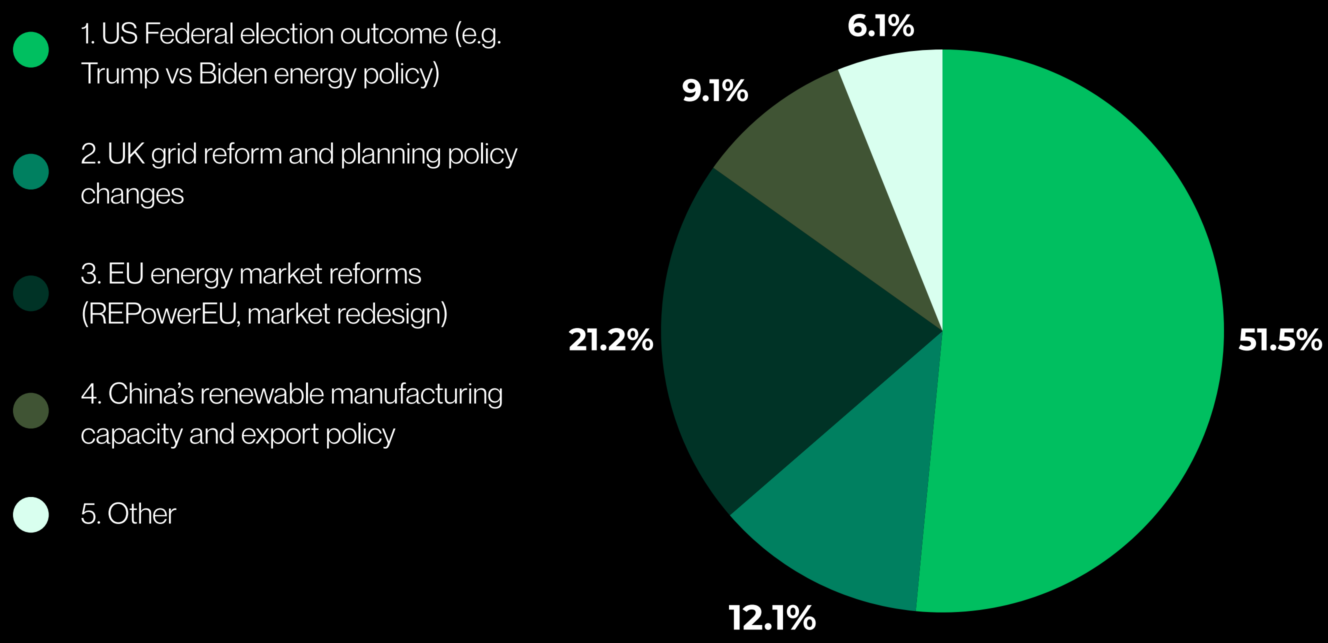
2025–2027 INVESTMENT OUTLOOK IN THE GLOBAL ENERGY TRANSITION:
PE & VC PERSPECTIVES

Prepared by:

Net Zero Search

Which of the following global political or policy developments do you expect to have the greatest impact on your investment strategy over the next 3 years?



Key Findings

1. US policy is the global swing factor

- The outcome of the U.S. federal election will set the tone for capital flows worldwide.
- Investors must prepare for two divergent scenarios: policy continuity that accelerates transition capital, or rollback that reshapes risk premiums and slows deployment.

2. Europe offers stability but there's execution risk

- REPowerEU and market redesign provide long-term clarity, but investors remain wary of regulatory fragmentation and market volatility.
- Execution around permitting reform will be the determinant of whether capital accelerates or stalls.

3. UK reform signals bottlenecks, not strategy shifts

- Concerns about grid and planning delays highlight a structural drag on returns, but do not fundamentally alter capital appetite for UK assets.
- These issues reinforce the need for patient capital and active engagement with regulators.

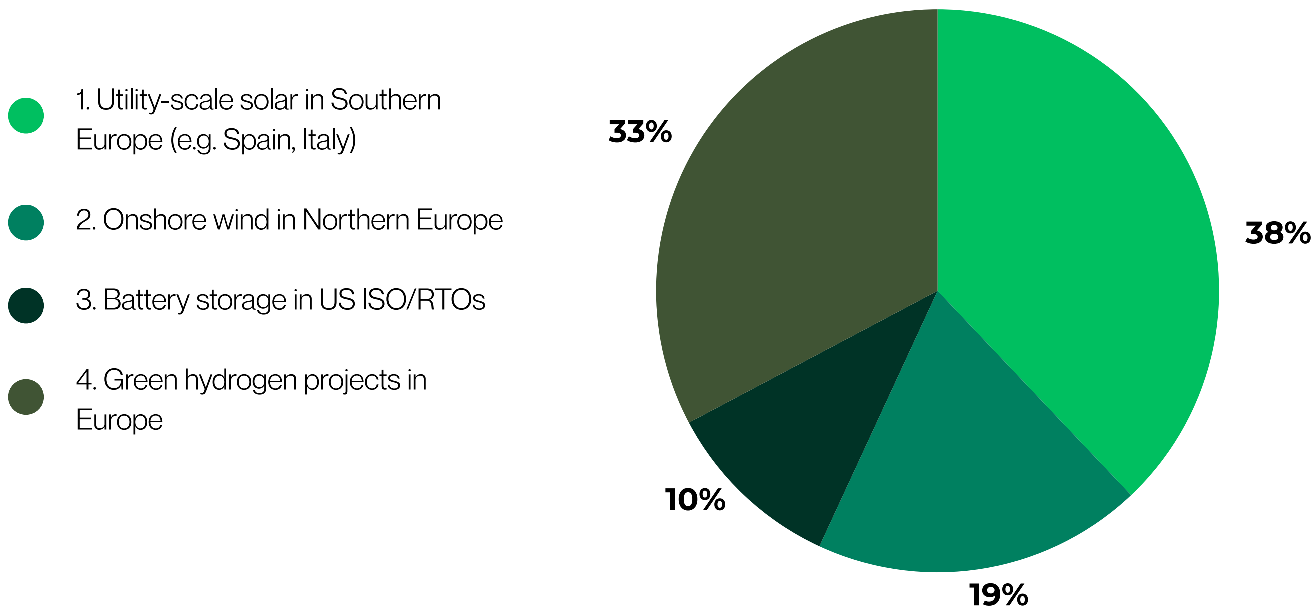
4. China shapes costs, not capital allocation

- Beijing's industrial policy indirectly sets the global cost curve for renewables and storage.
- For investors, this is less about deployment decisions and more about supply chain resilience and margin pressure.

