# Sustainability & Energy Transition

**WEEKLY REPORT #193**
August 16, 2024

# Climate Ambitions and Reducing Dependence on China are Mutually Exclusive

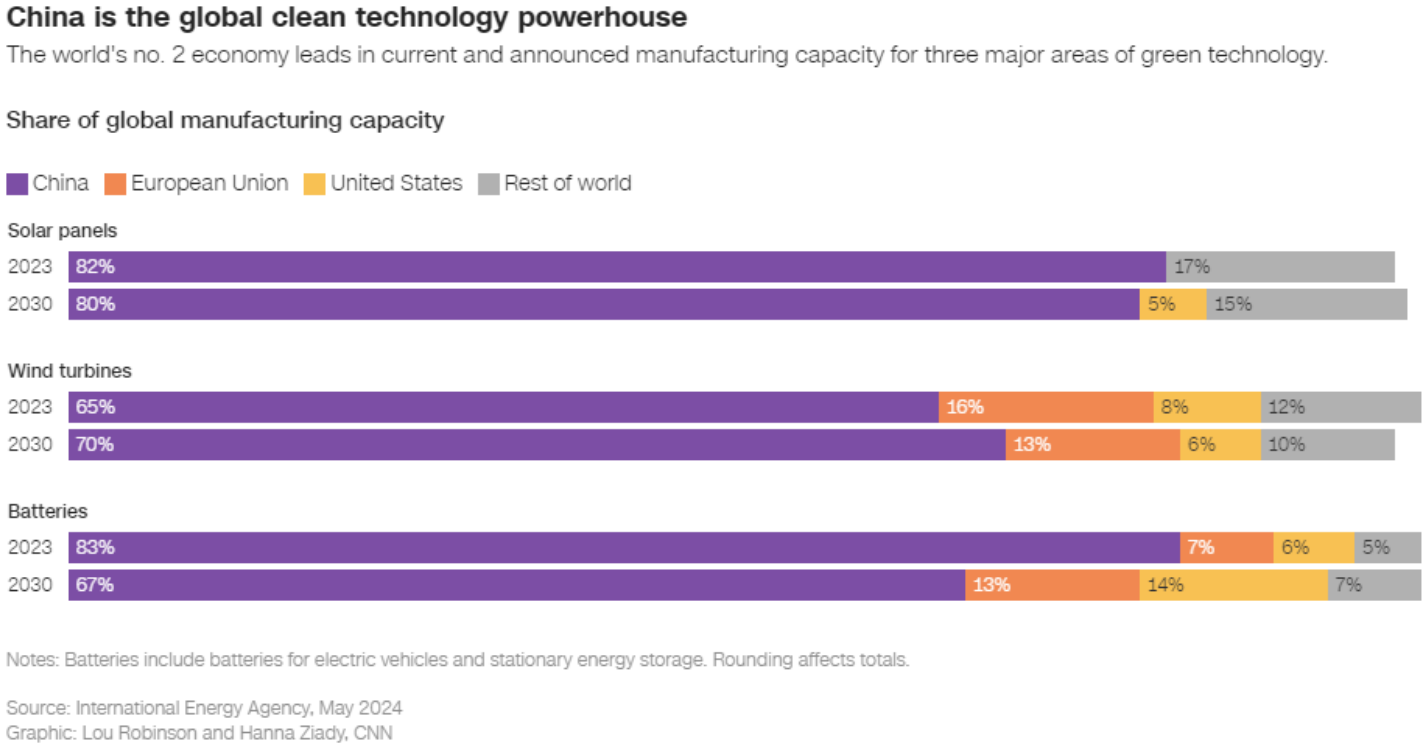
**1st Topic of the Week: We look at the scale of growth in China in many of the critical pathways to clean energy and question whether the US and Europe can afford to pick a trade fight with China while at the same time trying to reach ambitious climate change targets. The cost and learning advantage of the progress already made in China could provide the rest of the world with a much-needed route to lower costs of power and equipment.**

**2nd Topic of the Week: Why repealing the IRA would be a mistake for the Republicans.**

**Otherwise: We add to the work we did two weeks ago highlighting that polymer recycling rates are missing national targets, and we look at some of the challenges that are being identified with the tech industry and carbon offsets.**

- **Companies Mentioned:** Dragoman, Air Products, BMW, VW, Mercedes, Shell, Issaquena Green Power, ITM, Li-Cycle, PureCycle Technologies, Danimer Scientific, Amazon, Meta, Google, Ørsted
- **Products Mentioned:** Hydrogen, Electrolyzers, Carbon, E-Fuels, Solar Modules, EVs, Nuclear Power, Ammonia, Plastics
- **Subjects Covered:** Recycling, Renewables, Carbon Capture, Emissions, New Energy, Hydrogen, ESG Investing, Climate Litigation, Clean Fuels

