

Firmex Survey:

Renewable Energy

**Analyzing Project Financing
and 2023 Sentiment**

FIRMEX

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Introduction

The renewable energy sector has seen another turbulent year, with high energy costs and geopolitical uncertainty causing increased demand for and attention around clean energy. While some – but not all – of the prior year's supply chain challenges have settled down, growing issues with inflation and costs have hindered profitability.

In this environment, Firmex's first annual **Project Financing Survey** polled 100 senior financial executives in the renewable energy industry on their outlook for projects, funding and investment in 2023.

Given the market penetration of clean energy, and the green field opportunity, executives are optimistic for growth in 2023.



Renewable energy executives paint a picture of another challenging year, but they are optimistic that the forces of ESG, desires for green and secure energy, and rising oil and gas costs will outweigh negative influences.

– *Mark Wright, General Manager of Firmex*

Key Findings

Project Financing

Renewable energy companies are still finding success with project financing, but it has been more challenging for many due to inflation and market conditions.

Project Pipeline

Companies have robust pipelines and multiple ongoing projects, but nearly all have faced delays, and pressure to deliver is mounting amid rising energy prices and a growing focus on ESG.

Outlook for 2023

Despite recent financing challenges, financial executives are optimistic about demand and access to capital in 2023. They'll put capital to work by investing in new geographic regions and energy sectors.

State of Funding

A majority of renewable energy companies successfully secured funding in the past year, but many also say it was more challenging than in 2021.

The most successful source of funding was federal tax credits, which continue to be a boon for renewable energy development across sectors. The U.S. Inflation Reduction Act (IRA), passed in August, will provide further opportunity for the industry, with \$270 billion in incentives earmarked for green energy.

Funding Sources Targeted in Last 12 Months

	Successfully secured financing	Tried but was not successful	Not a focus
Federal Tax Credit	72%	20%	8%
Public Equity	64%	26%	10%
Project Bonds	64%	25%	11%
Syndicated Loans	61%	25%	14%
Joint Venture	59%	29%	12%
PE/VC	55%	32%	13%

50%
say it has been more
challenging to secure financing
in the past 12 months.

33%
have reduced
revenue projections
in the past 12 months.

State of Funding *CONTINUED*

It's not just in the U.S. – other countries are taking notice. The World Economic Forum reported that Canada will begin offering clean technology tax credits, worth up to 30% of investments, in order to remain competitive with the U.S.

Private equity (PE) and venture capital (VC) funds also continue to be interested in the renewables sector. While a majority of renewables executives found success with PE/VC investors, nearly one-third tried but were not successful, and that may come down to sector potential.

Case in point, PE firms appear particularly interested in the wind sector, with 67% of wind companies securing PE/VC investment, beating the average and the other surveyed sectors.

The IRA is also expected to be a particular catalyst for growth in the wind and solar sector, and PE funds will likely see an opportunity to capitalize on that movement as companies consider larger projects or new sites. In fact, Rystad Energy reports in Bloomberg that “the act could lead to an additional \$160 billion of investments in onshore wind, doubling installed capacity over the next decade to 280 GW, compared with an earlier growth forecast of 38%.”

As demand for wind surges, investors may see particular opportunities to help wind companies improve their profitability, but companies report high costs in manufacturing turbines. Major wind energy companies, Vestas and Siemens Gamesa, reported losses throughout 2022, pointing to COVID-19, high component costs and continued supply chain challenges as the causes. GE announced in October that they will restructure their wind operations to streamline and manage “market realities.”

Top Challenges for Funding

Most renewable companies say they have 4-6 projects seeking funding, and while most companies have found success in at least one type of funding, market uncertainty is creating some pressure.

