Risks and rewards for renewable energy investors in 2023

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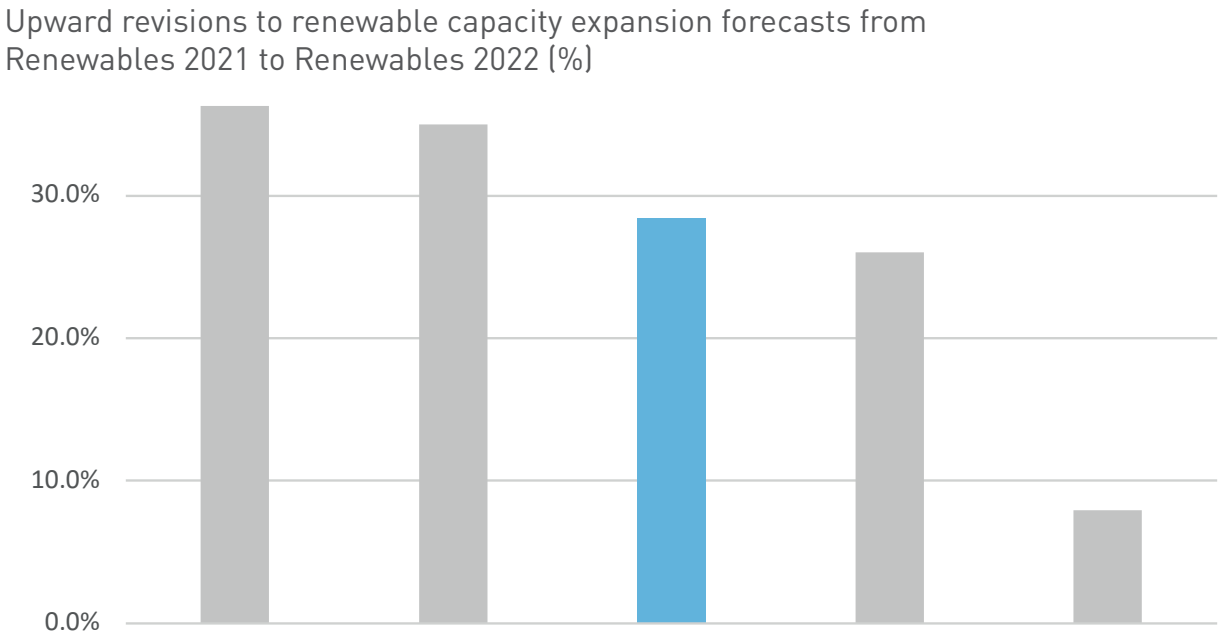


Source: Renewables 2022, IEA, December 2022

How does 2023 look for the renewables industry compared to 2022?

2022 was marked by several major events that will influence the energy and renewables industry in 2023 and potentially beyond.

The most crucial one was obviously Russia's invasion of Ukraine, which led to elevated commodity prices around the world. Although in the short term there has been a lot of focus on fossil fuels, especially for natural gas supply this winter and next, longer-term governments are looking to aggressively diversify their energy sources and increase energy security by all means necessary. This increased government support for renewable energy favored policies such as the Inflation Reduction Act (IRA) in the US and REPowerEU in Europe.

In the US, the IRA is arguably the most important clean energy legislation in recent history. The policy visibility that the IRA brings is key, too. In the past, renewable tax credits were often extended unpredictably on a year-to-year basis. Now, tax credits have been extended for a minimum of 10 years, which helps developers, utilities, equipment manufacturers and investors in project planning and development.

The IRA also looks to streamline the monetisation of clean energy tax credits by allowing them to be transferred (i.e. sold) to a third party, or via simple direct-pay mechanisms. Overall, for investors, these tax credits mean that previously marginal projects are suddenly economic, which should broaden the investable universe for clean energy and accelerate project deployment.

In Europe, REPowerEU looks to phase out fossil fuel imports from Russia by encouraging over EUR 200 billion of investments between now and 2027, with a focus on solar power, heat pumps, renewable hydrogen, biomethane and energy savings initiatives.