**Exhibit 1:** The West needs China for clean energy. It will pay a price to break free




Source: CNN, August 2024

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## First: We need China if the West is to maintain climate ambitions

**In a very energetic dinner in Houston this week with Dragoman CEO Tom Harley, the topic of China was front and center with Tom strongly of the view that we cannot meet climate and energy transition goals in the West without more help from China – we would agree.** While relative costs are a clear reason why China is important – lower equipment costs mean lower transition costs – it is the availability of equipment that may be more important. China has the capacity and in some cases over-capacity in materials and equipment, and we will be making the transition process materially harder and meaningfully more expensive if we try to make changes while at the same time trying to limit China's role. We suspect that the Chinese government knows this and is taking some political stances that are unpopular with the US and Europe because they believe that we cannot effectively push back without self-harm. Others might take the view that China is inflicting self-harm by creating tension with the West as this is likely to further impact trade and the local economy. The US and European stance might make sense in the absence of energy transition and climate related goals, but prioritizing what is the most important issue of the age – climate change versus "punishing" a less friendly China – should drive a need to make peace and find a way to move forward together. China could continue to produce the lower cost building blocks that we need for power, batteries, hydrogen, and even vehicles, while the West focuses on the industries and services where it has an edge or where supply and demand need to be more localized.

**We showed Exhibit 2 in our hydrogen report this week and have since added two more suppliers, not including the one we added just before publication on Tuesday**. The Asia producers are mostly in China, with a couple in Australia and India, and while there are clearly too many, everywhere, the number in China and the experience that they are gaining with local orders as well as some in the broader region leaves them several steps ahead of producers in the West who may be gaining orders but are not yet manufacturing at scale. The electrolyzer industry in China is moving at a pace, but it is way behind the solar module and battery (and component) industries where China has a huge lead as shown in Exhibit 1. While we see companies calling for more tariffs on solar panels in the US, we also see solar panel companies failing in the US, suggesting that tariffs need to move higher to protect the local industry.

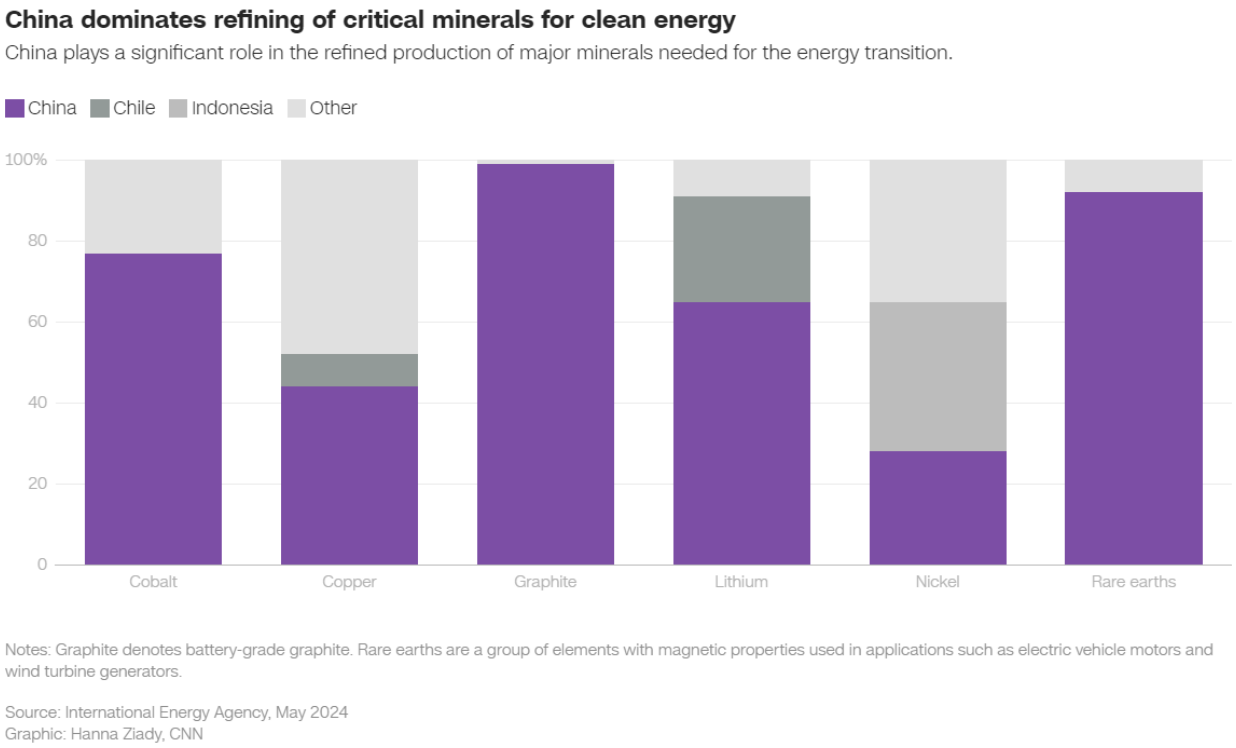
**Exhibit 2: Too many producers and not enough business in the near term – this industry is struggling.**