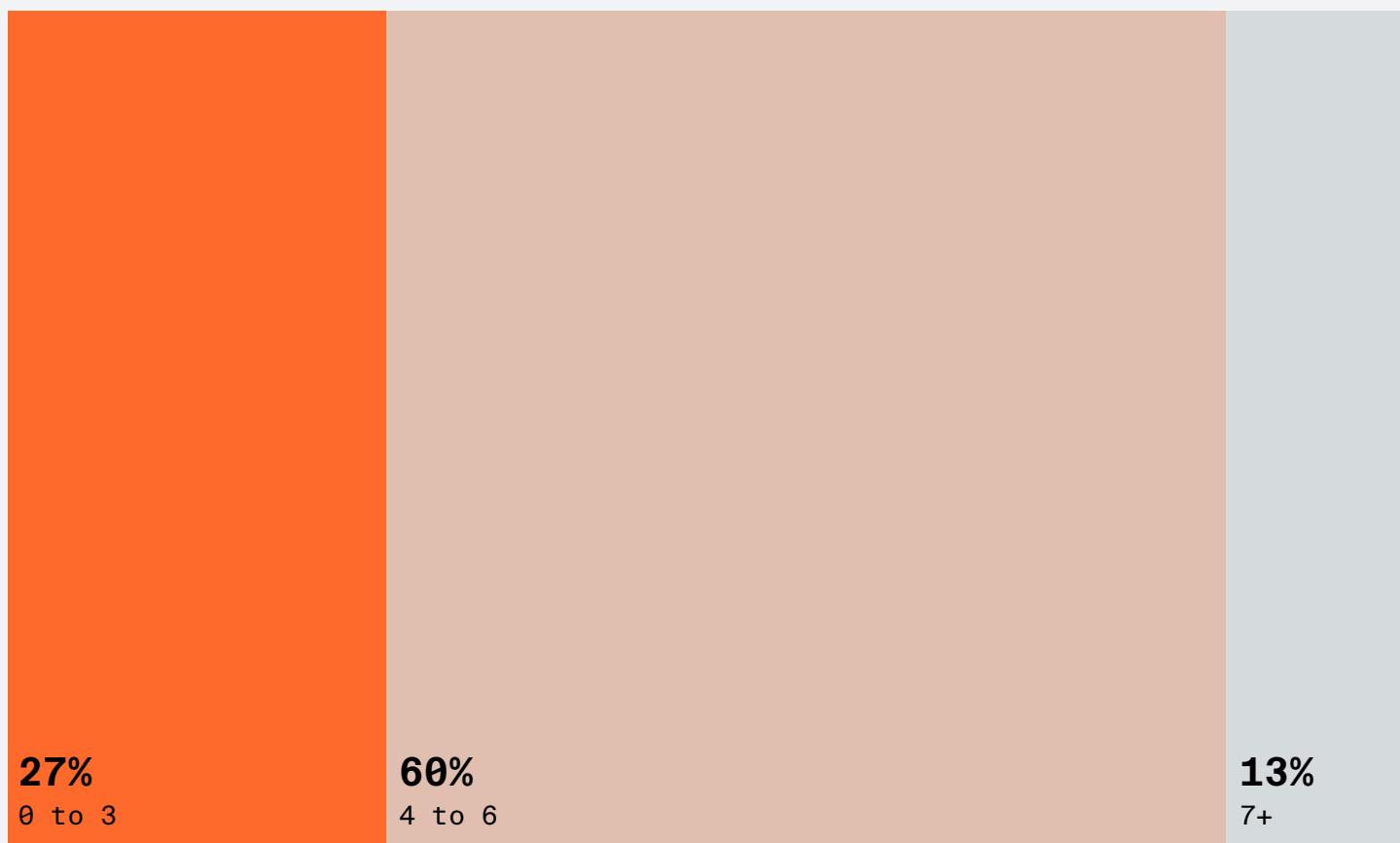
Financial executives point to “inflation and economic uncertainty” as the top challenge to securing funding, with “reduced investor appetite for risk” following as the second most cited.

The annual inflation rate was 7.7% for the period ending October 2022, according to the U.S. Labor Department, and market volatility is also creating some reticence on the part of investors who may be preparing for a potential downturn.

Inflation is going to be our biggest challenge by a mile. The impact of rising inflation is affecting every area of our business.

— Renewable Sector Finance Executive

Number of Projects Currently Seeking Funding



Top Challenges for Funding

CONTINUED

As a result, just over half of companies are meeting more than 50% of their project financing goals, and no company reports that they've met 100% of their goals.

Wind companies are outperforming that average here too, with 66% meeting more than 50% of their goals. But the top performing sectors are marine and hydro, where 100% and 89% of companies, respectively, are meeting more than half of their goals.

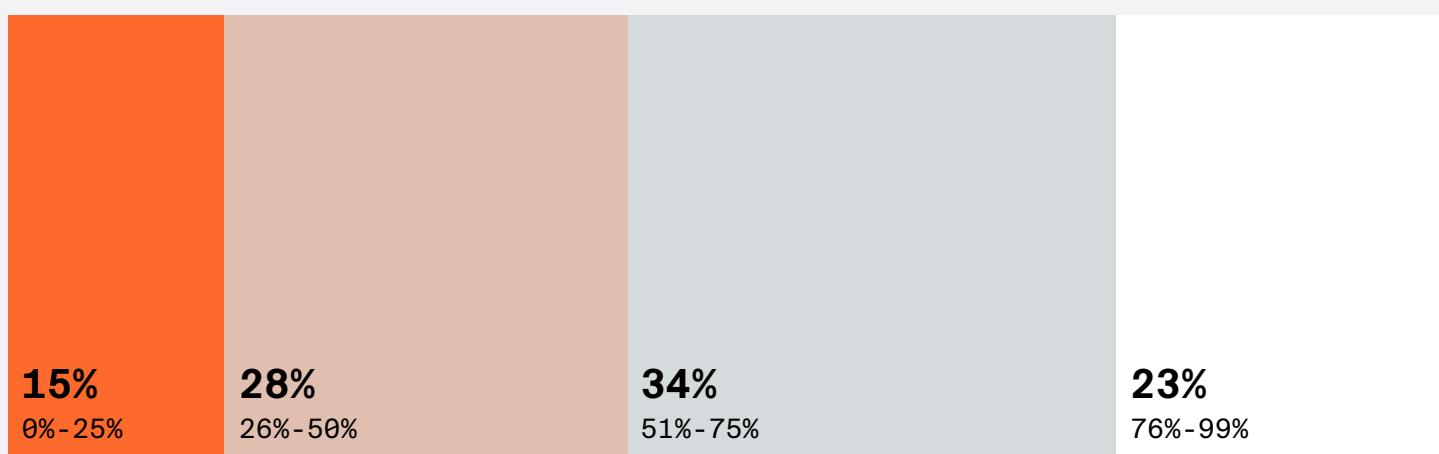
Investor-backed companies are outperforming the average as well, with 80% of VC-backed companies meeting more than half of their financing goals, suggesting plenty of both VC and PE dry powder to be deployed, as well as that investor accountability may enhance results.

