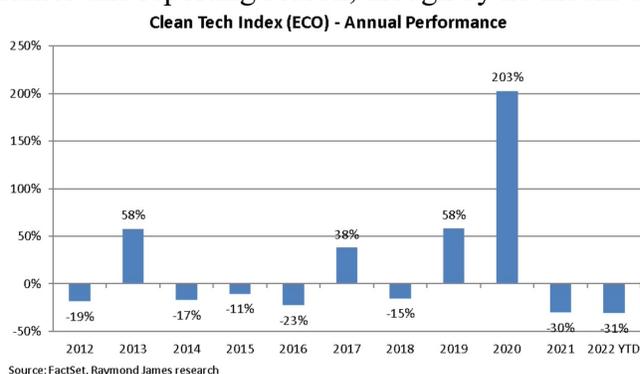


Excerpt from Raymond James, July 12, 2022

Amid \$100 Oil and Record Gas, Demand Is NOT a Problem, but Still Watching Supply Chains

With the broader market remaining in risk-off mode, similar to 1Q22 but with even more recessionary fears, the WilderHill Clean Energy Index (ECO) underperformed in 2Q22: down 30%, as compared to the S&P 500's decline of 16%. Year-to-date, the ECO is down 31%. This was the first full quarter with Russia's war in Ukraine, and the impact on hydrocarbon prices is undeniable: oil at eight-year highs near \$100/Bbl, natural gas setting records in Europe and near decade-high levels in North America, and coal also in record territory. Even without taking into account the geopolitical urgency of energy security – which adds to our long-standing preference for Europe-focused clean tech companies – the economic rationale for substitution into renewable and low-carbon solutions has arguably never been better. To be crystal-clear on this point, we see minimal risk on the demand side of the equation, even with all the talk about recession. That said, the stocks are generally **not** trading on the bullish demand-side fundamentals – they remain under pressure amid lingering (though improving) supply chain headwinds and concerns about the interest rate environment. This points to what we think will be better-than-average likelihood of relief rallies this reporting season, though by no means across the



Here are the two explanations for why the past six months were difficult. The first headwind, which is entirely fundamental in nature, was continuation from the latter half of 2021 of, broadly speaking, too much money chasing too few goods. This manifested itself in commodity inflation (encompassing steel, glass, polysilicon, lithium, carbon fiber, and more); and, along the same lines, supply chain tightness (i.e., constrained ability to source the necessary inputs, particularly electrical components). The resulting margin pressure and occasional revenue shortfalls were **not** limited to clean tech – practically every manufacturing business faced these issues: it is purely a matter of degree. Notwithstanding generally noticeable improvement in supply chain conditions, a series of lockdowns in China – most notably Shanghai and most recently (last week) Xian – provided stark reminders that supply chain risk is **not** over. Likewise, it is clear some commodity prices already peaked – steel is a good example, as macroeconomic headwinds are having an effect – but with Russia's war in Ukraine in its fifth month, logistics/freight costs remain elevated. Second, and related to point about inflation, upward movement in interest rates presented a serious problem vis-a-vis stock multiples, despite no meaningful read-through for industry fundamentals. The 10-year Treasury yield is currently at 3.1% – up from 1.5% at year-end 2021, near highest

.... It is crucial to underscore that energy security and energy transition both point in the same direction, mutually reinforcing the long-term shift away from fossil fuels. Before the war, approximately one-third of Europe's oil and gas consumption were sourced from Russia, with above-average levels of dependence among the frontline states in eastern Europe. The immediate priority is disentangling from Russia, which requires changes in the import mix – for example, [more LNG](#) in place of Russian gas – even without sanctions such as the pending EU oil embargo. But looking ahead to the second half of this decade and beyond, European policymakers, businesses, and consumers recognize that true energy security cannot be based on (for example) oil from Iran or LNG from Algeria. As such, the war is spurring decarbonization – via solar, wind, bio-based solutions, green hydrogen, [electric mobility](#), [energy efficiency](#), and more – at a pace that may end up being faster than what is mandated by the European Climate Law. On a side note: yet another reason we have a preference for clean tech stocks with a European overweight is the much lower level of regulatory complications – import tariffs, net metering, tax credits, etc. – as compared to the relentless gridlock and frustrations of Washington. There is less urgency vis-a-vis energy security outside Europe, but the point that high fossil fuel prices are incentivizing substitution is true worldwide. More ambitious climate policy can also help, as is [illustrated by Australia](#). On the other hand, U.S. climate policy at the federal level remains essentially limited to “carrots” rather than “sticks”, as was illustrated by the Supreme Court's June 30 decision that restricted the EPA's authority to regulate CO₂ emissions.

We are, of course, well aware of the gathering economic clouds, but it should be underscored that the demand side of the equation – i.e., substitution from expensive fossil energy to lower-cost cleaner energy – is a secular megatrend that is here to stay, regardless of how macro metrics move from month to month. With rare exceptions, demand in the various clean tech verticals faces little to no risk from recessionary headwinds, just as it derives only mild benefit from economic boom times. Meanwhile, an economic slowdown would have the “silver lining” side effect of accelerating the pace at which various supply chains loosen up. Speaking of silver linings, the year-to-date underperformance of clean tech stocks resulted in a sharp slowdown in capital markets activity and SPAC transactions. After two years of unprecedentedly active issuance, the slowdown provides a signal that management teams have less appetite

....
....