

# Timing the energy transition

Why some utilities can act today, while others must prepare for tomorrow's opportunities



# Management summary

**E**urope's energy transition is at risk. Although it is making steady progress, the process remains far from complete. The transformation requires continuous investments as well as robust balance sheets, yet ongoing participation in new generation, grid infrastructure, storage, etc. has not proven beneficial for all. Utilities' margins have fallen and stock performance has weakened, while debt levels continue to rise. As a result, the sector faces a widening gap between investment needs and financial capacity.

Utilities' ability to drive the transformation depends on the resilience and balance of their portfolios, their operational performance and their financial headroom. Thus, we regularly monitor the business performance of leading European utilities to assess their transformational power. Independent power producers (IPPs) and integrated utilities that once achieved healthy margins from power generation and sales now face pressure from changing market dynamics, while regulatory support for grid operators is failing to keep up with new investment needs. Today, the financial headroom of utilities covers only 20 percent of the EUR 1 trillion investment the European energy system needs by 2030. The very companies expected to lead the transition are running out of financial strength. To measure the transformational power of utilities, the Roland Berger Transformation Indicator was developed as a combination of ROCE and leverage. As of now, only about 55 percent of the top 60 European utilities are meeting its hurdle rate, putting the energy transition at risk. As strategic guidance, European utilities can be grouped into four categories based on their financial strength and recent investment patterns. Roughly a third are best described as "locked-in early movers" with low transformational capacity and heavy recent spending. Around 40 percent are "transformation powerhouses" with strong finances and asset expansion, while the remaining 25 percent are classed as either "reinforcers" or "restricted laggards". The strategic imperative differs for each group: Transformation powerhouses can use their margins to diversify, while others would be better off pausing investments for the moment and focusing on improving their business models.

We analyzed the top 60 European utilities over a ten-year period, identifying each utility's transformational power across different archetypes. Following this inaugural edition, the study will be published annually to provide ongoing insights into the evolving landscape of the European utility sector. Find out who's leading the transformation and why – explore the full report for more insights.

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# 1

## Energy transition at risk

### The challenge for Europe's utilities

Europe's energy markets are undergoing unprecedented change. The transformation of the continent's energy system demands a corresponding transformation within utilities, requiring new business models and revised investment strategies. Utilities of every type and size – IPPs, integrated utilities and grid operators – play a central role in shaping the new energy system. Achieving Europe's decarbonization targets while continuing to deliver affordable and reliable energy will depend on their ability to contribute effectively to this transition.

Market volatility, evolving regulation and rapid technological change make long-term planning increasingly difficult. For many, recent investment in new generation capacity and grid infrastructure has not yet proven beneficial. Despite strong regulatory and subsidy support and billions invested in renewable generation assets, power grids and low-carbon heating infrastructure, capital markets have not rewarded these efforts. The stock performance of utilities continues to lag as investors view their value-creation potential as lower than that of the wider market. ► **A**

At the same time, the performance of energy utilities is weakening as margins erode and business models come under strain, in traditional areas such as business-to-consumer (B2C) commodity segments as well as new ventures such as electromobility. Increasing regulatory intervention has made sustaining profitable growth even more difficult. IPPs struggle with declining margins and the prospect of zero-value electrons from renewable energy sources, while integrated utilities see pressure on their diversified operations. Grid operators continue to benefit from regulatory support, yet they too face enormous demands for expansion and modernization.

#### **A Have the investments paid off?**

Performance of STOXX Europe 600 Utilities vs. STOXX Europe 600  
(normalized to 100, as of January 2, 2015)



Source: Capital IQ, Roland Berger

Five powerful megatrends are reshaping investment priorities, operational resilience and business models across the sector:

### **01. Decarbonization and decentralization**

Climate change and the drive towards a low-carbon economy are creating new business opportunities in hydrogen, storage and demand-side management. Yet the associated investment requirements and regulatory pressure remain high – and in some cases are still increasing. Earnings from renewables are also eroding as the system moves toward zero-value electrons owing to weak system integration. The result is a decline in profit levels and greater volatility.