| | North America | Europe | Asia, Inc, Australia |
|---|---|---|---|
| **PEM** | Electric Hydrogen | Bosch | Sungrow |
| | Ohmium International | ITM | PERIC Hydrogen Technologies |
| | Cummins | Siemens Energy | CPU |
| | Plug Power | NEL | Hande |
| | | H-TEC Systems | SENZA |
| | | | Hygreen Energy |
| | | | Hefei Sinopower Technologies |
| **Alkali** | Cummins | NEL | PERIC Hydrogen Technologies |
| | SLB | Hydrogen Pro ASA | CPU |
| | Splitwaters | McPhy Energy | Hygreen Energy |
| | Evoloh | John Cockerill | Sungrow |
| | | Green Hydrogen Systems | Guofu Hydrogen |
| | | Sunfire | Kohodo Hydrogen |
| | | thyssenkrupp nucera AG & Co KgaA | Auyan |
| | | | Reliance Industries |
| | | | LONGi |
| | | | Sinohy |
| | | | Kylin Tech |
| | | | Sunfly |
| | | | Hefei Sinopower Technologies |
| | | | Hande |
| **Solid Oxide** | SLB | Bosch | |
| | Bloom Energy | Sunfire | |
| | | Topsoe | |
| | | CERES Power | |
| **Other** | Utility Global | Enapter | |
| | Advanced Ionics | | |

Source: C-MACC Analysis, August 2024

**But tariffs on clean energy make something that is already too expensive even more so – does this make sense?** We must question what the end game is here, because we see too many energy transition targets being walked back today and where it is not about equipment availability it is about costs, or it is a combination of both. The level of subsidies being thrown at energy transition in the US and in Europe are in many cases still not adequate and projects are being delayed or cancelled on both sides of the Atlantic. We are already seeing companies make the case that they cannot be competitive or deliver projects at the costs expected without using cheaper equipment from China or other manufacturers outside of Europe and the US. But as noted above, and in much of the supply/demand work that we have done for hydrogen, it is not just about costs, it is also about availability of equipment (not so much for hydrogen for the balance of this decade, but certainly thereafter) and about the availability of the materials needed to make the equipment. If we were to embrace China as a transition equipment supplier and encourage designers in the US and Europe to outsource manufacture to China and other low-cost regions, not only will transition move faster but it will also be cheaper. Opportunity to help China re-stimulate its economy must be worth something to China and that is likely worth a stab at compromise, and a negotiated truce around many of the issues that exist between the West and China today. We are looking for pathways to produce clean energy as that will drive cleaner industry, but the tariff walls that need to be erected to protect certain sleeves of industry from lower cost products in China will drive local costs so high that either what is ultimately produced will be globally uncompetitive, or the economies footing the bill will see economic growth stagnate because of higher taxes – to subsidize industries or price inflation for consumer good and energy.

**Exhibit 3: Not all the materials that we need for energy transition need to come from China, but China offers the lost cost of processing most materials and then the necessary fabrication using them.**




Source: CNN, August 2024

**But in addition to providing the lowest cost equipment in many cases, China is powering (pun intended) ahead in the production of lower carbon goods, as it adds more renewable power capacity and hydrogen.** The renewable power surge impetus in China is different from the investment wave in Europe, Asia, and other parts of the world, because it is driven by national energy security goals as well as a genuine need to replace visibly troubling pollution that has plagued many of the larger industrial cities because of coal use. In the West the driver is all emission and climate change related. China is moving ahead of the rest of the World, but with different core drivers. The West should recognize that the competition should be in the goods made for the clean power and not the clean power itself, where the goal should be to get costs as low as possible. Companies like BMW, VW, and Mercedes in Germany will have enough trouble making a low-carbon cost-effective vehicle with the cards stacked in their favor, but if they are penalized with inputs that derive from a more costly route to power than was necessary, they face an additional penalty, and if the additional cost is covered by local subsidies,