The third factor impacting the financing environment is project timing and delays, which threaten the ability of renewable energy companies to deliver on increased demand. Looking ahead, renewable energy companies and funders alike will need to match opportunity with the market and capitalize on demand, while not overextending or under-resourcing key projects. Demonstrating ROI will also be essential to ensure future PE, VC and Federal funding opportunities.

Top 3 Challenges to Securing Funding:

1. Inflation & economic uncertainty (38%)
2. Reduced investor appetite for risk (23%)
3. Project timing and delays (15%)

Percentage of Project Financing Goals Met



Project Status and Prioritization

The renewable energy industry continues to expand and invest to meet demand, with 53% of respondents saying development has increased in the past year and 58% saying they expect it to increase again next year.

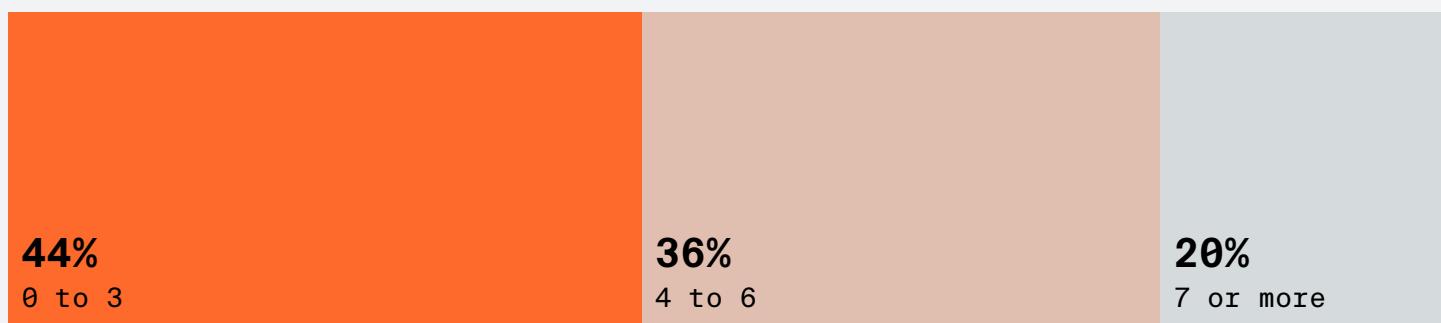
A similar majority (56%) of companies have an active pipeline of four or more projects in development in order to meet demand.

Average project size ranges, with the majority ranging between \$25-75M, highlighting the need for continued access to financing and the importance of meeting project schedules.

