimed at security of supply are a good place to start. Specifically, take the North Sea port of Wilhelmshaven, about an hour's drive away from Bremen. After years of bickering over terminals for liquified natural gas (LNG), a new one was recently completed

there in record time. The decision was taken in February 2022. All project steps (approval and construction) were done by November 2022. LNG has been arriving in Wilhelmshaven since December 2022, playing a crucial role in getting Germany through the winter.

So far so good and already, we see similar tendencies in the field of wind energy and solar energy, in terms of significantly shortening previously notoriously long administrative approval processes.² The reason to be only cautiously optimistic is that Germany's system of decentralized administration makes it very hard to know whether and how to extrapolate from the success in Wilhelmshaven. Will support for speedy decisions be equally energetic when the project in question is not national headline news at a time of crisis? What if instead, we are talking an urgently needed stretch of high voltage transmission line, widely opposed at the level of federate states? Or, a potentially extremely productive windfarm an excellent, windy location that has long been held up by vocal, local opponents, including elected decision makers at level of municipalities or rural districts? Anyone familiar with developing energy projects

¹ More than just a potential inflation hedge (dws.com)

² See, in particular: Mehr Energie aus erneuerbaren Quellen | Bundesregierung

in Germany will have come across plenty of such examples. Despite encouraging moves at the federal level since February 2022, it remains to be seen how this will actually translate into practical changes at the local level in 2023, especially once the immediate sense of crisis passes. Even the governing coalition in Berlin has recently appeared rather hesitant and fractured on the topic.³

This points to a broader paradox in thinking about the asset class. Infrastructure has always been essential to the proper functioning of society, the economy and the well-being of citizens. However, it sometimes takes a crisis, such as a nearby war or a pandemic, to bring home just how costly previous policy errors have proven to be. In Germany and beyond, the previous reliance on gas supplies from a single supplier created dangers, not just in geopolitical and security terms, but even when it comes to addressing the basic needs of citizens. At least for a while, that should lead to better policies, while at the same time creating scope for new pitfalls.

Such thinking also underpins the second trend: making infrastructure investment more accessible. The basic motivation behind this has long been clear, including at the European Union (EU) level. As we have argued, large amounts of capital are needed to cover the investment needs in the area of energy supply, but also in the area of infrastructure overall to facilitate Europe's energy and digital transformations decision makers are aiming for.⁴ If Europeans wish to secure their current high standard of living and lay the foundation for future prosperity, significant investments will be required in the coming decades to transform European economies, reduce external dependencies and build a sustainable industrial landscape.

Current sources of capital (governments, banks, institutional investors) will not suffice to close the existing financing gap. At the same time, private investors have so far been hindered in investing in this asset class, with some vehicles requiring high minimum investment amounts or onerous reporting requirements. All over Europe, this is beginning to change. To once again take Germany as an example, the new Fondsstandortgesetz ("German Fund Jurisdiction Act") passed in 2021 implements EU rules in harmonizing the playing field for green infrastructure investments; moves supervision towards digital information exchanges; and creates new opportunities for fund products specifically aimed at a retail audience.⁵

This too is to be cautiously welcomed. For good reasons, infrastructure has long been favored by many institutional investors. For centuries after the initial industrial revolution, traditional transport infrastructure projects, such as railways and toll road projects, have often wholly or partially relied on private funding; indeed, the very idea that in modern industrialized countries, these should be provided by state entities rather than private enterprises is largely a comparatively recent development of the 20th century.⁶ Electricity generation, notably from onshore wind, offshore wind and solar have risen in prominence in recent decades and represent the lion's share of completed transactions over the past decade, as shown in the chart below. Most probably, this will not change in the coming decade, either, since the move away from fossil fuels is an irreversible process that gradually penetrates all areas of private and corporate activity. Together with well-functioning grids and backup facilities for when intermittent renewable electricity is not available, renewables are seen as essential as Europe tries to wean itself from fossil fuels.

³ Germany is at last tackling its long-standing economic weaknesses | The Economist