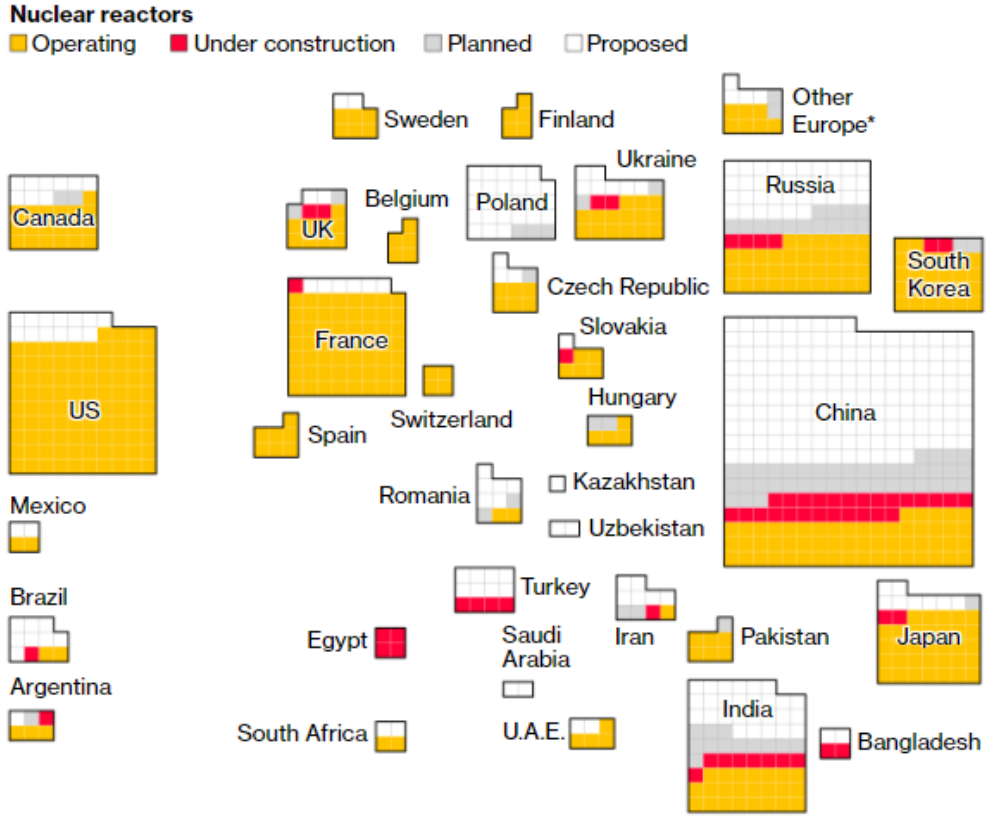
the taxpayer will foot the bill and will be less able to afford the vehicles. Chinese EVs, for example, are already far cheaper than those made in the West for comparable quality, but China may be able to get to low-carbon and low-cost vehicles faster and more effectively than others. Note the advancement of nuclear plans in China – more low-cost, low-carbon power.

**Exhibit 4: China is moving faster towards zero-carbon power than most major economies today.**

## Chart of the day

### China, India Lead Nuclear-Power Expansion

As new reactors come online, the world faces a growing need for additional uranium ore

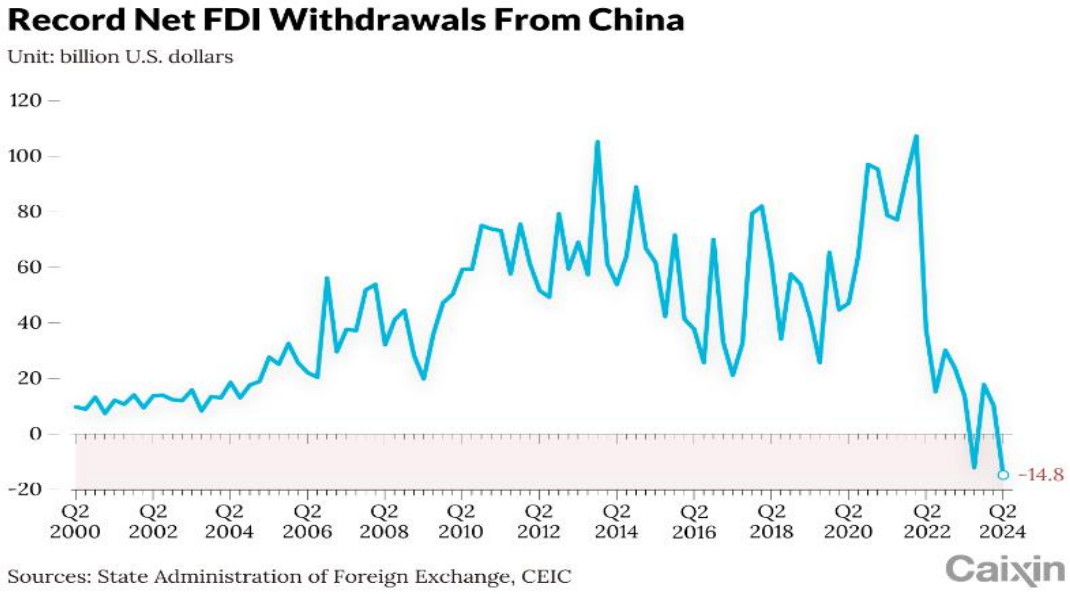



Source: World Nuclear Association
*Other Europe includes Armenia, Belarus, Bulgaria, Netherlands and Slovenia Note: Reactor construction in Brazil, Ukraine and Japan is currently suspended

