Real Estate Research

May 2024

Windy Cities: Energy & Real Estate

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IN A NUTSHELL

- Europe's landscape for energy is set to see radical change over the next decade. Directly employing around sixty million people worldwide, with even more jobs indirectly sustained through the supply chain, energy production is itself a direct source of real estate demand.
- The growth of solar and wind suggests the potential emergence of new energy hubs across Europe – from port cities with easy access to the North Sea to sun drenched areas Spain and Southern Italy.
- With governments supporting investment in renewables, this should help give investors security to develop real estate assets that enable the transition occurring across the energy sector.
- Direct real estate investment into energy, such as battery storage facilities, could also become increasingly prominent. Any move into this sector will require a deep understanding of the underlying drivers of the energy market, from supply and demand fundamentals, to tenant risk and asset pricing.

Over the past few years, the future of energy has become one of the key questions for both government and industry. Framed by dual crises of war and climate, the momentum for change has gathered pace.

As noted in our Infrastructure report on alternative fuels, "There has been a continued improvement in the policy environment surrounding the energy transition, particularly in 2022 with the introduction of REPowerEU"[1] which set out ambitious energy plans for diversification of supply and considerable investment in renewables. With the UK on a similar path, Europe's landscape for energy is set to see radical change over the next decade.

It will be important to understand the implications for real estate, and not just as a major consumer of energy. We should consider both the opportunities and the risks of investing in emerging energy hubs, energy intensive assets, or deploying capital into those assets that straddle the grey area between infrastructure and real estate.

Europe's energy transition

Mindboggling

The EU Commission has estimated that achieving decarbonisation targets will require energy investment to double over this decade, before continuing to rise to an annual figure of near €600 billion by the middle of the century. Three quarters of this attributed to energy efficiency in buildings and industry – something the real estate industry is already acutely aware – with renewables and power grids requiring annual spend of over €100 billion.[2]

As shown in our Infrastructure report, solar and wind capacity is projected to almost double by the end of the decade, while according to BNEF, meeting Net Zero targets could require investment in wind and solar of $3.8 trillion over the thirty years to 2050.[3] Add to this the growth of biomethane and hydrogen, the extent of this proposed change is almost unprecedented.

[1] DWS, Transforming European Energy: Alternative Fuels, October 2023

[2] EIB, May 2023

[3] BloombergNEF, April 2022

Real estate and energy

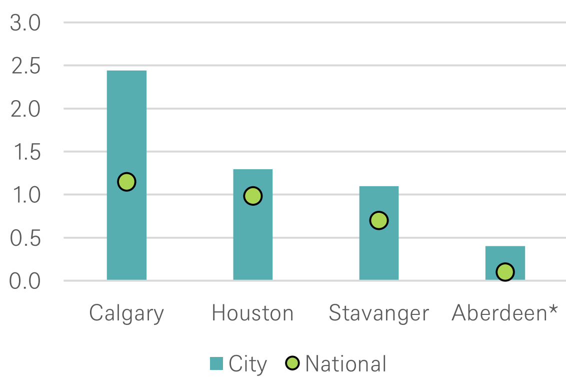
Driving demand for real estate

The relationship between real estate and energy is well documented. Real estate is one of the biggest single users, accounting for 30% of global energy consumption.[4]

However, the relationship goes well beyond this. Directly employing around sixty million people worldwide[5], with even more jobs indirectly sustained through the supply chain, energy production is itself a major source of real estate demand.

This is evident across the world's energy hubs. From Aberdeen in Scotland to Houston in the United States, Stavanger in Norway to Calgary in Canada, the development of the oil and gas industry in these locations has transformed the real estate environment over the past fifty years.

Population Growth (1970 – 2020, CAGR, %)



Note: *Scotland national population growth
Source: DWS, Statistics Norway, ONS, Macrotrends, US Census Bureau, May 2024

The development of energy production across all these cities has supported population, employment, and economic growth, with a direct impact on real estate demand. And while not all related activity occurred in these cities – for example many financial services jobs supporting North Sea oil are based in London – the local impact was substantial.

We clearly see this relationship in Houston. Not only did the development of Texas oil production see the city grow from just over 40,000 people in 1900 to 2.5 million today[6], the performance of the real estate industry has also been correlated – although imperfectly – to the price of oil.[7]

Although the Houston economy has increasingly diversified, according to Moody's Analytics, half of the local economy remains closely correlated with oil and gas. Their analysis found hotel and industrial performance most closely following the ups and downs of oil and gas.[8]

Elsewhere, the opening of North Sea oil fields in the 1970s saw Aberdeen move from a fishing port to one of Europe's major energy hubs, while in Stavanger, Norway's oil capital, surging oil prices in the decade to 2014 saw house prices move from below average to the highest in the country.[9]

Access to energy is also increasingly important when considering the viability of real estate projects, particularly largescale data centres. The speed and scale of this growth is likely to prove difficult, potentially rendering schemes unviable, or having a knock-on effect to the rest of the market, curtailing development in other sectors such as housing.

Where next?

We strongly believe wind and solar will continue to represent an increasing share of Europe's energy mix. Potentially more geographically dispersed than oil, the growth of solar and wind suggests the emergence of new energy hubs across Europe – from port cities with easy access to the North Sea to sun drenched areas Spain and Southern Italy.

The development of these energy hubs could significantly boost local real estate demand. The growth of employment, people, and business space required to support and service these new industries suggests higher demand particularly for residential, hotels, and warehousing. Should the development of these hubs also encourage other energy intensive (data centres, heavy industry) and energy related (battery production / storage) clusters, a substantial multiplier effect could take hold.

[4] IEA, 2023
[5] European Commission (2017 estimate), 2020
[6] US Census Bureau, 2024
[7] Moody's Analytics, May 2022
[8] Moody's Analytics, May 2022
[9] Yu Yiqi, Norwegian School of Economics, 2017

Identifying opportunities

There is a long run relationship between energy and real estate. This relationship will continue to evolve, but with governments supporting investment in renewables as a way to create jobs, growth, and energy security, this should help give security to develop and invest in real estate assets that enable the transition occurring across the energy sector – for example, modern warehousing to facilitate the ongoing maintenance of offshore wind, residential developments to house the new employees required to deliver and sustain new energy hubs.

Direct real estate investment into energy, such as battery storage facilities, could also become increasingly prominent. Any move into this part of the market will require a deep understanding of the underlying drivers of the energy market. Most traditional real estate investors are unlikely to have experience in this space, nor a clear understanding of the nuances of supply and demand fundamentals, tenant risk and asset pricing.

This could also raise the question over whether an asset is real estate or infrastructure, creating challenges over asset allocation, portfolio construction and benchmarking.

Nevertheless, this trend looks set to run for decades to come and has the potential to fundamentally alter the economic and built environment. For real estate investors it will be important to understand these changes, partnering with our infrastructure colleagues, assessing both the challenges and the opportunities that these changes could create.

Source: DWS Images, May 2024

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