Strategic Implications

- Political risk is now a primary input in portfolio construction and valuation models.
- Investors need scenario-based strategies for U.S. policy, with hedging or diversification where exposure is concentrated.
- Europe remains the most investable large-scale market, but execution discipline will separate winners from laggards.
- Supply chain dynamics, shaped by China, will determine relative competitiveness across markets.

Which markets do you believe are currently over-saturated for investment?



Key Findings

1. Overheating in Mature Segments

- Utility-scale solar in Southern Europe and Green hydrogen in Europe are seen as crowded markets. This suggests that:
  - Deal competition is high, driving up valuations.
  - Returns may be compressed, making it harder for PE/VCs to generate alpha.
  - Due diligence is more critical to avoid backing overvalued or poorly differentiated assets.

2. Risk of Following the Hype

- The high saturation in green hydrogen shows a gap between early-stage enthusiasm and practical execution. PE/VCs need to:
  - Be wary of inflated expectations.
  - Focus on tech differentiation and commercial viability before jumping in.

3. Continued Opportunities in Emerging Niches

- Battery storage in US ISO/RTOs being less saturated signals a window of opportunity:
  - This could offer better valuations, less competition, and scalable technology investments.
  - Especially attractive for VCs focusing on hardware/software innovations and for PE firms looking at infrastructure funds.

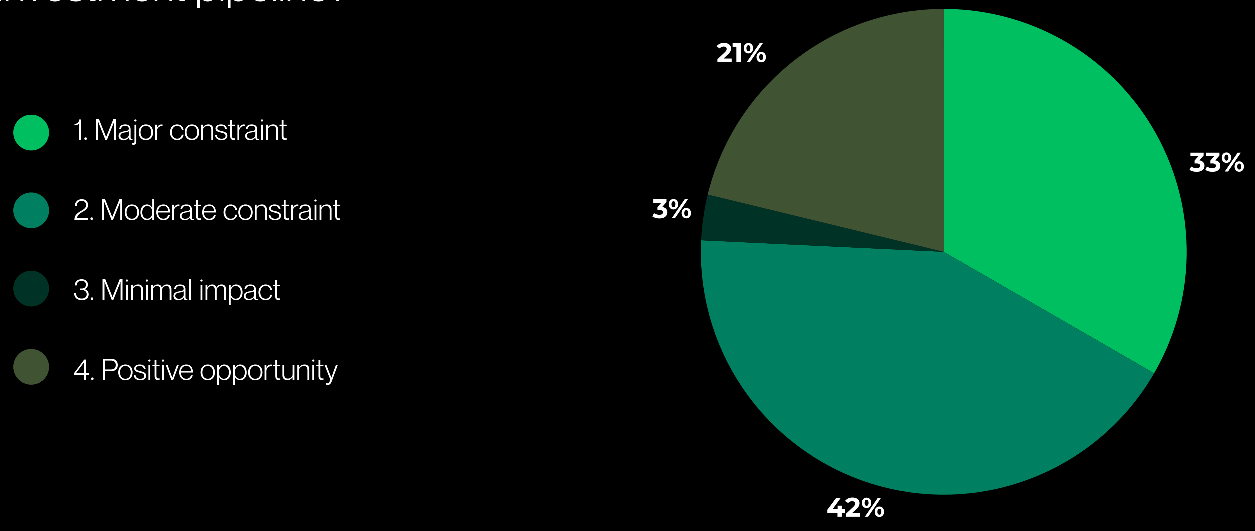
4. Need for Strategic Differentiation

- Saturation doesn't mean "no-go" – but success in mature markets may now depend on:
  - Operational excellence.
  - Geographic diversification.
  - Technological differentiation (e.g., hybrid systems, AI-led grid integration).

5. Shift Towards Value Creation over Pure Growth

- With saturation in solar and wind, PE/VCs might increasingly focus on:
  - Efficiency improvements.
  - Platform roll-ups.
  - Project optimisation, rather than greenfield development.

How would you rate the impact of political volatility on your 2025–2027 investment pipeline?



Key Findings

1. Political Risk is a Growing Investment Constraint

- Over 75% of respondents view political volatility as either a major or moderate constraint:
  - For PE/VCs, this means increased risk-adjusted return thresholds, especially in regions facing regulatory swings or unstable energy policy.
  - Investments may slow or be redirected to jurisdictions with more policy certainty or stronger incentive frameworks.

2. Market Selection is More Critical Than Ever

- Political instability affects:
  - Permit delays, grid access, and support schemes - key factors in energy infra and clean tech investments.
  - PE/VCs will likely shift focus to:
    - Countries with stable, long-term policy roadmaps.
    - Regions that offer predictable subsidy environments or clear energy transition targets.

3. Opportunity in Volatility for Agile Investors

- 21% of respondents see political volatility as a positive opportunity:
  - These could be first-movers aiming to benefit from:
    - Dislocation pricing (buying distressed or undervalued assets).
    - Policy-driven funding booms (e.g., IRA in the US or REPowerEU in the EU).
  - VC firms may find arbitrage in policy-induced gaps (e.g., localised storage mandates or decentralised grid tech).