### **02. Geopolitical tension and trade conflict**

Ongoing geopolitical uncertainty and trade disputes are reshaping the economics of supply. Reliable generation and flexibility are becoming strategic priorities, but volatile input costs and limited ability to pass these on to customers are compressing margins. At the same time, utilities face higher risks of supply shortages, delays in critical equipment or fuels and rising investment needs to safeguard infrastructure. Profitability and risk both rise in this environment.

### **03. Technological change and digitalization**

Rapid advances in artificial intelligence (AI), automation and data analytics are transforming processes and enabling new business models. Utilities need to expand their digital skills and IT infrastructure to capture efficiency gains, streamline processes and reduce workforce needs. As barriers to entry fall, service-oriented models gain in importance, raising profit potential while lowering operational risk.

### **04. Shifting demand profiles and industrial load centers**

Electrification, e-mobility and the expansion of data centers are creating new load patterns, while industrial activity migrates towards new regional hubs. Utilities would be well advised to respond with flexible grid expansion and stronger partnerships with industry, municipalities and policymakers. These developments can enhance profitability while at the same time stabilizing risk.

### **05. Market fragmentation**

The competitive landscape is breaking apart as new entrants – including regional players, startups and global technology companies – disrupt traditional markets with digital platforms and alternative business models. Commodity-based businesses are under particular pressure as customers demand more tailored, flexible offerings and greater local adaptation to regulatory frameworks. This trend erodes profit levels and heightens risk.

Together, these megatrends raise three critical questions for the sector. Which European utilities have the financial and operational strength to drive the energy transition? How can utilities adjust their business models and investment strategies to stay competitive and create value? And should every player keep investing now, or would some be better off leaving part of the transition to others, ready to strike back in the next market phase?

# 2

## The transformation gap

### Financial constraints across the sector

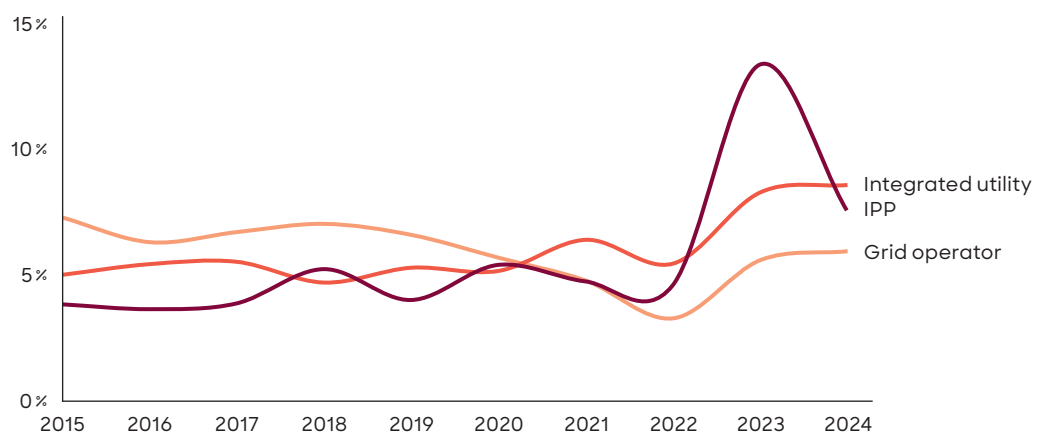
In this chapter we examine utilities' transformational power – their ability to finance and execute change in the face of Europe's energy transition. This depends on two factors: profitability, measured by ROCE, and financial headroom, measured by leverage (see the Roland Berger Transformation Indicator). Taken together, they show whether a company can generate sufficient internal cashflow and maintain the balance-sheet strength needed for large-scale transformation.