Due to the potential step change in renewable energy roll out, the International Energy Agency (IEA) estimated in December 2022 that renewable capacity expansion in the next 5 years will be 2400 GW worldwide , which means an 85% acceleration versus the previous 5 years and is almost 30% higher than their previous estimate a year ago, driven mainly by EU, China and the US.

However, before investors get too excited, there are still lots of uncertainties around the actual mechanics of various subsidies and government programs. 2023 will therefore involve a lot of back and forth between the government, industry groups and legal experts around actual policy implementation.

Directionally, policy changes are positive, but investors will need to be patient. Those who are looking to make investments in 2023 may even need to make certain assumptions on how policies will shape up before actually gaining clarity.

How have investment strategies evolved for renewable investors?

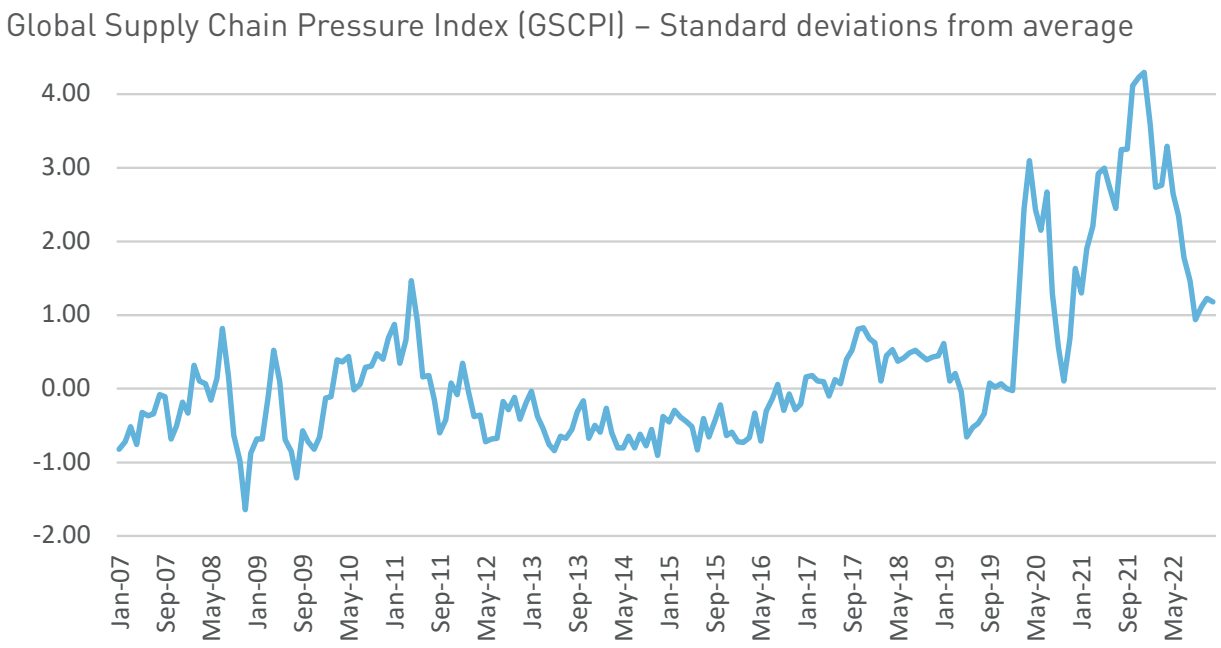
With the maturation of the renewables industry in the past decade, investments have gradually de-risked as investors gained a deeper understanding of the underlying economics, technologies, markets, and operational risks. This means all things equal, project hurdle rates have declined, and investors who are looking to generate higher returns must take on more risk.

For example, renewable investment strategies have shifted away from plain vanilla renewable energy projects with long-term power-purchase agreements (PPAs), to projects with more merchant exposure, which means investors must now perform more rigorous forecasts on energy markets and commodity prices.

In addition, investments have moved away from operational

projects to broader renewable energy platforms, where investors are betting on management teams that can drive growth from a pipeline of future projects. Investors must make sure they have the right people in place, scrutinise the track record of the individuals, and ensure that appropriate incentives are in place to align the management team with the growth plans.