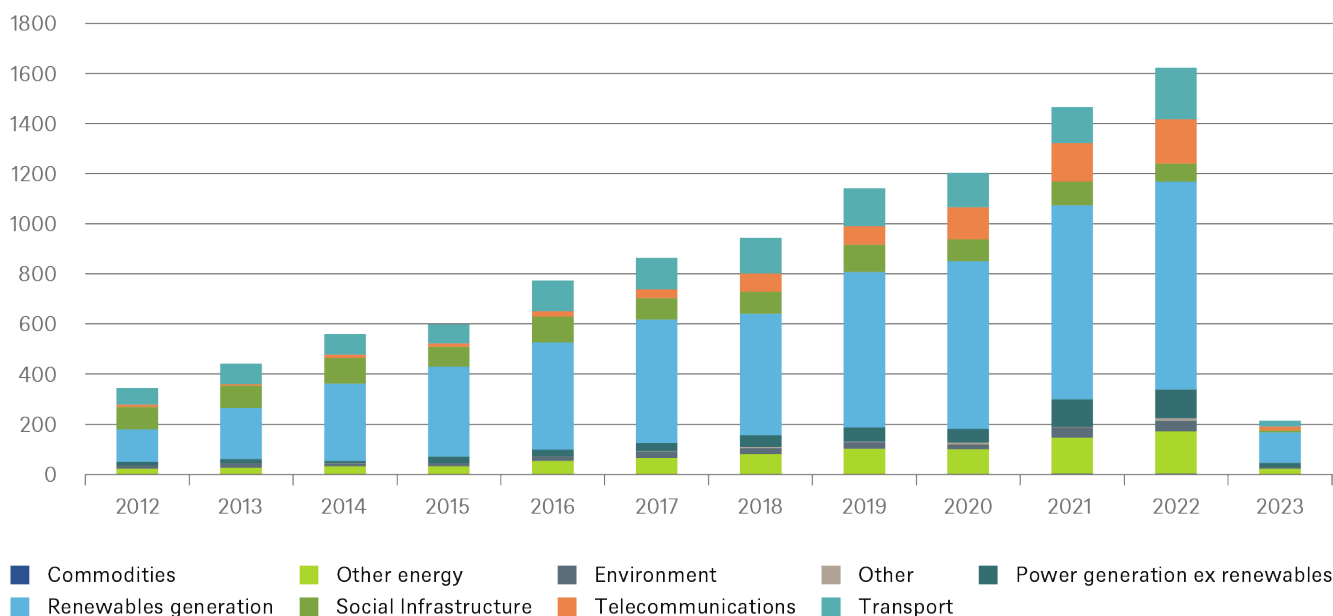
⁴ <https://www.dws.com/en-gb/insights/global-research-institute/a-framework-for-european-transformation/>

⁵ Deutscher Bundestag - Bundestag beschließt Stärkung des Fondsstandorts Deutschland

⁶ For revealing examples on privately funded infrastructure booms gone wrong in mid-19th century North America, see Surowiecki, J. (2004), *The Wisdom Of Crowds: Why the Many are Smarter than the Few and How Collective Wisdom Shapes Business, Economics, Society and Nations*, Little, Brown, esp. p. 50-68.

THERE IS MORE TO INFRASTRUCTURE THAN JUST RENEWABLE ELECTRICITY GENERATION

number of deals closed



Sources: Infralogic, DWS Investment GmbH as of 3/16/23

Two other types of infrastructure also need to be mentioned. Over the past 20 years, digital infrastructure projects, such as data centers, cell towers powering mobile telephony, and fiber optic networks have grown in prominence, as the growth in internet usage boosted the need for physical communications infrastructure. Increasingly, facilities to provide health and education, such as hospitals, universities and schools and other social infrastructure projects are also seen as important parts of the asset class, even if the number of deals in these areas remains modest for now.

What all these segments have in common is that one way or the other, they underpin citizens well-being, as well as economic activity and thus prosperity. At the same time, judging their attractiveness as investments requires careful analyses, not just segment by segment but asset by asset, to thoroughly understand the underlying revenue, cost and value generation levers available to the business in question.

To be sure, the quasi-monopolistic nature of many infrastructure assets means that final customer demand often tends to be inelastic. In general, they are therefore usually able to push through higher costs to customers through increased fees or tariffs. To put it bluntly: Most people would rather not go to a restaurant or order a pricey bottle of wine during a cost-of-living crises, if that means being unable to afford heating their homes.

Inelastic demand, however, will only deliver decent returns if risks are properly understood and managed on an asset-by-asset basis. To continue with the above example, most people would rate having a home as more essential than eating out. In itself, though, the inelasticity in demand for housing and shelter has not always made investments in residential real-estate a winning proposition everywhere. Indeed, the rules governing new open infrastructure funds aimed at enabling German retail investors to finance infrastructure project companies are partly based on those of German open real estate funds. The later

This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect. Alternative investments may be speculative and involve significant risks including illiquidity, heightened potential for loss and lack of transparency. Alternatives are not suitable for all clients. DWS Investment GmbH as of 03/13/23

have repeatedly run into troubles, most spectacularly following the global financial crisis of 2008.⁷ Rules have since changed to avoid those specific problems for real estate, but it remains to be seen how well they work in infrastructure. Most probably, there will be some learning by doing, for asset managers, investors and regulators alike, with some potential problems and risks only becoming obvious with the benefit of hindsight.

Policy responses can be unpredictable. To take just a few topical examples, last summer's very threat of many European households facing a cold, costly winter, brought affordability concerns to the top of the agenda for many regulators and other policymakers. The former often have the ability to limit regulated assets' capacity to react to changing economic conditions under existing regulatory regimes. The latter are frequently tempted to interfere with existing economic arrangements, imposing, for example, windfall taxes on assets following periods of outperformance. All this has impacted how quickly infrastructure assets have been able to adjust revenue streams to boost or at least maintain residual cash flows. For some infrastructure assets, higher costs of capital and material inputs also pose earnings risks. And of course, with interest rates rising and likely to remain higher than they have been for many years, the impact on discount rates and infrastructure valuations continues to be increasingly felt across the asset class.