ROCE is the sector's cash engine: Higher returns create more capital to reinvest. Leverage (as net debt-to-EBITDA ratio), in turn, defines flexibility – the lower it is, the greater the capacity to fund new projects. Combining both indicators reveals a utility's true ability to transform, balancing performance with resilience.

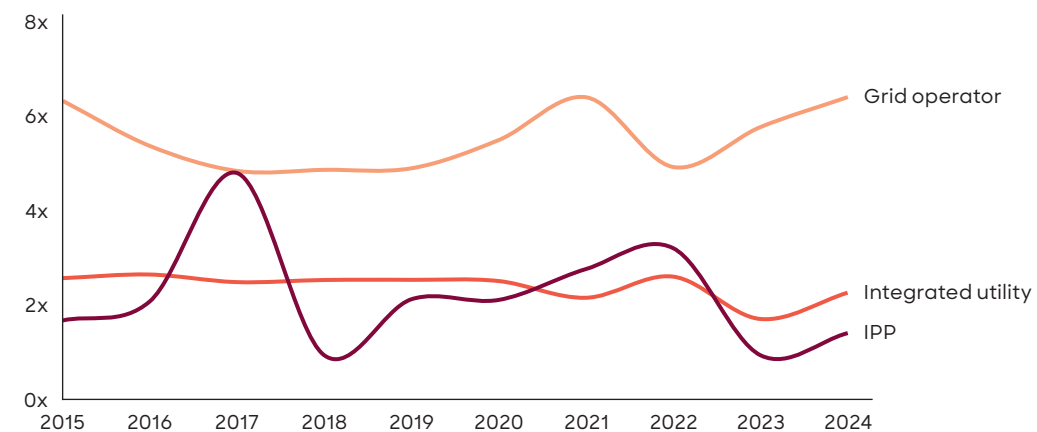
#### B Measuring performance

Median ROCE and leverage of top 60 European utilities, 2015–24

##### Median ROCE



##### Median leverage



Source: Capital IQ, Company information, Roland Berger

Our analysis of the top 60 European utilities by revenue over the past decade shows rising financial pressure despite a brief recovery. Profitability remains volatile and leverage high, casting doubt on whether utilities have the strength to finance the investments Europe's energy transition demands. ► **B**

IPPs currently show the highest returns and the lowest leverage. Although they receive subsidies, they are facing the full market risk, remaining highly volatile and fragile, with earnings tied more to market swings than to robust business models. Integrated utilities perform more steadily thanks to diversified operations, positioning their business model as a dominant one in the long term. Regulated grid operators combine low but stable returns with high leverage that limits flexibility. While this stability suggests a robust business model, it could also mask a gradual decline. The brief profitability rebound following the 2022 energy price shock was largely external, not structural, and its effects are fading. As prices normalize, both earnings and financial headroom are tightening again, revealing that much of the sector's apparent strength depends on temporary factors rather than sustainable fundamentals.

### The Roland Berger Transformation Indicator

To quantify a utility's ability to fund and execute transformation, we use the Roland Berger Transformation Indicator. This metric combines ROCE and leverage to assess how much change a company can drive based on its own operational performance and balance-sheet strength. In essence, it measures the degree of transformation that can be financed internally, without excessive reliance on external capital.

$$\text{Roland Berger Transformation Indicator} = \frac{\text{ROCE} \times 100}{1 + \text{Leverage}}$$