Renewable Energy Development

	Past 12 Months	2023
Increase	53%	58%
No Change	22%	16%
Decrease	25%	26%

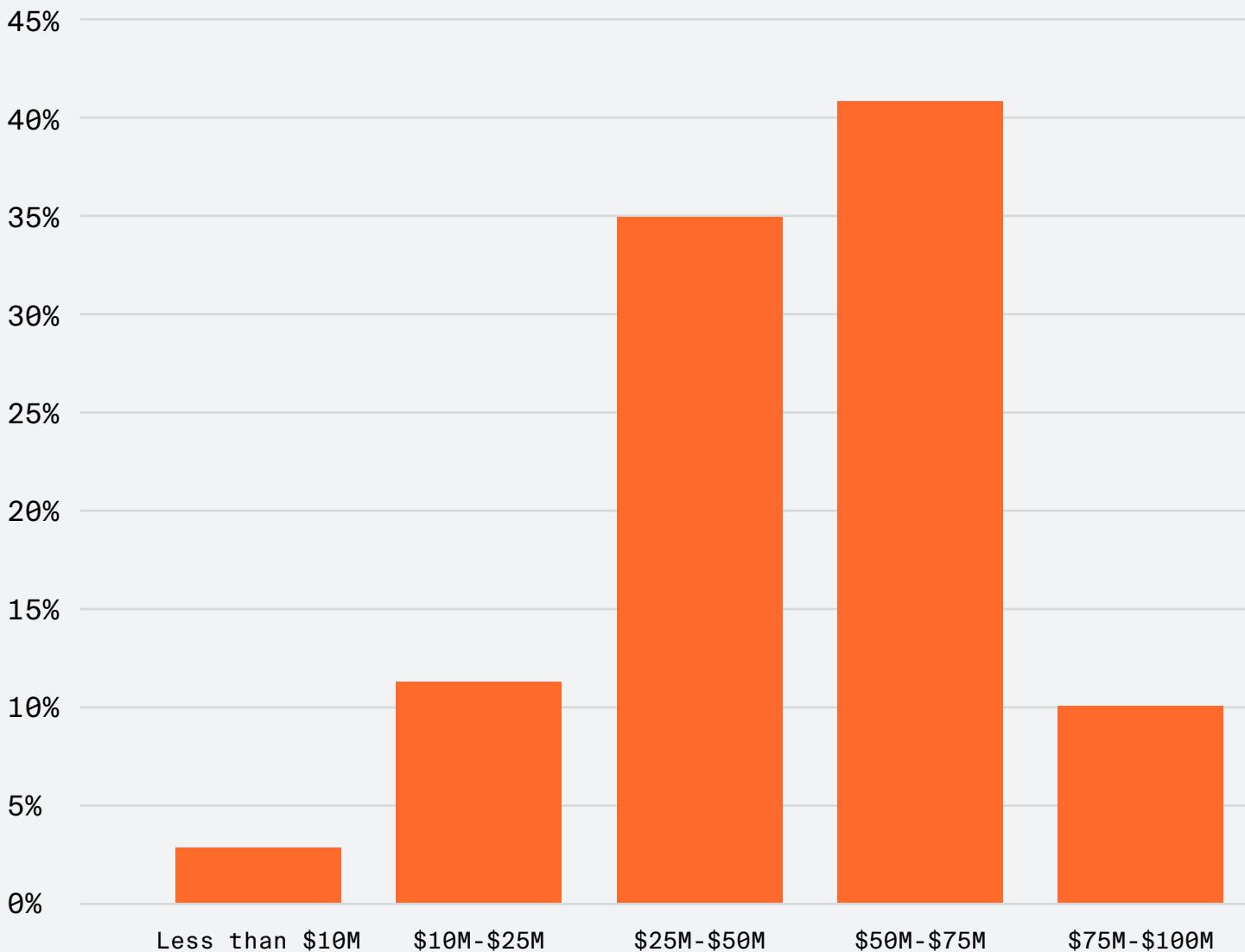
Number of Projects in Development



Project Status and Prioritization *CONTINUED*

Solar and wind are among the most active sectors. Notably, the Solar Energy Industries Association (SEIA) reports that there are more than 5,800 major solar projects representing almost 180 GW of capacity. Wind projects – off and onshore – also continue to make progress, including Vineyard Wind 1, one of the largest industry initiatives, which recently started installing cable off the coast of Martha's Vineyard to prepare to supply 0.8 GW to Massachusetts in 2023.