**Yet we are walking away from China because we do not like the way that local politics is changing and we do not like the dominant manufacturing position.** Note that it is demand in the West for low-cost Chinese made goods that has allowed the local industry in China to develop the scale and low costs that we see today, but it has also afforded investment to improve quality and China is now producing goods of comparable quality to the best in the world in many cases. Foreign direct investment in China has collapsed, as shown below – and we are now in a period of net liabilities. This could also have a large unintended consequence for the West as China will change strategies to protect its own economy and we see signs of this already with activity in other parts of the World. Chinese equipment, power, and electrolyzers could make some of the large Africa and Middle East green hydrogen/ammonia projects some of the lowest cost in the World. Europe, in particular, may refuse to buy Chinese equipment, see local projects stall because of escalating costs, and end up buying hydrogen and ammonia from offshore from equipment made in China. While this may be the end game, Europe will waste a lot of money on failed projects in the meantime – a couple of stories below indicate the issues.

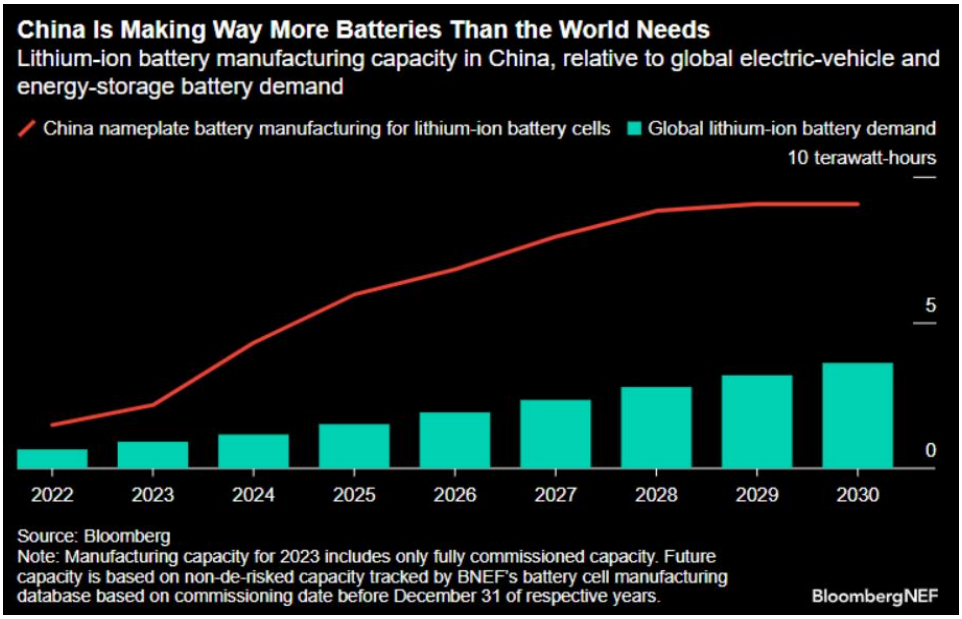
- **High prices, no offtake, insufficient incentives: why Ørsted scrapped FlagshipONE**
- **ITM Power eyes profitability; urges hydrogen sector to finalise investments**

**Exhibit 5:Net Foreign Direct Investment Withdrawals From China Hit Record High**




**In this week's hydrogen report - A Difficult Choice – Who Will Be Around to Support Your Hydrogen Investment? – we note that one of the challenges with an industry that needs to consolidate, is where to make your bed today, given the need for ongoing support.** This is somewhat different than the consequences for the battery market, where the battery packs are generally standard in size and fungible – if one supplier fails you can buy from another. When Shell, for example, confirms ITM as an electrolyzer supplier in Europe, is the company considering the very weak financial position at ITM and the risk that the company may not be around to support the life of the green hydrogen project. This is much more of a challenge for possible electrolyzer users than it is for EV makers and battery supply. The chart below suggests that the battery makers will need to go through a major period of consolidation and restructuring, which will likely be good for the industry as the stronger producers will survive, and at the same time, consolidation will drive down costs. Following on from the China comments at the start of this report, the low-cost position that China enjoys in batteries will only get better as the industry consolidates, and consequently, automakers and other battery users in the West will still likely be better off buying from China than from those trying to compete with battery manufacture locally. China-based supply will make high-cost energy transition plans lower in cost in the West, and as the primary constraint to progress in the West is cost, finding a better way to work with China makes a lot more sense than trying to find ways to work around China.