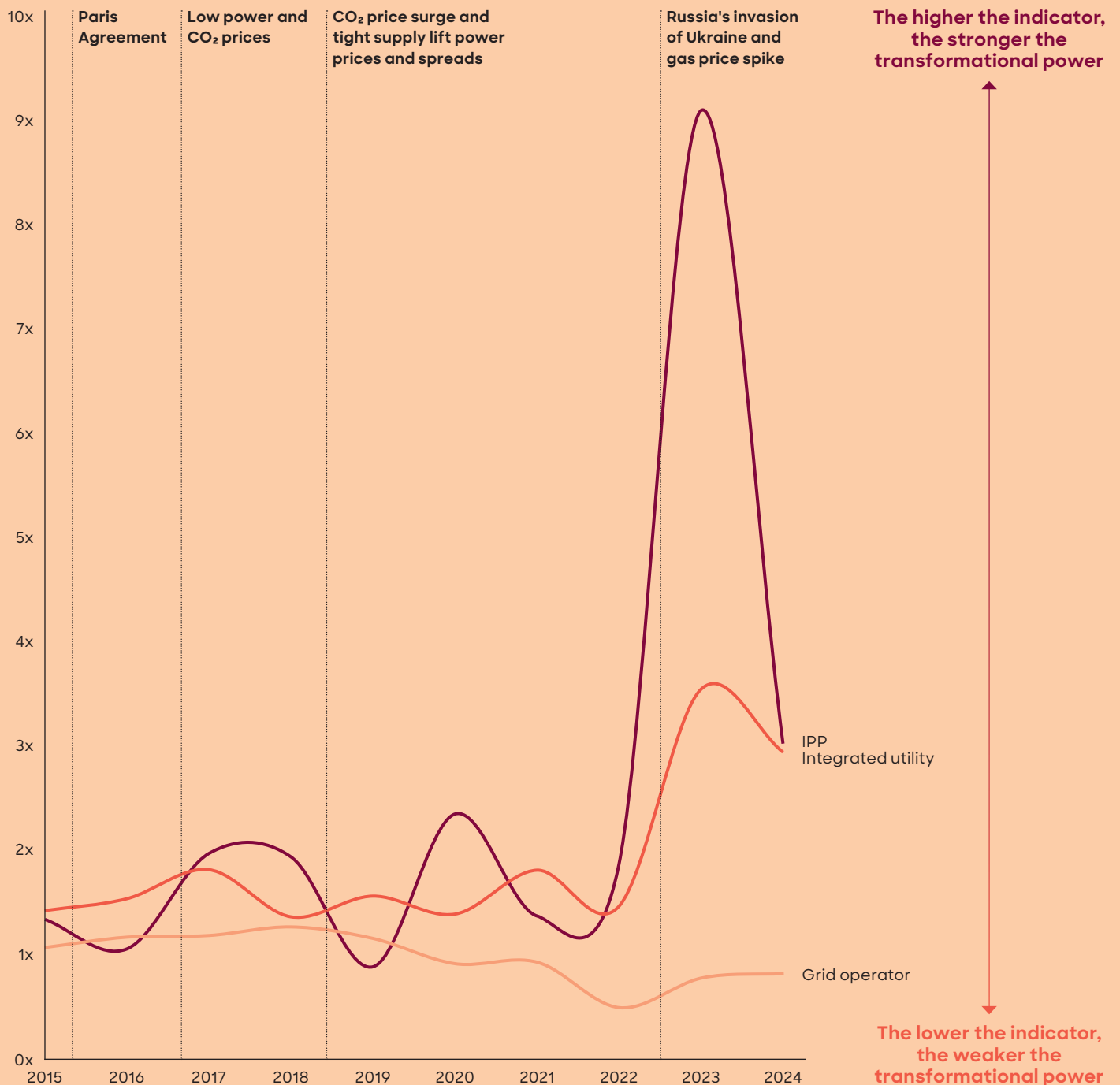
Tracking utilities' Transformation Indicators over the past five years reveals that most of Europe's leading players exhibit weak transformational power. The reasons vary across business models. Grid operators, for example, tend to have relatively low scores – despite stable revenues – because their regulated business model combines moderate profitability with high leverage, leaving limited headroom for investment. By contrast, IPPs achieve higher indicator values, reflecting both stronger recent returns and lower leverage, even if their earnings remain more volatile. ► **C**

