VAN LANSCHOT KEMPEN

INVESTMENT MANAGEMENT

Mega-trend 2
Decarbonisation

Energy transition to energy security

For Professional Investors only

The trillion-dollar investment opportunity

Looks can be deceiving. Beneath the surface of the energy transition lies something more urgent, less politically vulnerable, and worth trillions: energy security[1].

The strategic shift: from transition to security

While climate headlines dominate, the real driver of capital and policy in the coming decade may be something more immediate: keeping the lights on.

The energy transition is widely recognised as the defining challenge of our time, as it's the one that most directly affects our future. If we do not get this right, everything else we are working towards, from cloud computing to resource extraction, will have nowhere to play out. Solving this for the energy transition, protects all of us against the worst consequences of climate change.

In addressing this challenge, priorities are revealed and the part of the transition that is already attracting capital - policy support and investor attention - is energy security.

This paper is not here to revisit the urgency of climate action and decarbonisation. Instead, it focuses on the clear and present opportunities from energy security. In our view, the more profitably a company can participate in this theme, the more sustainable the business model will be, and the more resilient the energy transition itself becomes.

Jags Walia
Head of Global Listed Infrastructure strategy

> *"It is worse, much worse, than you think".*
>
> **David Wallace-Wells**
> The Uninhabitable Earth (2019)

Source: 1. IEA

Energy transition vs energy security

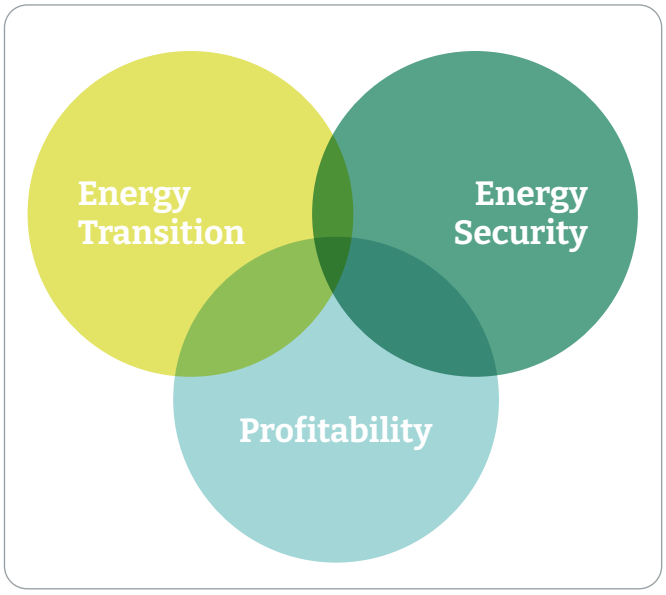
Delving further into the definitions to explain the important differences in the terms:

Energy transition means electrifying everything, decarbonising the electricity supply and making it green. It also means connecting the two, through the grid infrastructure that underpins the system. The goal is to halve carbon emissions by 2030[2], a target that we are unlikely to meet, and to reach net zero by 2050.

Energy security is simpler to explain. At its core, it means having a reliable, affordable, and uninterrupted supply of energy. In practical terms, it asks a more immediate question: will the power come on when you need it?

As investors we consider which of the two matters most in the near term. Where a company is involved in solving both challenges, we focus closely on the profitability of its business model.

Figure 1: The overlap between energy transition and energy security



Source: Van Lanschot Kempen Investment Management 2025

Energy security is not guaranteed

For equity investors, the opportunities to participate across the spectrum of companies involved in addressing the climate challenge is incredibly broad. However, the potential for these investments to increase energy security varies greatly.

For example, those preferring to invest in solar farms with battery storage in Chile or the Philippines will not be disappointed in the choice of options. Likewise for offshore wind or for those considering the role of nuclear or small modular reactors. All options are available, including options on grid transmission - where investment needs to double by 2030[2] – and more. All deliver different energy security impacts.

Importantly, to contribute meaningfully to both energy transition and energy security power generation must deliver on three key factors: cost, time-to-market, and reliability.

The most compelling and profitable investment opportunities emerge where energy transition and energy security align.