Average Project Size



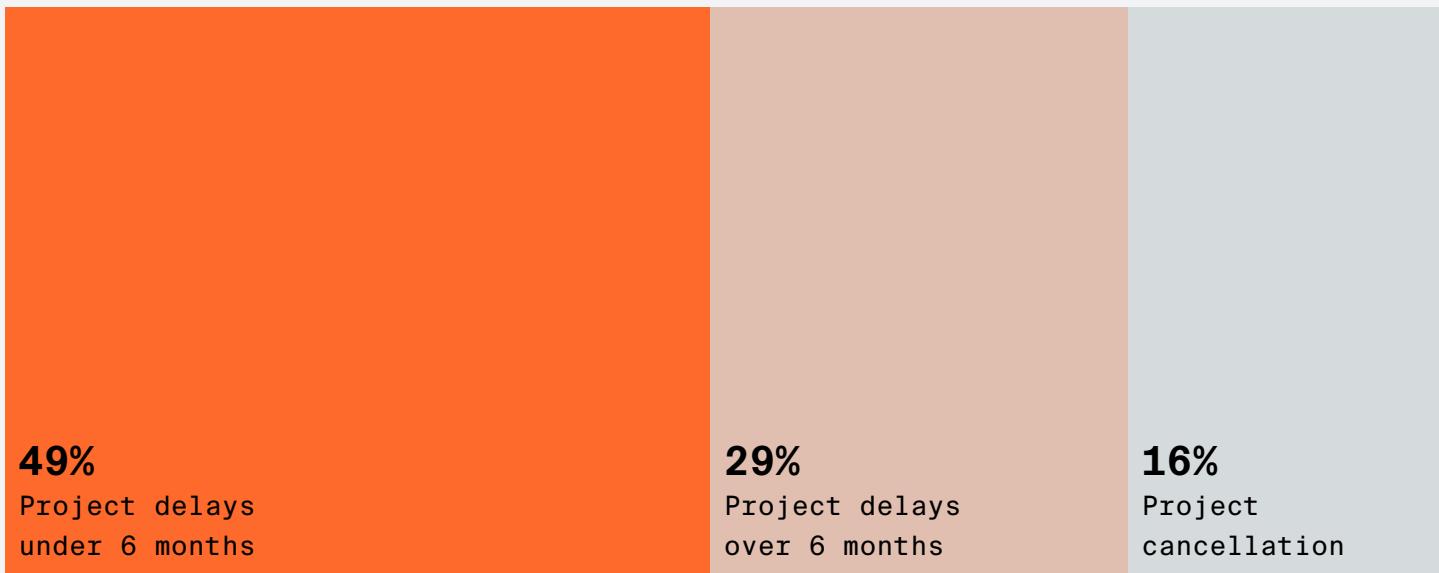
Project Performance

Along with progress, delays were also a major story of 2022. Nearly all companies reported delays of some kind, and 29% experienced delays of more than six months, causing strain for companies, investors and end customers.

The solar industry in particular faced notable installation delays in 2022. The U.S. Energy Information Association reports that 17.8 GW of utility-scale solar projects were scheduled to be online in the first half of the year, but only 4.2 GW came online in that period. Average delays reached 4.4 GW per month, compared to 2.6 GW in 2021. American Clean Power reports a similar trend for Q3, with developers adding 3.4 GW of new capacity, the lowest level in the past three years.

Both survey respondents and industry associations say that delays are not just due to one factor, but rather a perfect storm of economic, supply chain and labor challenges.

Experienced Project Delays



96%
have faced a project
delay in the past year.

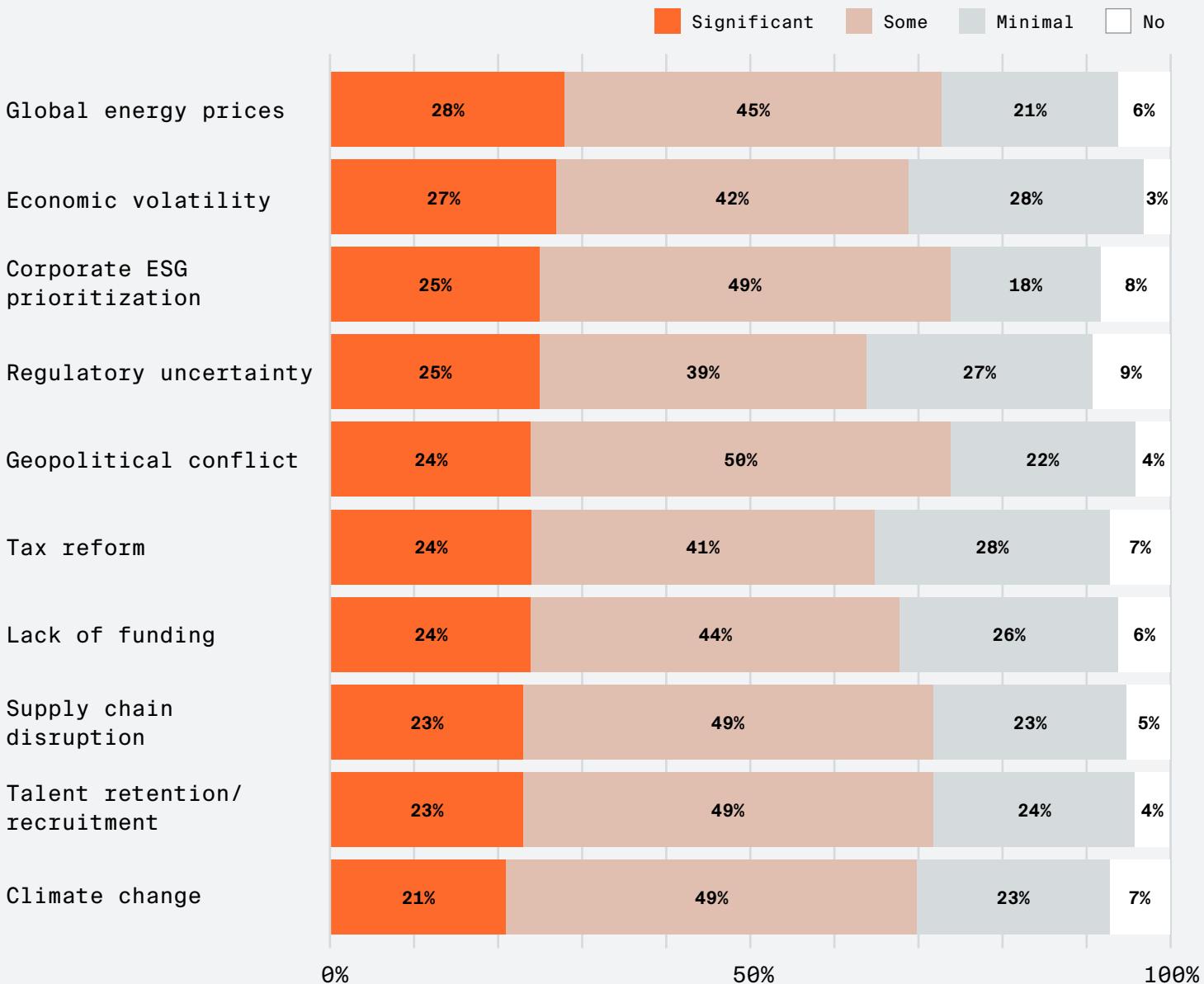
50%
report that between 26-50%
of their projects have been
delayed in the past year.