**Exhibit 6: Chinese battery industry faces consolidation wave.**




Source: BloombergNEF, August 2024

## Second Topic of The Week

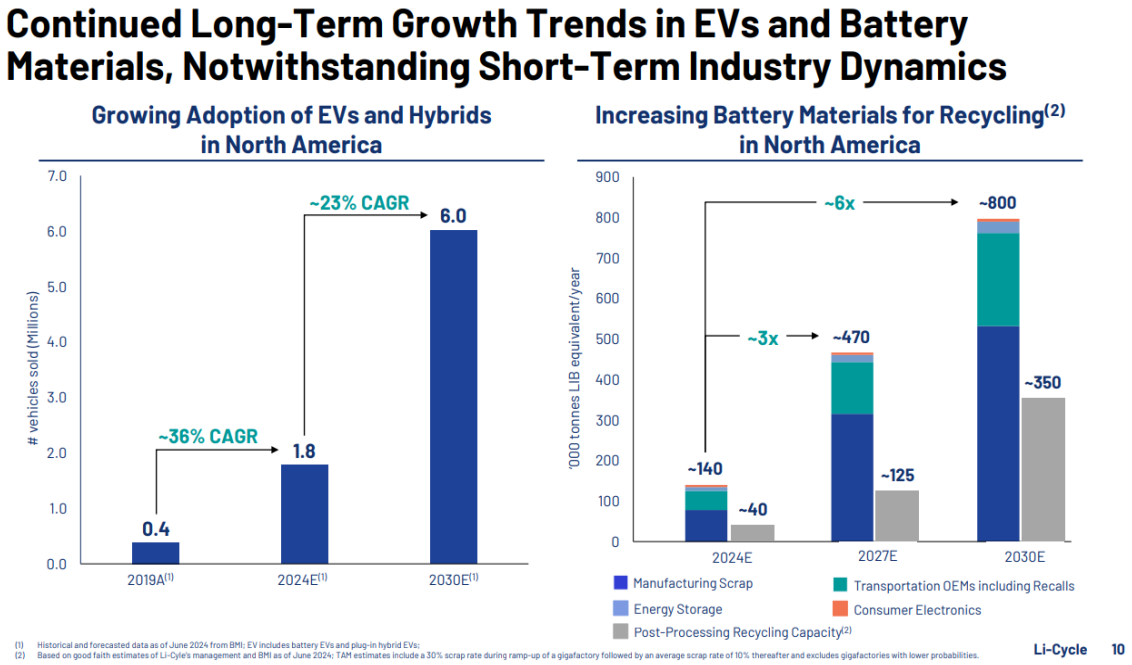
**No one wins if the IRA credits are repealed, but a lot could be gained if they were tweaked:** One of the headlines below talks about the risk of a Republican pullback on IRA credits and concludes that it does not make a lot of economic sense and would only be a political move aimed at swiping at the opposite party. Sensible economics suggest that you should keep the entire structure in place, at a minimum, and perhaps enhance it in a way that makes the Republicans and the Oil Lobby happy, while at the same time accelerating progress. This should not be looked at as solely an energy transition policy, because at its heart it is an industrial incentive policy, and it is working – albeit more slowly than it could. As plenty of commentary has noted over the last year, more of the awarded IRA incentives have gone to Republican States than Democrat States. But some Republican influence could drive emissions down more quickly! The challenges we see today are that 45Q is not attractive enough to decarbonize existing heat-based industry, including natural gas-based power. Increasing the focus on creating clean natural gas-based power, could drive faster adoption of CCS for power, and if this low carbon power was then also seen as allowable for 45V – i.e. if the rules around carbon intensity and additionality were relaxed, you might save the US electrolyzer industry, and allow the US to catch up with China on electrolyzer based hydrogen, which while not completely clean on day one, could be eventually. The other move a republican administration could possibly tackle, although this is now begrudgingly becoming more bipartisan, is regulatory reform so that we are not still debating a clean investment while China is completing ten of them. There are billions of willing dollars focused on energy transition and emission abatement-related investment – the next US administration should focus more on what it can do to unlock that spending.

- Repealing IRA tax credits would 'undermine investment and waste billions': Republicans

## Recycling and Renewables

**"It's Just Over the Next Hill" – Many companies see hope, but can they get there?** Li-Cycle, PureCycle Technologies, Danimer Scientific, and others see light at the end of long tunnels with respect to demand for their products and the possibility of positive EBITDA, but will the cash well run dry before they get there? If you look at the sector stock charts that we show in our Sustainability work each week, one of the obvious takeaways is the lack of public market appetite for these sectors – Danimer is currently trading at less than $0.40 per share, which reflects its somewhat dire cash position. But the lack of appetite in the equity markets is reflected in other segments of the capital markets and so these companies are largely out of borrowing options. We have done lots of work with start-ups over the last 20-plus years and one of the common failings is the "off to the races" attitude that some have, once they raise initial capital.