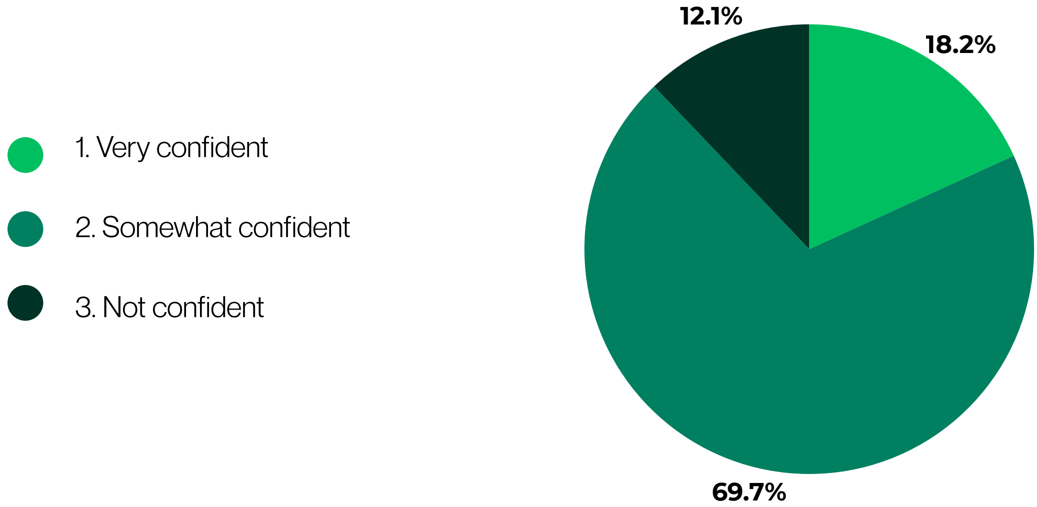
4. Increased Importance of Policy Fluency in Due Diligence

- PE/VCs must now:
  - Factor in political timelines and election cycles.
  - Build or partner with firms that have regulatory affairs expertise.
  - Use scenario modelling to stress-test investments against policy reversals or delays.

5. Strategic Patience May Win Over Speed

- The findings suggest a shift toward longer time horizons and more cautious capital deployment between 2025–2027.
  - PE may lean into brown-to-green transitions where political tailwinds are strongest.
  - VCs may double down on tech enablers that de-risk policy exposure (e.g., SaaS for compliance, automation, forecasting tools).

How confident are you that your current portfolio can weather a significant policy reversal in a key market?



Key Findings

1. Confidence is Cautious, Not Absolute

- Only ~18% of investors feel very confident that their portfolio can withstand a major policy reversal.
- The vast majority (around 70%) are only somewhat confident, revealing a clear sense of partial exposure or vulnerability.
- Around 12% admit to having no confidence, suggesting significant strategic risk in certain portfolios.

2. Policy Risk Remains a Structural Weak Point

- Many PE/VC-backed energy transition portfolios may be:
    - Too reliant on favourable regulatory conditions.
    - Concentrated in markets or models that can't easily pivot under new political regimes.

3. Portfolio Construction Must Evolve

- These figures indicate an urgent need for:
    - Diversification across markets, revenue types, and technologies.
    - Greater focus on policy-resilient models, like decentralised energy, B2B efficiency platforms, and unsubsidised tech.

4. Flexibility and Optionality Are the New Differentiators

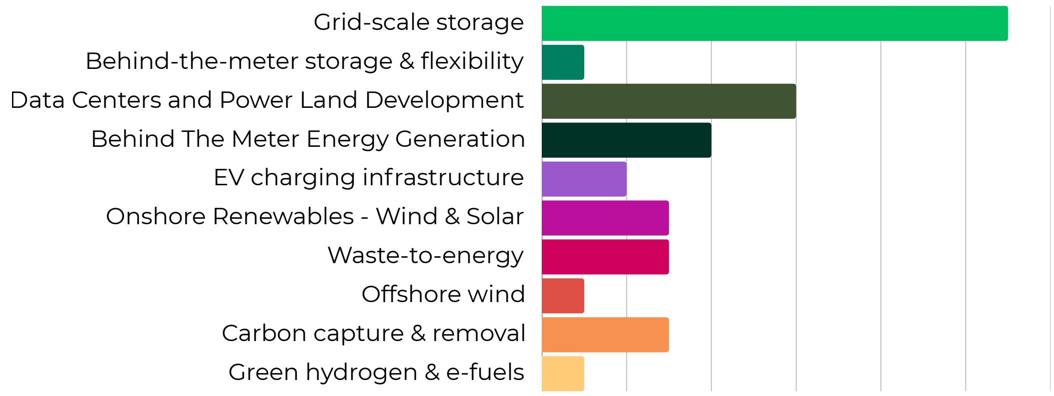
- Forward-thinking funds will invest in:
    - Modular, relocatable, or dual-market assets.
    - Tools that enhance operational agility in response to regulatory change.
    - Risk-sharing JV structures that distribute political exposure.

5. LPs Will Demand Stronger Answers

- These numbers signal to LPs that:
    - Resilience is not yet baked into most fund strategies.
    - They'll expect GPs to show active risk management plans and stress-tested investment theses going forward.

Which technologies or sub-sectors are most attractive for new capital in the next 24 months?

(The below graph demonstrates respondents number 1 selection)



Key Patterns & Takeaways

1. Storage (Grid-scale & Behind-the-Meter) Lead the Pack

- Grid-scale storage surfaces repeatedly as either the top or near-top priority in many respondents' rankings.
- Behind-the-meter storage and flexibility also consistently appears in high-ranking spots.
- Interpretation: Investors view energy storage (at both utility and distributed scales) as a critical enabler for grid stability, renewables integration, and flexibility. It's being seen as lower-hanging fruit compared to riskier frontier techs.

2. Electric Vehicle (EV) Charging Infrastructure is a Core Bet

- EV charging infrastructure often ranks in the top 2 or 3.
- This is a signal that PE/VCs believe in strong demand acceleration from the electrification of transport and infrastructure as the backbone for that growth.

3. Data Centres & Power / Land Development - A Supporting Role

- Data centers/power land development is regularly present in many portfolios' top tiers.
- Likely seen as a supporting investment: providing physical infrastructure, real estate, and modular energy loads that align well with storage and grid assets.