Market Influencers

Renewable energy executives point to a number of headwinds and issues that contributed to delays and setbacks in the past year.

Outside of lack of funding, geopolitical conflict, supply chain disruption and access to talent are among the top challenges. The key theme underlying these issues is insecurity – renewable energy companies have wondered if materials will arrive, if workers will be available and if conflict in Ukraine will cause further disruption. This uncertainty makes it difficult to plan, and even harder to execute, given the forces outside of their control.

Key Trend Impacts on Renewable Energy Projects



Market Influencers *CONTINUED*

When asked about the trends that had the most significant impact on their business, renewable energy companies pointed to **The Big 3: Energy Prices, Economic Volatility & ESG**.

While the market influences are mixed, renewable energy companies can proceed with caution. 2023 may have some of these same challenges, but renewable energy companies – just like investors – need to take a long-term view. The short-term economic challenges will likely be offset by the bigger, systemic moves toward clean energy, and with many projects taking multiple years to complete, it's not time to pump the brakes.

Energy Prices

2022 Impact

Energy costs have been up across the board in 2022, but oil and natural gas prices have understandably received the most attention. With the price of oil between \$90-105 per gallon for most of the year, consumers have felt pressure at the pump and companies have felt pressure across their entire supply chain.

2023 Outlook

TAILWIND – The U.S. and other economies are taking steps to level out costs. But the attention on high costs and volatility with oil and gas due to the war in Ukraine will only continue to raise the alarm about the need for alternative sources of energy to power the future.

Economic Volatility

2022 Impact

The major story in the U.S. and many European markets this year has been inflation. The causes have compounded, from inflation to COVID-19, supply chain disruptions, a shifting labor pool and more. Now rising interest rates – designed to offset the effects of inflation – strain the borrowing and deal environment as the costs to fundraise get higher.

2023 Outlook

HEADWIND – The IRA should help address some of the acute economic challenges due to inflation, but many analysts expect the U.S. and many regions in the EU to be in recession for 2023, which could constrain access to capital and cause investors to act with more caution.

ESG

2022 Impact

It's clear that ESG has made it to the mainstream. There is no better evidence of this than the growing voice of detractors who think ESG is no better than greenwashing and harms consumers by avoiding profitable investments in oil and gas companies. But renewable energy companies know that the focus on ESG is not only driven by regulators but by companies, investors and end stakeholders who are incentivized to do well by doing good.

2023 Outlook

TAILWIND – While critiques on so-called “woke capitalism” may grow in a new Congress, the momentum for ESG prioritization and disclosures is proven out by ROI and is not going away. Companies will continue to invest in environmentally friendly and socially responsible practices, which will benefit the industry and economy overall.

Future Outlook

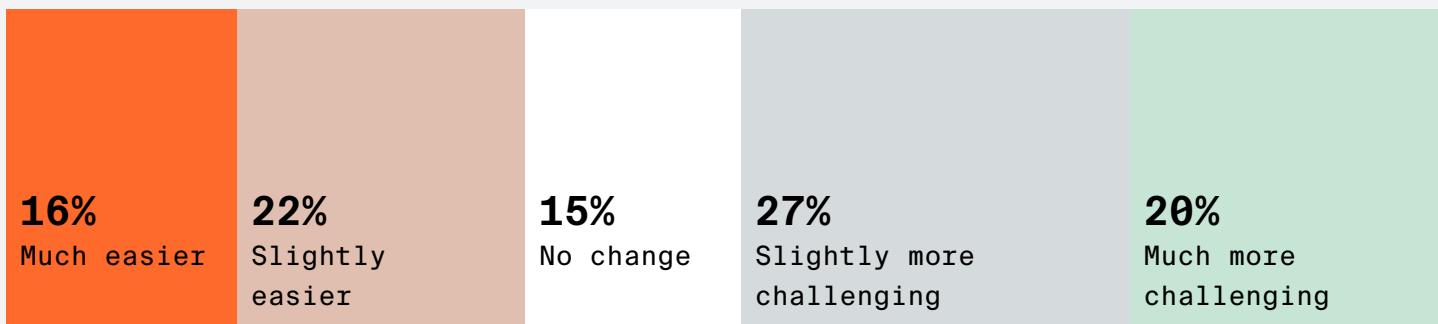
Despite 2022 challenges and lingering economic concerns, the push toward clean energy via customer demand, regulatory influence and corporate stewardship overrides headwinds, and nearly all companies are confident the sector will continue to grow.