When mapping the top 60 European utilities against a target ROCE of more than eight percent and a maximum leverage ratio of 3.5 – representing the conditions under which utilities can typically secure financing from traditional lenders – it becomes clear that Europe's energy transition is at serious risk. Given a target value of 2x for the Transformation Indicator, only 55 percent of the leading utilities meet this hurdle rate. Even the largest utilities often lack the operational strength and financial headroom needed to sustain the scale of investment required. Without renewed profitability or alternative funding models, their ability to drive the transformation of the energy system will remain restricted. ► **D**



## C Who has the most transformation power?

Median Roland Berger Transformation Indicator  
by utility type, 2015-24



Source: Capital IQ, Company information, Roland Berger



## D Mapping the energy industry

Average ROCE and leverage  
by utility, 2020-24



Source: Capital IQ, Company information, Roland Berger

# 3

## Four archetypes

### From transformation powerhouses to restricted laggards

To provide concrete strategic guidance, we distinguish utilities based on their transformational power and investment momentum. Together, these two dimensions determine how effectively a company can shape Europe's evolving energy system and secure long-term value creation.

Transformational power – taken as the average Roland Berger Transformation Indicator for the period 2020 to 2024 – reflects a utility's business performance and financial resilience. Investment momentum, meanwhile, is captured through the company's average capital expenditure to depreciation ratio (CAPEX/D&A) over the period 2015 to 2024. Here, a value above 1.25 indicates a clearly expanding asset base and active renewal, signaling strategic commitment and forward investment. Around 75 percent of European utilities have made substantial investments in recent years, indicated by CAPEX/D&A ratios above 1.25 – clear evidence of strong engagement in decarbonization efforts.

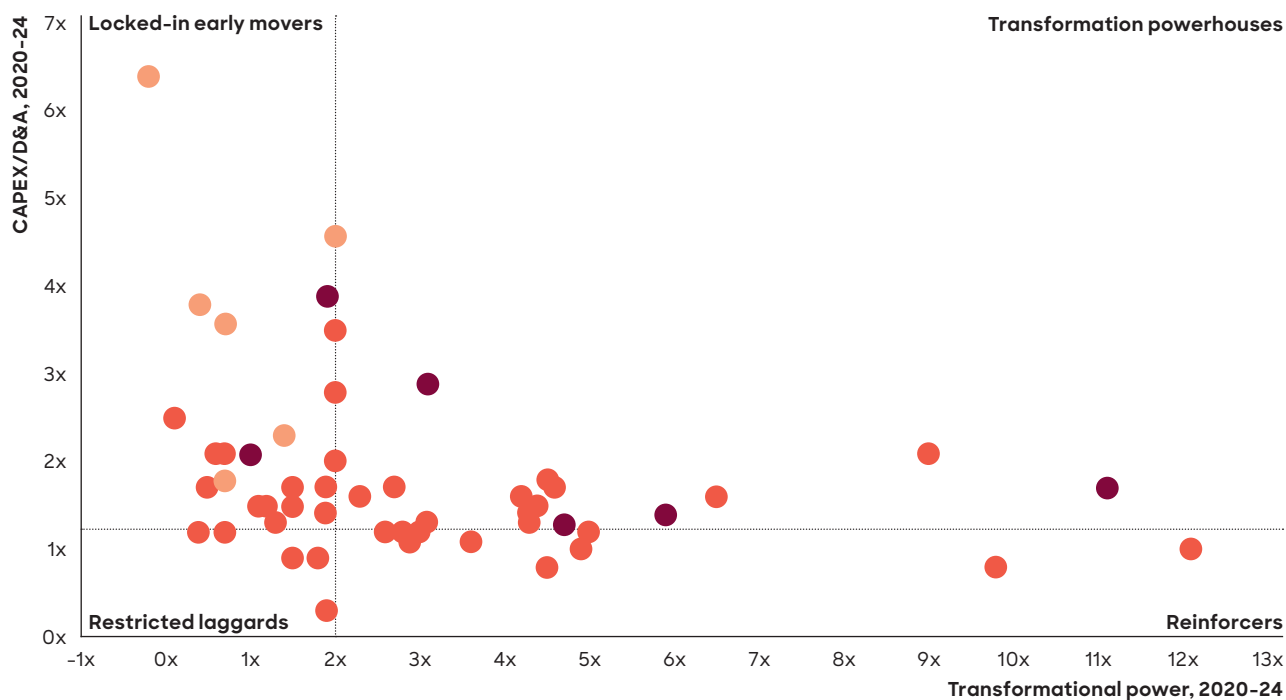
Mapping these two dimensions within a four-quadrant matrix reveals four distinct "archetypes" of European utilities. Each type represents a different balance of financial strength and strategic dynamism, calling for a tailored approach to transformation. At the top right of the matrix are the **transformation powerhouses** – financially strong utilities with large asset bases and high transformational capacity. Having benefited from initial excess margins, they now have the resources and scale to drive the energy transition and shape new business models. The **reinforcers**, in the bottom right quadrant, are the sector's sleeping giants. They have solid financials and written-off legacy assets, giving them sufficient dry powder to invest. While not yet fully engaged, they are well positioned to enter in a second wave once technologies mature and returns stabilize.