4. Renewables (Wind / Solar) Still Attractive — But No Longer Dominant

- Onshore renewables (wind & solar) still appear in many top 5 rankings, but they don't dominate the very top slots as often as storage or EV charging.
- This suggests maturation: renewables remain core, but differentiation is harder; new capital is seeking adjacencies and enablers rather than pure generation.

5. Emerging / Riskier Themes (Green Hydrogen, Carbon Capture, Waste-to-Energy) Rank Lower

- Green hydrogen & e-fuels, carbon capture & removal, and waste-to-energy generally fall into lower ranking positions.
- These are viewed as more speculative, longer horizon, or with higher execution or regulatory risk — though still of interest, just not the "safe bets" for immediate capital deployment.

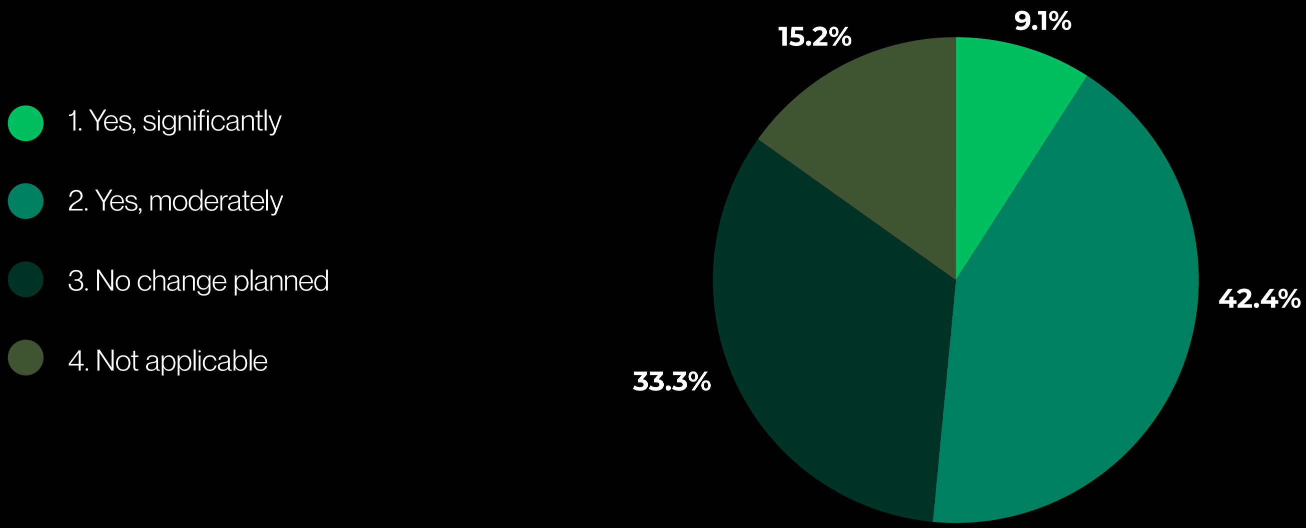
6. Behind The Meter Energy Generation (self-generation) is Mixed

- Behind-the-meter energy generation appears in many rankings, but often not in the topmost slots.
- It's seen as relevant, especially in contexts of load-shifting and resilience, but not as a universally top priority compared to storage or charging.

Strategic Implications for PE & VC Investors

1. **Double down on storage + flexibility plays.** The data strongly validates a focus on both grid-scale and distributed storage as foundational elements for decarbonisation.
2. **Build out EV charging platforms.** Infrastructure ownership, software controls and network effects (e.g. roaming, interoperability) are attractive levers.
3. **Target synergies.** Pair storage and charging and property (data centres, power land) to unlock integrated value chains.
4. **Insist on differentiation in core renewables.** Since generics are less differentiated now, success in wind/solar investments will depend more on operational excellence, financing innovation, or niche geographies.
5. **Use caution with frontier techs.** Hydrogen, CCUS, and waste-to-energy demand deeper technical, regulatory, and offtake diligence if they are to succeed.
6. **Stage risk/return over time.** Use early-stage capital for speculative themes, but allocate the bulk of deployment into more "bankable" infrastructure adjacencies in the near term.

Are you shifting geographic focus due to grid capacity constraints or permitting bottlenecks?



Key Findings

1. Nearly Two-Thirds Are Shifting Strategy

- Roughly 55% of respondents report either moderate or significant geographic shifts due to grid constraints or permitting delays.
- For PE/VC investors, this is a strong signal that infrastructure bottlenecks are materially influencing deal flow and deployment strategies.

2. Infrastructure Access is Becoming a Competitive Advantage

- Grid congestion and slow permitting are now primary barriers to value creation, not just financial or technical factors.
- Funds will need to:
  - Prioritise markets with predictable and faster permitting (e.g., certain US states, Nordics, Baltics).
  - Invest in developers with local permitting expertise and infrastructure-led platforms.

3. Portfolio Rebalancing Is Underway

- With over half of investors adjusting geographies, we can expect:
  - Capital migration away from grid-locked regions (e.g., Southern UK, parts of Spain, Germany's industrial corridors).
  - Growth in secondary but more grid-available areas, where land, connections, and regulatory environments are more favourable.

4. Slow-Moving Funds Risk Being Outmaneuvered

- The ~32% responses planning no change could face reduced pipeline access and greater project delays.
- Inaction here may lead to missed opportunities in higher-momentum, less-congested markets.