While delays may persist, renewable executives are bullish for access to capital. A majority believe the financing environment will either be easier or no more challenging than what they experienced in 2022. Even better, 60% expect investor interest in the sector will increase.

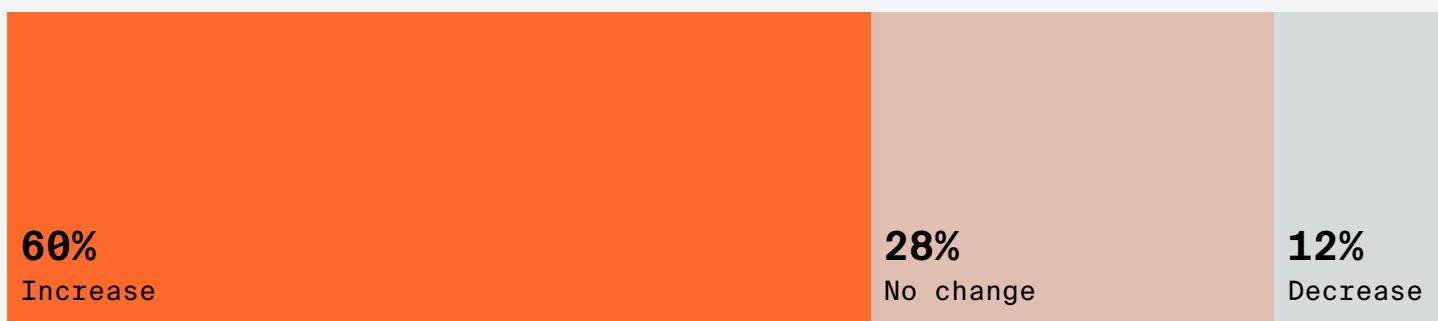
[Regarding] the inflation act that President Biden just signed, I believe the government's assistance and increasing renewable energy sources will put a lot of faith and trust in future investors.

— Renewable Sector Finance Executive

Financing Outlook for 2023



Investor Interest Outlook for 2023



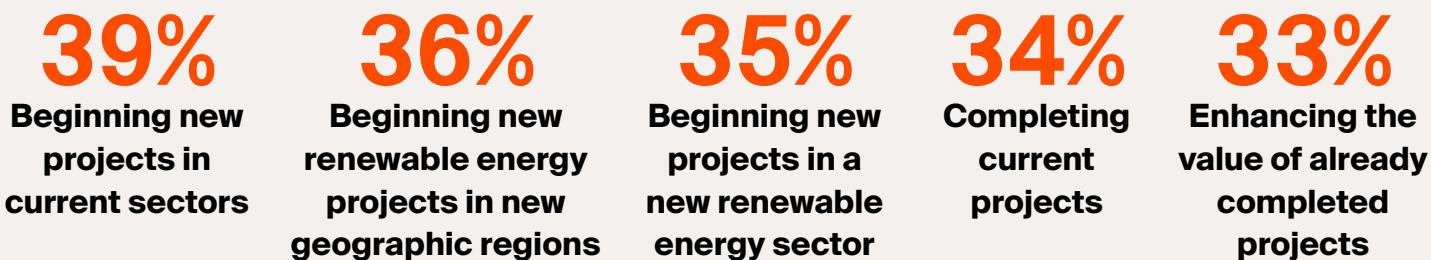
Growth Areas

When it comes to project planning for 2023, renewable energy companies are casting a wide net as they look to regain ground from delays and slower progress and take advantage of the IRA. As one finance executive noted, “competition is increasingly fierce,” creating urgency across the industry.

Just over a third of companies will start net-new projects in new regions and new sectors, and 39% will add new projects in their current sectors. This suggests companies across every sector continue to see prime opportunities for growth, and that there is still appetite to break new ground and take on new risk.

However, with the delays of the past year still top of mind, many will also focus on completing current projects and enhancing the value of recently completed projects.

Focus Areas for 2023



Renewable energy executives are likely planning for further shortages and volatility in access to and price of oil and gas. In Europe, for example, the IEA projects that there could be a 30 bcm gap of natural gas next summer that would put reserves at only 65% full ahead of the winter, with Russia's pipeline decisions being a major risk.

Renewable Energy Project Spotlight

- **NextEra Energy Resources** completed construction of the Wheatridge Renewable Energy Facility in October. This will bring 300 MW of wind energy and 50 MW of solar energy to Oregon.
- **Amazon** announced 71 new global renewable energy projects in September with a total of 2.7 GW of clean energy capacity, including 1 GW in the Southeastern U.S.
- Through a clean energy agreement between **DTE Energy and Ford Motor Company**, 650 MW of new solar energy capacity will be added in Michigan by 2025.

