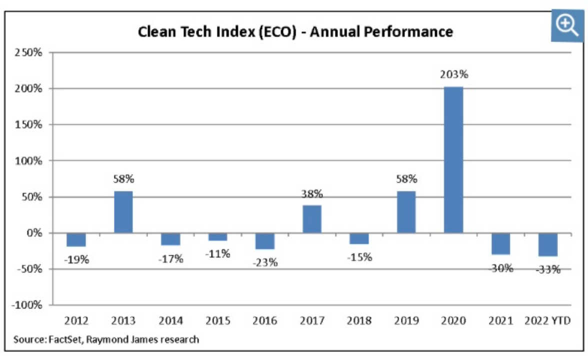
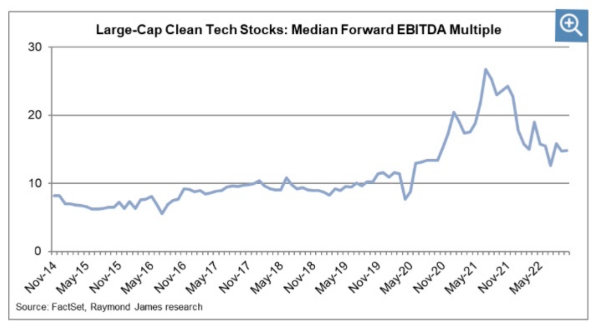
Excerpt from Raymond James, October 12, 2022

RENEWABLE ENERGY AND CLEAN TECHNOLOGY

Nice Surprise From Congress Creates a Bounce (Finally), But Sentiment Remains Mixed

What did it take for the WilderHill Clean Energy Index (ECO) to post its first quarter of gains since 2020? Only the largest package of climate legislation in U.S. history. The Inflation Reduction Act — whose unexpected emergence in July was followed by a lightning-fast path to enactment in August — was certainly a positive surprise, hence the ECO's outperformance in 3Q22: **up** 5%, as compared to the S&P 500's **decline** of 5%. Year-to-date, though, the ECO is down 33%. Russia's war in Ukraine is in its eighth month, and while oil prices cooled off in 3Q, European natural gas and electricity prices remained near record highs, as the Kremlin ratcheted up weaponization of gas supply. As a general premise, the lofty hydrocarbon pricing around the world is bolstering the economic rationale for substitution into renewable and low-carbon solutions. Thus, we see nothing but strength on the demand side of the equation. That said, investor sentiment surrounding clean tech remains decidedly mixed, as a result of macro headwinds: lingering supply chain headwinds — an issue that is persisting much longer than we originally anticipated — and recessionary fears running rampant amid the sharply increased interest rate environment.





Source: Raymond James

Notwithstanding the improvement in supply chain conditions year-to-date, the frequent (and impossible to predict) lockdowns in China — such is the reality of the only large economy still clinging to a zero-COVID policy — provide reminders that supply chain risk is **not** over. Likewise, some commodity prices may have already peaked, but by no means all. Concurrently, the year-to-date increase in interest rates is a problem vis-a-vis stock multiples, despite having no meaningful read-through for industry fundamentals. The 10-year Treasury yield is currently at 3.9% — up from 1.5% at year-end 2021, and near the highest levels since 2011.This environment provides a supportive backdrop for underlying clean tech demand. However, adverse impact on valuations is unavoidable, particularly for yield-sensitive equities.

With the war and resulting energy crisis adding to the urgency of displacing fossil fuels in the European context, the Inflation Reduction Act is providing a similarly wide-ranging catalyst for U.S. energy transition. The difference, of course, is in the approach. European climate policy has always been a story of "sticks", even before the unprecedented wartime escalation in gas and power prices. By contrast, the only climate legislation that is able to get through Congress is "carrots". Thus, the new law comprises a package of incentives — mostly extensions/enhancements of existing policies, but also some brand-new ones (particularly the manufacturing credits) — with just about all clean tech verticals benefiting in some way.

Separate and distinct from what's happening in Brussels and Washington, the final months of 2022 are poised to have some important climate-related headlines from elsewhere. First, the annual United Nations climate conference — COP27 — will take place ….

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We are, of course, well aware of the current 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, the economic slowdown, regardless of whether it ends up being a recession in a technical sense, has the "silver lining" side effect of easing the path for various supply chains to loosen up.

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