The **locked-in early movers**, in the top left quadrant, were among the first to invest heavily in renewables but now face declining margins, operational challenges and limited financial headroom. High leverage and falling returns have left them under pressure, with assets that no longer generate expected revenues. Finally, the **restricted laggards**, in the bottom left quadrant, have arrived late to the party. With weak earnings, outdated asset bases and high restructuring needs, they lack both profitability and flexibility, leaving little capacity to participate meaningfully in the ongoing transition. ► E

Based on their transformational power and investment activity, we classify 39 percent of all utilities as transformation powerhouses and 36 percent as locked-in early movers, driven largely by integrated utilities and IPPs. Among IPPs, 67 percent are transformation powerhouses and 33 percent locked-in early movers, while for integrated utilities, roughly 40 percent fall into the transformation powerhouse category, with about 30 percent identified as locked-in early movers. All analyzed grid operators were classified as locked-in early movers, further highlighting a structural gap between regulatory provisions and the financial resources required to ensure necessary investments.

## E Four archetypes

Transformation Indicator and investment strategy, 2020-24



	Transformation powerhouses	Reinforcers	Locked-in early movers	Restricted laggards
IPPs	67%	0%	33%	0%
Integrated utilities	40%	21%	28%	11%
Grid operators	0%	0%	100%	0%
All	39%	17%	36%	8%

● IPP ● Integrated utility ● Grid operator

Source: Capital IQ, Company information, Roland Berger

Across all utilities, the average leverage level provides total financial headroom for an estimated EUR 190 billion in additional investments in the energy system – after accounting for average dividend payouts and without assuming incremental earnings from new projects. Yet this amount represents only about 20 percent of the European Union's EUR 1 trillion Sustainable Investment Plan intended to finance the Green Deal between 2020 and 2030. The conclusion is clear: Even with remaining financial headroom, utilities alone cannot shoulder the investment required to secure Europe's energy transition. The pressing question is, however, which of them should invest next – and when?

# 4

## Strategic guidelines

### The way forward for industry players

Each utility archetype demands a clear strategic response aligned with its transformational power and market context. Analysis of relative market position and financial capacity reveals distinct paths forward – from accelerating investment and diversification to adapting existing operations or temporarily holding back until conditions improve.

#### TRANSFORMATION POWERHOUSES

As the strongest players in Europe's utility landscape, transformation powerhouses hold the financial and operational capacity to advance the energy transition. Their large asset bases and solid balance sheets after years of early-mover excess margins make them the natural drivers of change. The priority for these utilities is clear: Push the transition forward while managing the value at risk within their portfolios as margins erode. They should use their financial strength to diversify across new technologies and into new regions, while realizing losses from underperforming assets where necessary. At current leverage levels, transformation powerhouses collectively have room to invest an estimated EUR 75 billion – a substantial sum but still insufficient to fund Europe's full transition. Additional public financing and government support programs will therefore remain essential. Notably, most European countries have at least one central transformation powerhouse capable of leading national efforts. Where such champions are absent, as in Germany, coordination and reliability of investment become significantly more difficult.