Conclusion

Renewable energy executives remain resilient against industry and market challenges. While supply chain and inflation issues are likely to linger into 2023, projects continue to proceed and get funded as the global economy demands access to green energy. The outlook is brighter with U.S. and international governments continuing to invest and incentivize clean energy development and security.

Investors are not only interested in financing new projects, but will likely continue to eye the renewables sector for deals. Strategic buyers see advantages in tackling the day's challenges with greater scale and leverage. Meanwhile, financial buyers continue to see value in ESG-focused portfolios and opportunities to streamline operations to expand the value of an asset.

In short, renewable companies have no shortage of opportunities for growth and evolution. But they will need to choose prospective financers, partners and projects wisely to manage risk and hedge the impacts of potential delays or further cost increases.

Key Takeaways

1.

Align opportunities with market demand to avoid overextending or under-resourcing key projects, and ensure there is demonstrable ROI.

2.

Maintain a long-term view of the year ahead, as short-term economic headwinds are likely to be offset by bigger, systemic tailwinds.

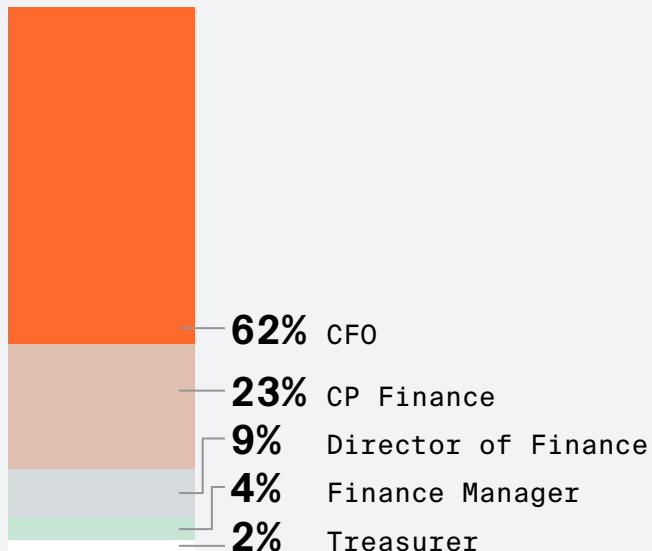
3.

The outlook in 2023 is favorable – companies should embrace new opportunities for growth if the conditions are right.

Respondent Profile and Methodology

The Firmex Project Financing Survey polled 100 financial executives in renewable energy companies to gauge current project and financing trends and their outlook for 2023. The survey was conducted by independent research firm Rabin in the fall of 2022.

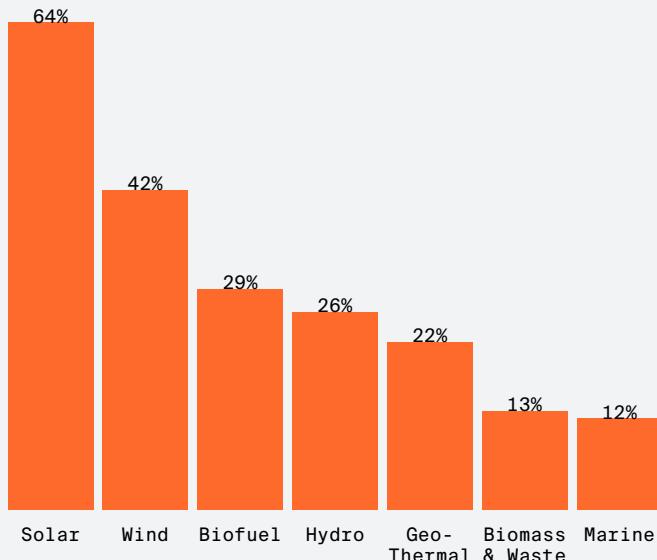
Job Title



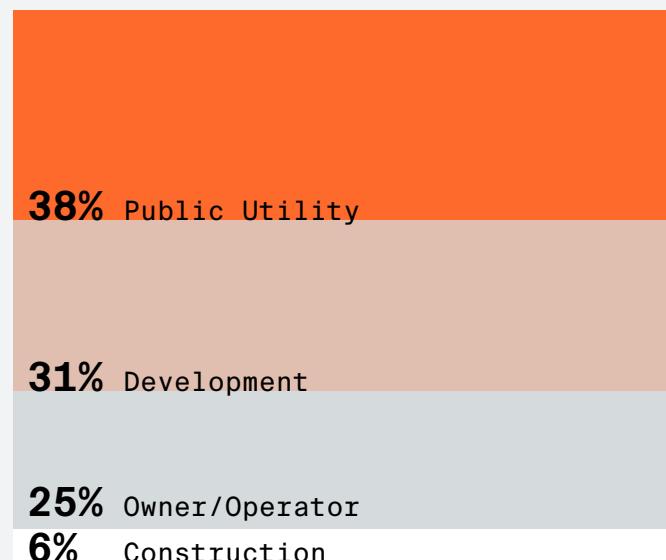
Company Revenues



Renewable Sectors



Company Type



About Firmex

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