Finally, strategies are also embracing newer technologies such as energy storage, renewable natural gas (RNG/biomethane), hydrogen etc., as there is increased conviction that these investments will further de-risk and become more mainstream in the long term, especially with the policy tailwinds. The trick is identifying when to enter these new markets as an investor. At what point does the increased technology or development risk make the investment too risky, or too venture-capital like? At what point does it fall within the domain of more traditional renewable energy investors? This depends on each investor's own strategy and risk tolerance.



Source: Federal Reserve Bank of New York, December 2022

Can you talk a bit more about these new renewable energy technologies?

There are several areas that the industry is focusing on. First, the intermittency of traditional renewables (solar and wind) is an issue to tackle, and is at the same time putting energy storage in the spotlight. Not only does energy storage smooth out renewable energy generation, but it is also an enabler for future renewable energy growth.

Beyond the power sector, there are also many areas that are prime for decarbonisation. We're seeing an acceleration in the roll out of clean energy technologies such as hydrogen, renewable natural gas, carbon capture, utilisation & storage (CCUS). These could all play an important role in decarbonising hard to abate sectors such as transportation and industrial manufacturing.

Finally, decarbonisation can also be supported on the demand side if users reduce or become more efficient with their energy consumption. That's where investments in smart city infrastructure, energy efficiency, urban mobility, digital connectivity and circular economies come in. Power consumption growth across many developed markets have been flat in the last 10 years mainly due to energy efficiency improvements, so demand side initiatives should not be underestimated.

What are the risks and challenges for renewable investors?

As mentioned before, there will be an acceleration of renewable energy project deployment over the next decade. However, growth can be a messy business, so there will certainly be risks involved.

Given all the hype in energy transition, the biggest challenge is probably competition. This could be market specific where potential overcapacity could negatively impact projects economics, or it could be deal specific where you need to pay a high premium to close a transaction due to the large number of bidders.

Luckily, the market is growing so fast that it should be able to absorb all the different players, especially when we are talking about trillions of dollars of investments that are needed in just a few years. However, some markets will likely be overbuilt at some point, and that is just a feature of any rapidly growing markets that have long construction cycles and project lead times. Investors must be wary of these risks.

Government policies are also a risk despite overwhelming positive tailwinds at a high level. For example, there are still uncertainties around the actual mechanics of various tax credits and subsidies. It will take time for some of these issues to get ironed out, and even in the future, there could be further adjustments and changes based on legal rulings or government decrees.

Finally, I've also talked about the opportunities across newer renewable energy technologies, but some of them are also riskier investments. Due to the positive track record from the previous rollout of renewable energy, some investors may be tempted to make overoptimistic assumptions. For example, they may assume that these new technologies will enjoy similar learning curves, market penetration rates and cost reductions experienced by wind and solar. However, not all technologies are created equal, so being able to identify which one is going to be as scalable as wind or solar would be key.

It is important for managers to stay agile and adaptable in order to take advantage of new opportunities and maximise returns, but they must also have realistic expectations.

How about the widely reported bottlenecks across the global clean energy supply chain?

This remains a significant issue for the energy industry. For example, American Clean Power reported that in 3Q22 , 14 GW of clean power capacity has been delayed, bringing the total backlog of delayed projects to 36 GW. During the quarter, developers only installed 3.4 GW of new capacity in the US, down 22% year-on-year. This is mainly due to supply chain issues and growing interconnection queues of projects trying to connect to the grid.

Similarly in Europe, wind turbine orders in 3Q22 have fallen by 36% year-on-year. However, tightening monetary policy around the world, demand destruction, and the slowdown in the global economy are starting to alleviate these issues. The New York Federal Reserve's Global Supply Chain Pressure Index (GSCPI) has declined from the peak of 4.3 standard deviations above mean set in December 2021 to 1.2 standard deviations above mean in December 2022. An economic slowdown benefits renewable energy investors, as there will be less competition for raw materials and equipment from more cyclical industries.

FOOTNOTE

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