#### REINFORCERS

With stable balance sheets and untapped capacity, reinforcers are well positioned to join the energy transition in its next phase. Their focus should be on investing in green technologies and digitalization to create new asset bases and distinct market positions, while maintaining financial flexibility. Acting as deliberate second movers, they can wait for clearer signals and economies of scale in areas such as long-duration storage, hydrogen, and carbon capture, utilization and storage (CCUS) before committing at scale. Overall, the reinforcers identified in our analysis could contribute around EUR 60 billion to Europe's decarbonization and modernization process, positioning them as key players in the next wave of investment.

#### LOCKED-IN EARLY MOVERS

Following heavy early investment in renewables, many of these utilities are now under financial strain, with declining margins, operational challenges and high leverage. Their immediate task is to recognize that both operational capacity and financial headroom are insufficient to sustain further investment. Instead, they should focus on 'cleaning up' their portfolios, transforming their business models, building new, asset-light and service-oriented activities such as digital platforms, trading, maintenance and flexibility services. Emphasizing operational and functional expertise as a unique strength can help scale their existing asset base and mitigate the impact of market downturns. In total, locked-in early movers in our analysis represent about EUR 50 billion in potential investment capacity, largely due to their significant share within the dataset – although further expansion should be approached with caution.

## RESTRICTED LAGGARDS

These utilities have entered the transformation too late and now face severe structural constraints such as weak earnings, outdated assets and limited financial flexibility. Their immediate challenge is to acknowledge the scale of change required to remain viable. Maintaining existing legacy assets for as long as possible can help sustain cashflow in the short term, but survival will depend on strict cost control, improved efficiency and rebuilding financial strength. Over time, these companies should pivot towards service-oriented roles within the energy ecosystem. Strategic partnerships – or in some cases, integration into stronger groups – may offer the most realistic path forward. For this group, total financing potential is limited to less than EUR 5 billion, underlining the urgent need for structural repositioning.

Regardless of their strategic path, all utilities face a common priority: securing the financial capacity to act. As a no-regret move, every utility should make financing strategy a central element of its transformation agenda. Traditional sources of capital – that is, debt and equity – may become constrained by leverage limits or rising capital costs, making it essential to explore alternative, largely off-balance-sheet mechanisms. Public-private partnership models, for instance, can distribute both investment and risk, while mezzanine capital offers equity-like flexibility with debt-like repayment structures. For transformation powerhouses and reinforcers, these instruments can further optimize financial performance. For locked-in early movers and restricted laggards, they may represent the few remaining avenues to fund essential, high-priority investments.

## The road ahead

The transformation of Europe's energy system remains one of the defining challenges for utilities. Positioning companies according to their transformational power and the state of their asset bases provides a clear framework for strategic foresight and action. The development of ROCE and leverage over recent years shows that "the more, the better" no longer applies to capital expenditure in the new energy system. For many utilities, rising financial pressure and limited headroom make continuing their current investment strategies unrealistic. In such cases, holding back – that is to say, postponing large-scale investments in favor of restoring profitability – may be the more prudent choice.

At the same time, investments in energy infrastructure cannot be deferred indefinitely. To maintain the overall stability of the sector, financially strong transformation powerhouses will need to take the lead in driving the transition. Yet even their capacity will not be sufficient to meet Europe's overall investment needs, making additional capital sources, including public funding, essential. The remaining utilities – those without the means to move now – should focus on strengthening operations and rebuilding financial power to prepare for the next wave of transformation. Ultimately, the challenge for every player is the same: deciding whether to invest now or wait and prepare for tomorrow's opportunities.

At the end of 2026, a second edition of this report will be published, building on refreshed data and updated macroeconomic developments to uncover the gap between today's and tomorrow's powerhouses.

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## Further reading

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