

Global Clean Energy

2023 Outlook



2022 Review

2022 began with lingering inflationary and supply chain complications, largely driven by excess demand as economies bounced back from COVID-19. Russia’s invasion of Ukraine in February exacerbated these issues, this time on the supply side. Energy imports from Russia were essentially shut off and many countries started to prepare for a shift from globalization to “regionalization.” As a result, supply chain conditions became tighter. The rise in global interest rates added market pressure as central banks attempted to curb inflation.

A positive surprise for clean energy came in late July with the passage of the Inflation Reduction Act (“IRA”) in the U.S. The IRA is a reincarnation of the much-discussed Build Back Better legislation, which the market believed was untenable. The IRA will set in motion a long-term wave of clean-energy investments and potentially puts the U.S. at the forefront of the global clean-energy transition.

2023 Outlook

The macro headwinds that plagued 2022 could persist into 2023. However, as noted, the IRA is a boost for clean energy in the U.S. The IRA provides a package of financial incentives for established technologies, such as wind and solar power generation, as well as new technologies, namely hydrogen. These incentives are already driving renewable investment by traditional utility companies, developers, industrials, and residential consumers. Moreover, the IRA provides visibility and longevity for clean energy, which is vital to long-term capital investment decisions. In fact, foreign clean-energy firms are dedicating more capital to the U.S., given the country’s relatively attractive investment and incentive backdrop.

Europe’s efforts to move the energy transition forward have been slowed by crippling energy prices brought on by Russia’s invasion of Ukraine and subsequent severing of energy supplies. Due to the EU’s unique circumstances, policymakers are caught in a “trilemma” of keeping energy affordable, ensuring adequate supply, and continuing the transition to a clean-energy economy. The latter appears to be on pause as the EU seeks to replace Russian energy. The coming winter season will be critical in many ways. The EU is moving to fast-track renewable energy permitting to help wean the continent off Russian energy as quickly as possible. Energy independence is paramount for Europe, and we believe this should drive policy promoting clean energy for many years to come.

While the U.S. and the EU appear to be on diverging paths, the underlying fundamental drivers for clean energy remain intact: an accommodative policy backdrop, private sector demand, attractive economics, and “security of supply.” All have arguably strengthened in 2022. Macroeconomic and fiscal factors will continue to influence markets, but we remain very constructive on the global outlook for clean energy. The pace of the energy transition may vary, but when clean energy deployment slows, pent-up demand could cause significant subsequent momentum.

This backdrop is also driving increased adoption of newer technologies. For example, hydrogen is a clean-energy source to watch in 2023, in part due to significant backing in the IRA. Combined with ITCs (“Investment Tax Credits”), last year’s Infrastructure Investment and Jobs Act, and the Department of Energy’s “hydrogen hubs” initiative, critical infrastructure for hydrogen could be available as early as 2025 in the U.S. We anticipate that nuclear power will play a leading role in the electrolysis process of green hydrogen. In the EU, countries and

companies are moving forward with plans to utilize existing natural gas infrastructure for the transportation of hydrogen. The continent's main gas transmission companies are starting to prepare their networks to blend in hydrogen and interconnect with the individual EU countries that are more vulnerable to gas shortages. The EU recognizes hydrogen's role in helping to solve the "trilemma."

While 2023 could see an extension of 2022 headwinds, we believe the long-term attraction of clean energy continues to strengthen. One of clean energy's main economic characteristics is relative cost, especially in an environment with rising commodity prices. Simply put, renewable energy is deflationary for consumers, and the higher energy commodity prices go, the greater the attraction of renewables on a levelized cost basis. An analysis by NextEra Energy, as of 11/30/22, shows that new solar and wind power generation is now 54% and 71% cheaper, respectively, versus new natural gas fired power plants. Even before factoring in the IRA's incentives and the run-up in natural gas prices, solar and wind were 38% and 41% cheaper. As we look to 2023 and beyond, the economic, geopolitical, and societal benefits of switching to clean energy will become more apparent. We believe long-term investors will be rewarded by owning a basket of clean energy market leaders at the vanguard of this transition.



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