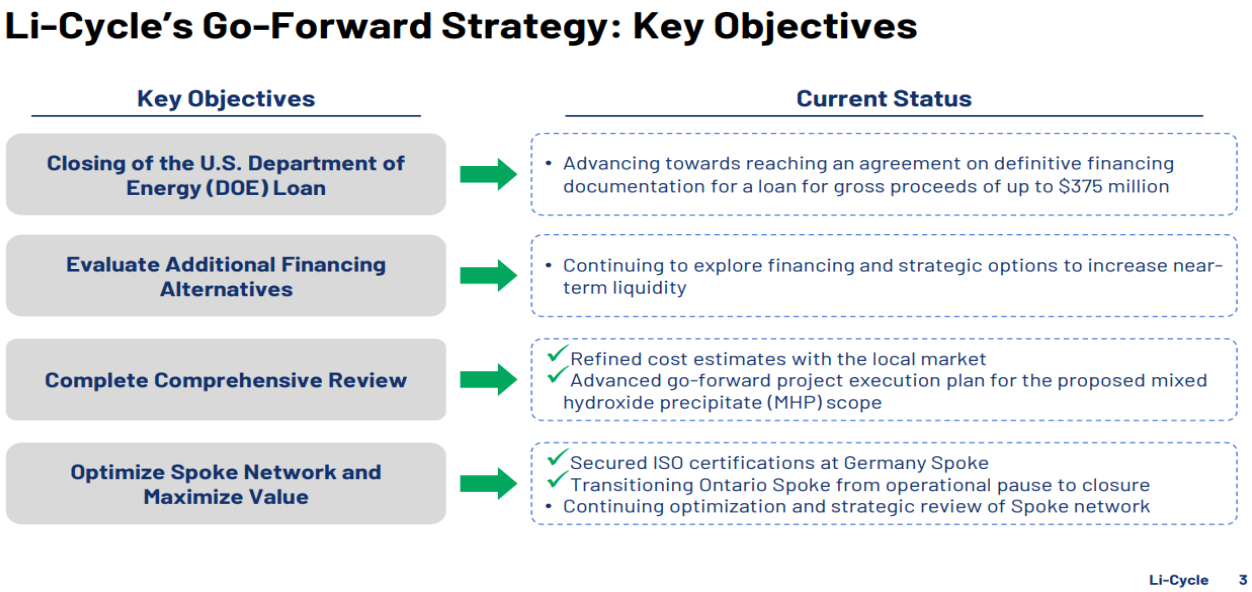
**Exhibit 7: Li-Cycle's 2Q24 business update was similar to the Purecycle 2Q24 update, as both are highlighting positive long-term trends but scrambling for funds near term to support operations.**




Source: Li-Cycle 2Q24 Earnings Presentation, August 2024

**This is not peculiar to energy transition, and there are examples of this in start-ups everywhere – companies spend too much.** You must build infrastructure around a new business, but there is also a need to be frugal, as you should always focus on the downside to cash flows and have plans to deal with that. Many companies are persuaded by financial advisors that the way to deal with risk is to raise more capital than you think you need. This is the right approach, but it is not an either/or situation – you need an adequate capital raise and aggressive cost discipline. One of the promises that we are making to investors in Issaquena Green Power is that we will be aggressively frugal with cash – a lesson we have learned working with clients who have not been.