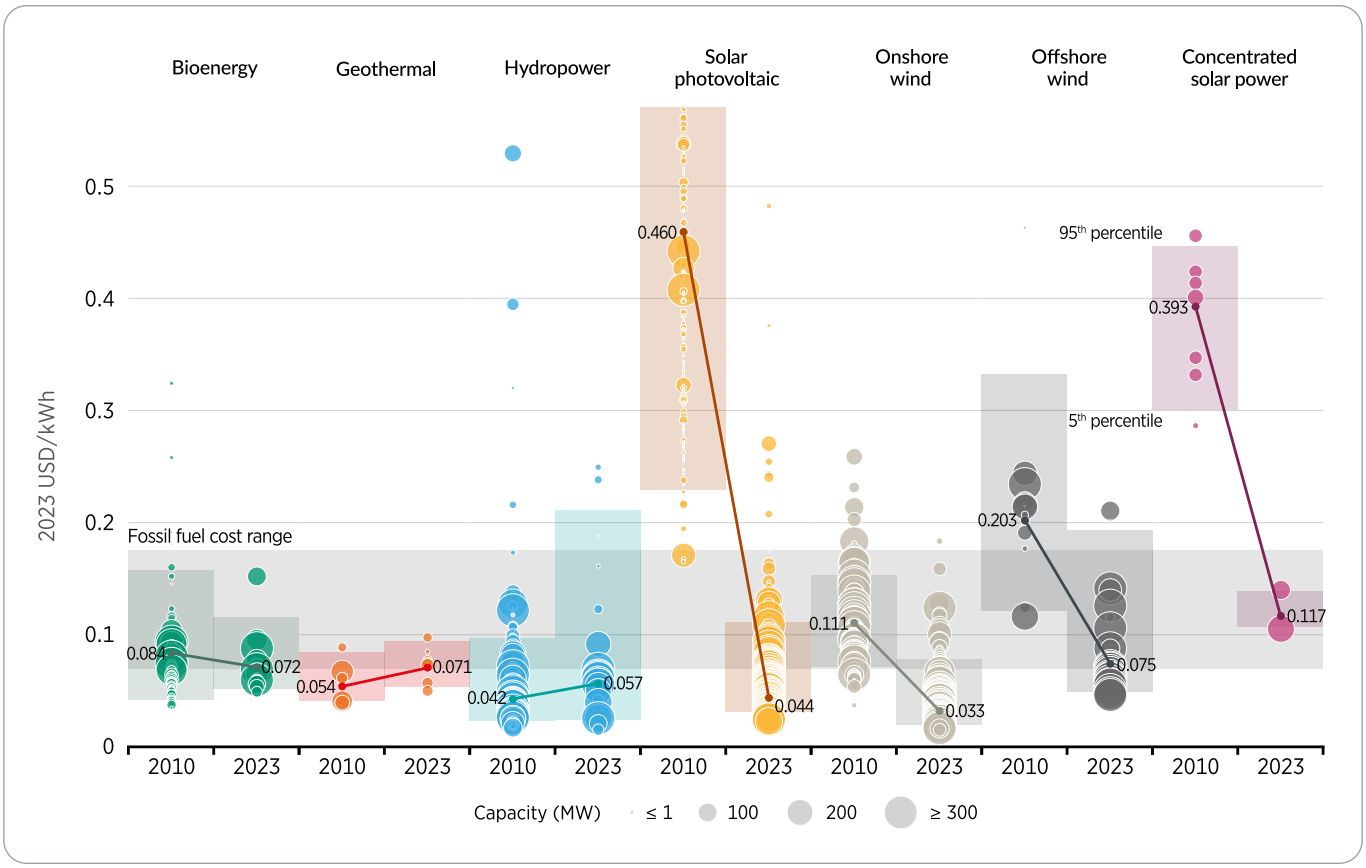
Cost

To further illustrate this point, below you can see how the Levelised Cost Of Electricity[4] (LCOE) shows how far the economics of renewables have come.

Solar leads in cost competitiveness, a commercial and climate win.

What we see over the period shown (2010 to end 2023, last year of full data) is the most meaningful cost reductions globally have been in solar. This is not just a climate win – it is a commercial one. The grey horizontal bar shows the comparative cost of using fossil fuels.

Figure 2: Global weighted-average LCOE from newly commissioned, utility-scale renewable power generation technologies, 2010-2023



Source: Van Lanschot Kempen Investment Management

This is the second in a series of three reports into the impact of the mega-trends on infrastructure investing. Visit our website to receive the follow-up reports straight to your inbox at:
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Mega-trend 1 – Decarbonisation
Mega-trend 3 – Deglobalisation

Time-to-market and reliability

Considering time-to-market and reliability there are two caveats to keep in mind. Firstly, every industry has its headline-grabbing failures, from nuclear to offshore wind, that can distort perceptions. We try to look past the outliers and focus on the average performance across the industry while recognising that extreme cases can still skew the data.