If risks are properly managed, returns from a well-diversified portfolio of infrastructure assets have the potential to offer comparatively safe and rather predictable return streams for investors, while at the same time contingently contributing to societal well-being. And for newly launched retail products, we believe there should be no shortage of projects to choose from in coming years. In Germany and elsewhere, government plans see plenty of new green generating electricity coming online until 2030. Beyond that, related projects such as upgrades to power grids, will also need to be financed. A practical example are power grids in Germany from north to south, which bring the electricity generated by offshore wind farms in the north to the areas in southern Germany where many large, energy intensive industrial areas are. Then there are projects geared toward the energy transition, from electricity storage in the form of batteries, to hydrogen and innovative smart grid projects that balance supply and demand responses. But for retail investors seeking to secure attractive returns in an asset class they might have limited familiarity with, taking a cautious and selective approach makes sense. Not least in terms of who to entrust their hard-earned money.

⁷ Immobilienfonds als Milliardenräuber (faz.net)

GLOSSARY

In business administration, the **cost of capital** is the cost incurred by a company in using equity capital for investments or in obtaining debt capital for them.

The **discount rate** is the interest rate charged to commercial banks and other depository institutions for loans received from the country's central bank's discount window.

The **European Union (EU)** is a political and economic union of 27 member states located primarily in Europe.

Liquefied natural gas is the name given to liquefied processed natural gas cooled to -161 to -164 °C.

A **monopoly** is a market with only one supplier.

Open-end funds are funds whose shares can be issued and redeemed at any time.

Price elasticity describes the relationship between a change in a good's demanded quantity and a change in its price.

Important Information

DWS is the brand name of DWS Group GmbH & Co. KGaA and its subsidiaries under which they do business. The DWS legal entities offering products or services are specified in the relevant documentation. DWS, through DWS Group GmbH & Co. KGaA, its affiliated companies and its officers and employees (collectively "DWS") are communicating this document in good faith and on the following basis.

This document is for information/discussion purposes only and does not constitute an offer, recommendation or solicitation to conclude a transaction and should not be treated as investment advice.

This document is intended to be a marketing communication, not a financial analysis. Accordingly, it may not comply with legal obligations requiring the impartiality of financial analysis or prohibiting trading prior to the publication of a financial analysis.

This document contains forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. No representation or warranty is made by DWS as to the reasonableness or completeness of such forward looking statements. Past performance is no guarantee of future results.

The information contained in this document is obtained from sources believed to be reliable. DWS does not guarantee the accuracy, completeness or fairness of such information. All third party data is copyrighted by and proprietary to the provider. DWS has no obligation to update, modify or amend this document or to otherwise notify the recipient in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subsequently becomes inaccurate.

Investments are subject to various risks. Detailed information on risks is contained in the relevant offering documents.

No liability for any error or omission is accepted by DWS. Opinions and estimates may be changed without notice and involve a number of assumptions which may not prove valid.

DWS does not give taxation or legal advice.

This document may not be reproduced or circulated without DWS's written authority.

This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, including the United States, where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DWS to any registration or licensing requirement within such jurisdiction not currently met within such jurisdiction. Persons into whose possession this document may come are required to inform themselves of, and to observe, such restrictions.

For institutional / professional investors in Taiwan:

This document is distributed to professional investors only and not others. Investing involves risk. The value of an investment and the income from it will fluctuate and investors may not get back the principal invested. Past performance is not indicative of future performance. This is a marketing communication. It is for informational purposes only. This document does not constitute investment advice or a recommendation to buy, sell or hold any security and shall not be deemed an offer to sell or a solicitation of an offer to buy any security. The views and opinions expressed herein, which are subject to change without notice, are those of the issuer or its affiliated companies at the time of publication. Certain data used are derived from various sources believed to be reliable, but the accuracy or completeness of the data is not guaranteed and no liability is assumed for any direct or consequential losses arising from their use. The duplication, publication, extraction or transmission of the contents, irrespective of the form, is not permitted.

© 2023 DWS [Investment] [International] GmbH

Issued in the UK by DWS Investments UK Limited which is authorised and regulated in the UK by the Financial Conduct Authority.

© 2023 DWS Investments UK Limited

In Hong Kong, this document is issued by DWS Investments Hong Kong Limited. The content of this document has not been reviewed by the Securities and Futures Commission.

© 2023 DWS Investments Hong Kong Limited

In Singapore, this document is issued by DWS Investments Singapore Limited. The content of this document has not been reviewed by the Monetary Authority of Singapore.

© 2023 DWS Investments Singapore Limited

In Australia, this document is issued by DWS Investments Australia Limited (ABN: 52 074 599 401) (AFSL 499640). The content of this document has not been reviewed by the Australian Securities and Investments Commission.

© 2023 DWS Investments Australia Limited

094980_1 (03/2023)

DWS Investment GmbH as of 03/13/23