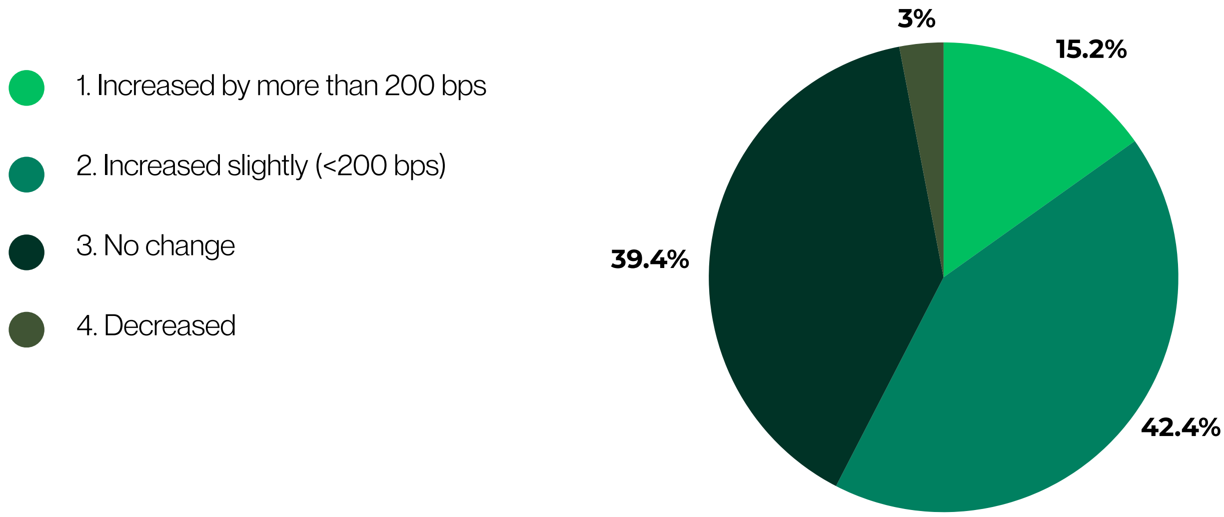
5. Opportunity in Platform Plays & Local Champions

- VCs and growth-stage PE firms should back platforms with:
  - Pre-secured grid access or queue positions.
  - Regional focus, deep regulatory relationships, and agility in navigating local infrastructure constraints.

Takeaway

Grid and permitting barriers are no longer just operational hurdles; they're now strategic filters shaping capital flows. Savvy investors are already moving capital into more agile, infrastructure-ready geographies. The rest risk being left behind.

Has your target IRR for new investments in low carbon / energy transition assets changed in the past 12 months?



Key Findings

1. Over Half of Investors Are Raising Return Expectations

- About 58% of respondents report a rise in target IRRs for new investments:
  - ~15% say they've increased by more than 200 bps.
  - ~43% have seen slight increases (under 200 bps).
- Interpretation: This reflects rising market uncertainty, higher cost of capital, and a tougher macro backdrop pushing investors to demand higher returns for the same risk.

2. The Era of Easy Capital Deployment is Over

- The data suggests a shift from the growth-at-all-costs mindset:
  - PE firms are tightening thresholds, especially for infrastructure or project-based investments.
  - VCs may also be re-evaluating valuations and timelines in earlier-stage clean tech.

3. Investor Discipline is Hardening

- For both PE and VC, higher IRR expectations mean:
  - More selective capital allocation.
  - Greater pressure on business models to demonstrate early revenue, scalability, or exit potential.
  - Fewer bets on high-hype/low-evidence sectors (e.g., speculative hydrogen, unproven carbon tech).

4. Flat IRR Expectations Still Represent Nearly 40%

- Around 37% reported no change to their target IRRs:
  - These could be investors with patient capital, existing commitments to lower-yielding assets, or those playing in geographies with strong regulatory support and lower perceived risk.

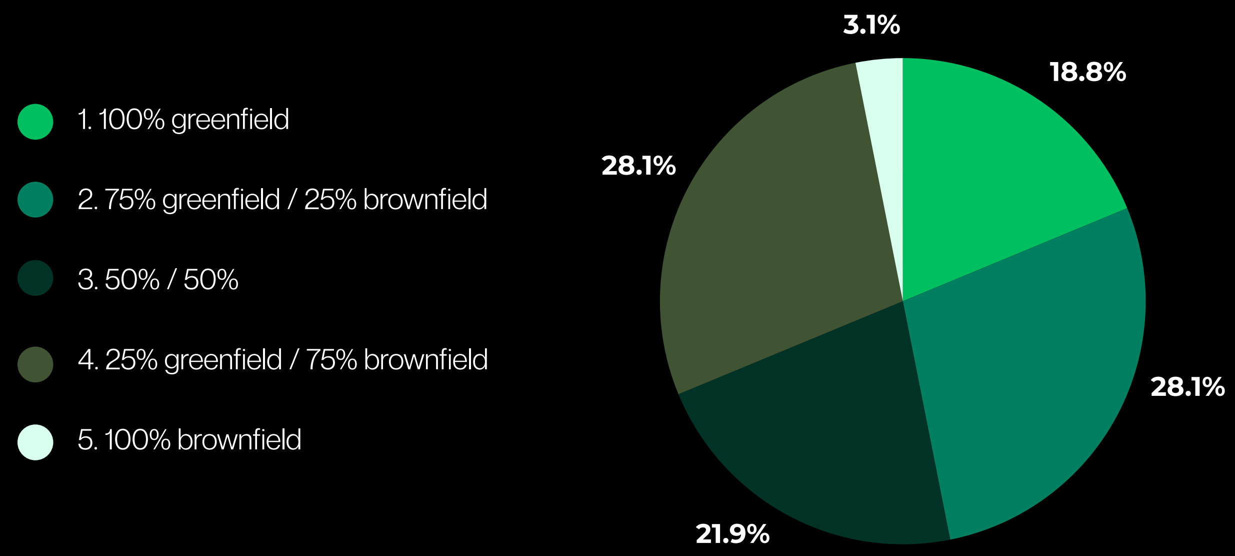
5. Only a Small Minority Have Lowered IRR Expectations

- Just ~3% decreased their return expectations:
  - This is rare and likely driven by strategic long-horizon plays, public-private co-investments, or mission-driven funds with impact-first mandates.

Strategic Implications for PE & VC:

- Founders and project sponsors will feel more pricing pressure. Deals must be sharper, faster to revenue, and de-risked to meet rising return bars.
- Deal terms are likely to tighten. Expect more structured equity, ratchets, and downside protections.
- Emerging sectors must prove commercial traction faster. Technologies still in R&D or subsidy-dependent stages may struggle to attract capital without unique defensibility.