Secondly, and more importantly, not all projects are created equal. Time-to- market can vary significantly depending on several key factors including:

- Supply chain availability
- Project complexity (greenfield, or modular/brownfield)
- Regulatory approvals (in the US, increasingly replaced by political will)
- Location (for consistency, the timelines below are based on US data)

This list could be much longer, but these are the key drivers that most often determine how quickly a project can be delivered.

Figure 3: Estimated time-to-market across the energy system, from fastest to slowest.

Type of energy	Estimated time frame
Solar farms	12 - 18 months[1]
Battery storage	1 - 3 years[2]
Grid connection	2 - 5 years[3]
Gas plants	2 – 4 years[4]
Coal plants	3 - 4 years[5]
Onshore wind farms	4 - 9 years[6]
Nuclear plants	7 – 10 years[7]
Offshore wind farms	7-11 years[8]

In terms of time-to-market, the table above clearly highlights the winners. Companies developing new solar projects with battery storage and grid connection, will consistently outpace new wind or nuclear projects. This means they can deliver earlier solutions for both energy security and the energy transition.

Profitability as a pillar of sustainability

And finally, to not lose sight of the goal for investors – the energy transition should be profitable. That is the first line of defence against a slowdown in progress. As we have seen in recent years, renewable energy companies that report write-downs and losses will see their investor base looking elsewhere.

For us, profitability through the cycle will be more than what can be modelled in a discounted cash flow. It includes utilisation rates, management quality, asset location quality – including the regulatory environment - and the decarbonisation pathway the company contributes to. These are core to how we value businesses in this space.

Strategic imperative: invest where transition meets security

Over the past years, political appetite for energy transition has ebbed and flowed. Yet the underlying need for energy security, which we see within the energy transition, actually holds support on both sides of the political spectrum. While we should be vigilant for political ambitions that supersede climate goals, the need for energy security remains resilient.

As shown in figure 1, the overlap between a profitable energy transition and energy security, offers investors more sustainable path to long-term returns and opportunities for alpha.

For institutional investors, the message is clear: focus on companies advancing both goals. These are the businesses best placed to deliver reliable, scalable, and enduring value, regardless of political cycles or market conditions.

Now is the time to focus on companies that can deliver both clean and secure energy. The future belongs to those delivering both in a profitable way.

Sources: 1. US Light Energy, Nov 2023, 2. National Renewable Energy Laboratory (US DOE), 3. CleanPower.Org, 4. US EIA.gov, 5. Power Plant Economics, Alstom., 6. A Comprehensive Guide to Windfarm Construction, JMS Energy, Nov 2024., 7. ScienceforSustainability.org, 8. A Guide to Offshore Windfarm Development and Construction, WindCycle Energy.

Listed Infrastructure: general risks to take into account when investing in Listed Infrastructure strategies

Please note that all investments are subject to market fluctuations. Investing in a Listed Infrastructure strategy may be subject to country risk and equity market risks and risks specific to the infrastructure market, which could negatively affect the performance. Under unusual market conditions the specific risks can increase significantly. Historic data for similar investment vehicles indicates that the strategy can carry an aggressive level of risk. Potential Investors should be aware that changes in the actual and perceived fundamentals of a company may result in changes for the market value of the shares of such company. The strategy is allowed to invest in financial derivatives and (short-term) money market instruments. Currency exposures may be hedged.

Profile of the typical investor in Listed Infrastructure strategies:

The strategy may be suitable as a core or supplemental investment for those: interested in a convenient way of gaining exposure to global listed infrastructure companies (international equity markets); seeking long-term growth of their investment (5 years or longer); who can bear the possibility of significant losses, especially in the short term.

The value of your investment may fluctuate, past performance is no guarantee for the future. Do not take unnecessary risks. Before you invest, it is important that you are aware of and are informed about the characteristics and risks of investing. This information can be found in the available documents of the strategy and/or in the agreements that are part of the service you choose or have chosen.

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Kom verder

{moving · forward · together}

There's a saying in Dutch, Kom verder, which has many meanings including 'moving forward together'. But it's more than a phrase to us. It's our company philosophy and how we work with clients to deliver the right investment solutions for them.

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