\What percentage of your fund's capital do you expect to allocate to new-build (greenfield) projects vs acquisitions (brownfield) over the next 3 years?



Key Findings

1. Capital is Tilting Slightly Toward Greenfield

- A combined 48% of respondents expect to allocate at least 75% of their capital to greenfield projects:
  - This shows confidence in new-build infrastructure, innovation, and long-term decarbonisation growth drivers.
  - It reflects PE/VC interest in origination opportunities, project development platforms, and early-stage asset creation.

2. But Appetite for Brownfield Remains Strong

- Roughly 33% expect either a 50/50 split or 25% greenfield / 75% brownfield, while just 3% are exclusively brownfield.
  - Investors are still looking to de-risk portfolios with operating or revenue-generating assets.
  - Brownfield deals often provide faster cash flow, easier financing, and lower policy exposure - valuable in today's macro environment.

3. Balanced Models Are Emerging

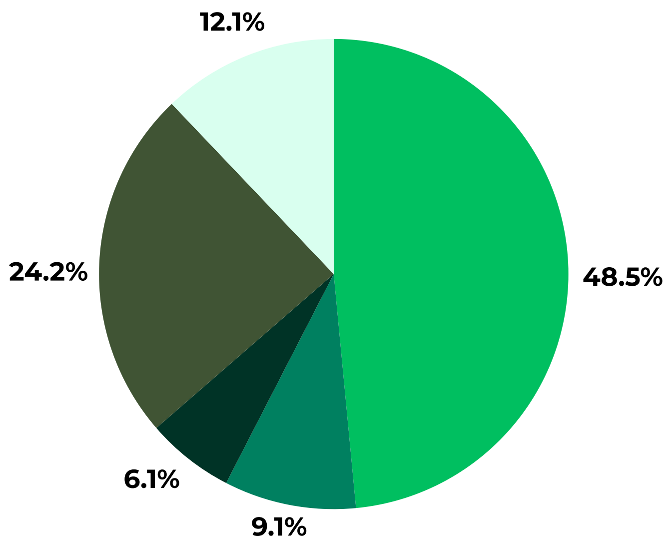
- The 50/50 allocation cohort (~21%) suggests a growing segment of funds seeking hybrid strategies:
  - Developing greenfield assets to build a pipeline, while acquiring brownfield assets to backstop near-term returns.

4. Greenfield Enthusiasm Reflects Long-Term Conviction

- The ~18% allocating 100% to greenfield are likely:
  - Targeting early-stage infrastructure platforms, tech-first energy solutions, or frontier markets.
  - VCs and development-focused PE firms fall into this group, betting on innovation, regulatory tailwinds, and scale potential.

Which of the following most influences your investment committee's decision to approve a deal in the current market?

- 1. Long-term offtake agreements in place
- 2. Technology readiness level (TRL)
- 3. Permitting status
- 4. Track record of management team
- 5. Political/regulatory stability



Key Findings

1. Long-Term Offtake Agreements are King

- Over 55% of respondents say secured long-term offtake agreements are the primary driver for IC approval.
  - For PE/VCs, this reflects a sharp focus on revenue certainty and de-risked cash flows.
  - In uncertain markets, offtake agreements offer bankability, exit clarity, and downside protection — especially for infrastructure or asset-heavy plays.

2. Management Team Track Record Still Matters

- ~28% identified the track record of the founding or executive team as a key influence.
  - This is especially relevant for growth equity and VC-stage deals, where execution risk is high and the strength of the team can make or break the venture.
  - For PE, it signals a continued preference for backing experienced operators or developers with proven delivery.

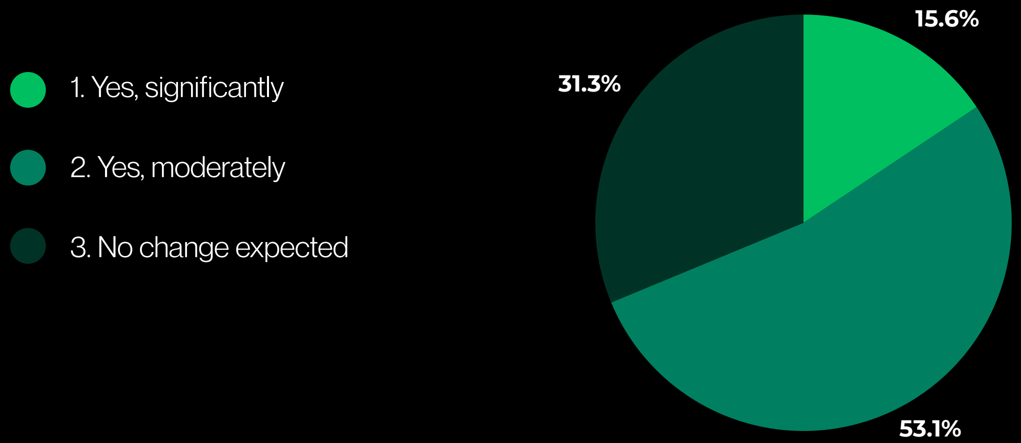
3. Political/Regulatory Stability is a Secondary Filter

- ~14% of responses cite this as their primary factor.
  - It's less critical than offtake or team strength, but still a non-negotiable in certain jurisdictions.
  - Especially relevant for projects in emerging markets, frontier tech (e.g., hydrogen), or subsidy-linked models.

4. Tech Maturity and Permitting Are Surprisingly Low Priorities

- Only ~7% prioritise technology readiness level (TRL).
- Just ~3% cite permitting status as their main decision factor.
  - This suggests that in the current market, commercialisation and revenue lock-in trump technical or bureaucratic progress.
  - However, these factors are likely critical hurdles within due diligence—just not the top trigger for final IC greenlight.

Do you expect to increase your portfolio companies' leadership capacity in 2025–2027 to address growth, compliance, or restructuring needs?



Key Findings

1. Strong Majority Plan to Scale Leadership Teams

- ~71% of respondents expect to increase leadership capacity (either significantly or moderately) across their portfolios.
  - This signals a clear intent to professionalise operations, prepare for scale, and respond to heightened compliance and restructuring demands.

2. Growth & Complexity Are Driving the Talent Shift

- As energy transition companies move from development to execution:
  - PE/VC investors see a need for more experienced operators, functional specialists, and transformation leaders.
  - This includes bolstering finance, regulatory, ESG, commercial, and technology leadership.

Key Takeaway: Leadership investment is emerging as a core post-investment priority for PE & VC funds in the energy transition. The ability to scale, adapt, and stay compliant will depend not just on capital but on having the right people in the right seats.

3. Limited Appetite for Status Quo

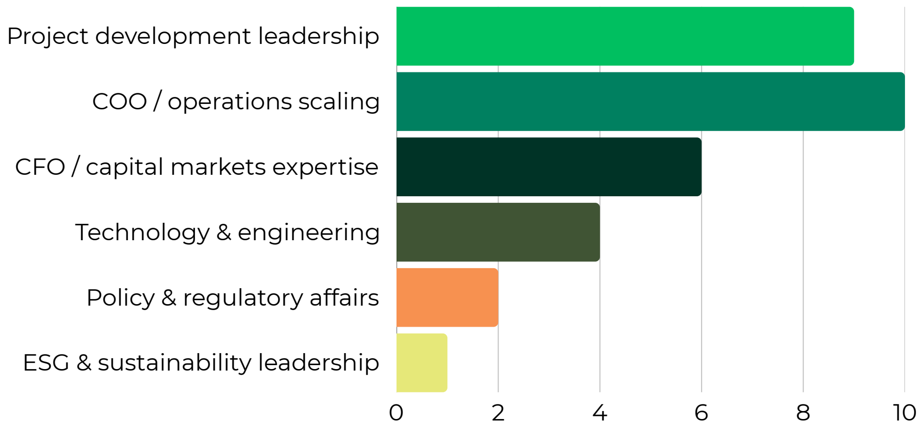
- Only ~29% anticipate no change in leadership resourcing:
  - These may be funds with stable, late-stage assets or those focused on niche/geographic platforms that already have mature teams.
  - However, they may face external pressures (e.g., compliance with CSRD, taxonomy, or ESG reporting standards) that could alter their plans.

4. Implications for Talent Strategy

- PE & VC firms should:
  - Proactively pipeline executive talent across finance, compliance, ops, and commercial functions.
  - Consider interim or fractional leadership to support scaling companies without overburdening OpEx.
  - Leverage leadership expansion as a value creation lever, particularly ahead of exits, fundraises, or regional expansion.

Which functional areas will be most critical to secure top talent in for your portfolio companies?

(The below graph demonstrates respondents number 1 selection)



Key Findings

1. Operations and Project Leadership are the Highest Priorities

- COO / Operations Scaling and Project Development Leadership dominate the top 2 slots across nearly all rankings.
  - This signals a clear shift in portfolio needs: from innovation to execution and delivery.
  - Funds are preparing for asset deployment at scale, where operational excellence and project execution are key to value creation.

2. Financial Leadership is a Core Focus

- CFO / Capital Markets expertise is consistently ranked in the top 3-4, reflecting:
  - The need for leaders who can navigate complex capital stacks, debt structuring, refinancing, and IPO/M&A pathways.
  - With IRR expectations rising, financial leadership is now a growth driver, not just a back-office function.

3. Technical & Engineering Roles Remain Important – But Not the Bottleneck

- Technology & engineering ranks in the mid-tier for most respondents:
  - Still critical, but execution bottlenecks (permits, builds, ops) and financial structuring are now seen as bigger limiting factors to scale.

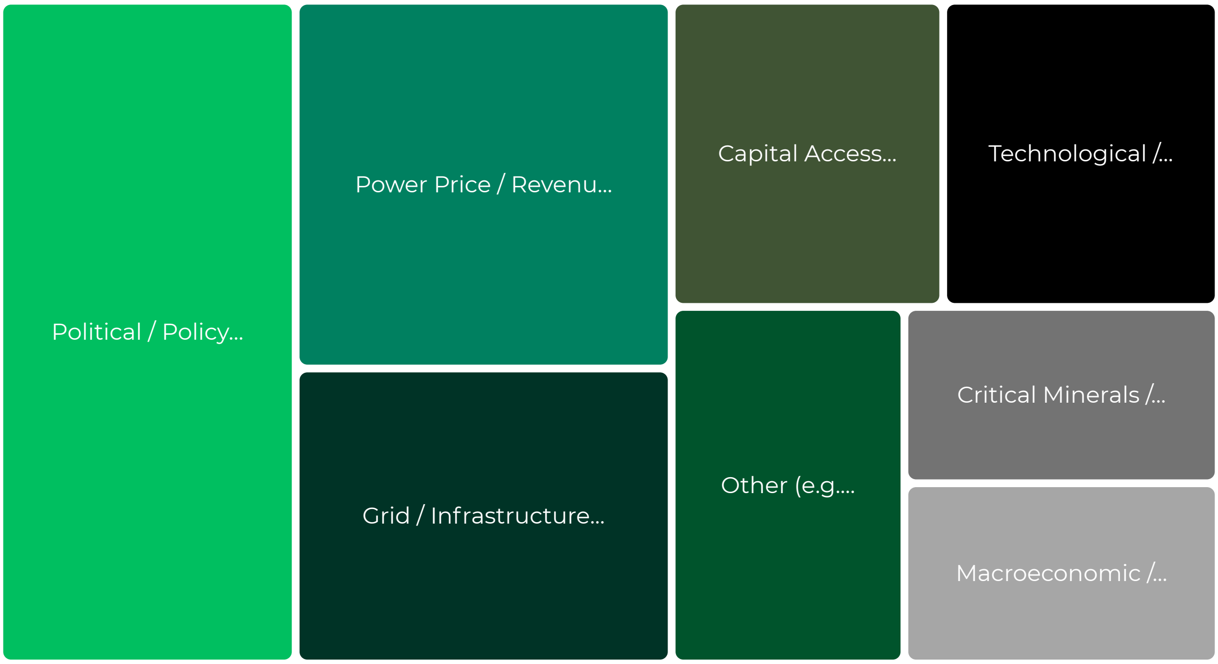
4. Policy and ESG Talent Rank Lower – But Aren't Ignored

- Policy & regulatory affairs and ESG & sustainability leadership rank consistently in the bottom two:
  - These functions are now seen as supporting infrastructure, not core growth enablers.
  - However, they remain essential in high-risk or high-regulatory markets (e.g., hydrogen, CCUS, new geographies).

STRATEGIC IMPLICATIONS FOR PE & VC TALENT STRATEGY

- Double down on operator talent: Funds should focus on hiring or backing strong COOs, Heads of Deployment, and Delivery Directors, especially for platform plays.
- Prioritise capital-markets-ready CFOs: With IRR targets rising and capital costs tightening, CFO-level hires must bring capital strategy, not just reporting.
- Support founders with seasoned execution teams: Many technical or mission-led founders will need operational counterparts to succeed at scale.
- Build agile project dev teams: Rapid permitting, land acquisition, and local delivery capability is emerging as a key differentiator.
- ESG and policy will follow scale: These roles will increase in importance post-Series B / post-deployment, but are not primary blockers at the entry stage.

In your view, what is the single biggest underappreciated risk in the energy transition investment landscape right now?



Key Findings

1. Policy Risk Must Be Treated as a Core Sensitivity

- Many investors implicitly view policy frameworks as stable; this survey suggests that sudden reversals or reconfigurations are a blind spot.
- Funds should stress-test upside/downside scenarios around subsidy cuts, permit rollbacks, or regulatory reversals.

2. Revenue / Price Volatility Requires New Risk Tools

- Power markets are more dynamic than many models assume. Downside in merchant pricing or contracting risk could erode margins.
- Use hedging strategies, diversified offtake structures, or revenue floors to stabilise returns.

3. Infrastructure & Grid Bottlenecks Are Hidden Constraints

- Even the best technology or sited asset will fail to scale if grid capacity or permitting cannot keep pace.
- Prioritise pipeline projects with pre-secured grid access, queue positions, or jurisdictions with streamlined grid/permit frameworks.

4. Capital Stack & Funding Continuity Are Fragile

- Because energy transition is capital-intensive, a delay or pullback in debt/equity markets can derail scaling.
- Ensure sufficient reserve capital or options for bridging, co-investors, or flexible capital to survive “capital winter” phases.

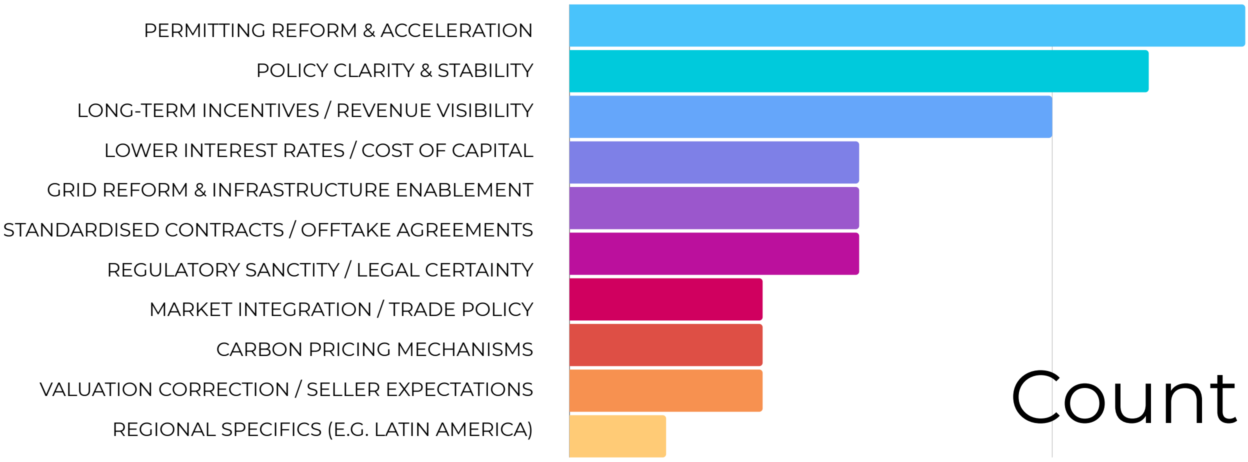
5. Supply Chains & Mineral Dependencies Are Rising Risks

- Metals, rare earths, critical minerals, and geopolitical constraints are often external to project teams, but can threaten viability or cost.
- Due diligence must incorporate supply-chain stress scenarios, import risk, and alternative material strategies.

6. Execution & Commercialisation Gaps Remain

- Especially for nascent technologies, the difference between pilot performance and commercial scaling can be large.
- Expect execution delays, cost overruns, or inability to hit performance metrics—structure contracts, milestones, and reserves accordingly.

What market or policy change would most accelerate your deployment of capital?



Key Findings

1. Prioritise Jurisdictions with Policy Certainty & Permitting Efficiency

- Where governments commit to long-term decarbonisation, streamlined permitting, and binding incentive regimes, capital is likely to flow first.

2. Develop Offtake & Incentive-aligned Models

- In markets where direct offtake or CfDs are possible, structuring investments around them can materially reduce execution risk.

3. Advocate / Engage in Policy Design

- Funds may need to be proactive: participating in policy consultation, local stakeholder engagement, or public-private mechanisms that push for permitting reform and stable incentives.

4. Structure for Rate Volatility / Interest Rate Stress

- With interest rates in flux, structuring debt with flexible terms, hedges, or co-investment buffers is critical.

5. **Bundle Capital + Advocacy**

- The fastest deployment will often arise in places where capital is paired with policy reform momentum—investors may become de facto accelerators of permitting or regulatory modernisation.

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