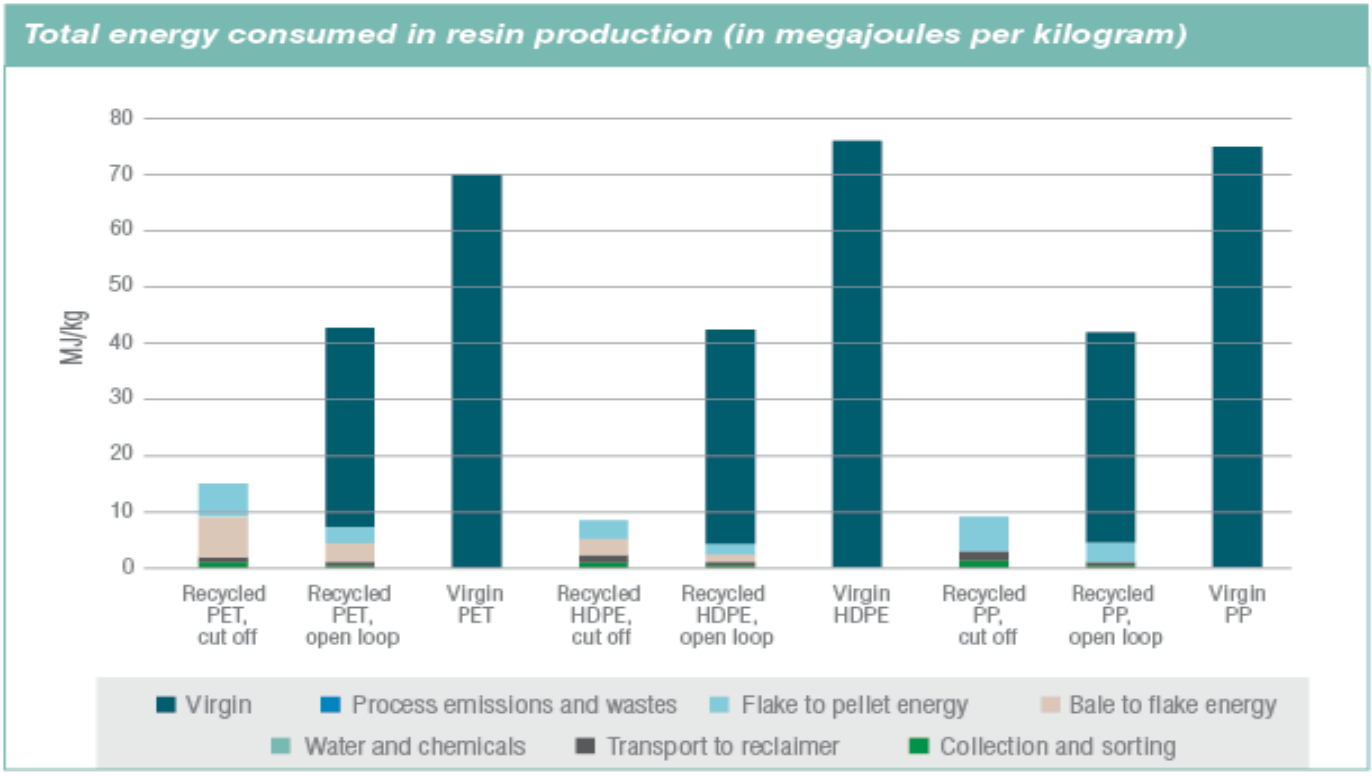
**Exhibit 8: We highlight efforts at Li-Cycle to get additional financing while improving its recycling operations.**




Source: Li-Cycle 2Q24 Earnings Presentation, August 2024

**Time to try something different:** The second exhibit below shows that the plastic industry needs to change paths with its recycling strategy because if Europe falls behind with recycling targets, the rest of the world has very little chance. Europe has been more focused on the circularity of plastics than the rest of the world. It has some of the most prescriptive rules around waste collection and recycling, with stiff financial penalties in some countries if you do not follow the rules. Part of the challenge with the chart below is that it measures against expectations, and European expectations are high. In the US, expectations are very low, and it would be easier to meet the goals. The positive in the chart is that Germany appears to be meeting goals, so it shows that progress is possible – albeit with a big stick, as Germany has some of the stiffest non-compliance penalties. However, the failure to meet targets in Europe, especially versus other recycled materials, is a reflection of the significant challenges in collecting and sorting waste plastics, and some of the fixes needed to make things better seem unlikely. We would need much more packaging design standardization, for example, to limit the number of different plastics in the mix and increase the volumes of those that can be easily recycled. We would need much more packaging design standardization, for example, to limit the number of different plastics in the mix and increase the volumes of those that can be easily recycled. We would also need even more draconian recycling rules than we have in Germany today – likely to impossible to enforce in many countries. In our hydrogen report yesterday - A Difficult Choice – Who Will Be Around to Support Your Hydrogen Investment? – we highlighted a small waste-to-hydrogen project in Spain. Pulling the hydrogen out of waste may make more sense than trying to recycle it, and we have covered this at length – see - We should try not to Waste hydrogen! However, targeting hydrogen specifically is likely not economic, as pyrolysis technologies need a lot of heat – which comes with a carbon footprint and gasification produces a lot of CO2. The better route would be waste to E-fuels, utilizing both carbon and hydrogen. This approach to waste management and a focus on producing lower carbon virgin polymers may make much more economic and environmental sense than trying to fit the plastic recycle square peg in the plastic collection and sorting round hole. If you look at the EU recycled targets of 65% by 2040 – second chart below – we see this is highly unlikely without far more regulation, and an overall waste policy might stand more chance of success.

**Exhibit 9: Virgin polymer production is more energy intensive and dependent on regional cost curve developments than recycled polymer production, where costs are much more tied to waste sourcing and sorting.**




Source: Stina, Resource Recycling, August 2024

**Exhibit 10: Most EU member states fail to meet waste collection and recycling targets**

| | Paper and cardboard | Ferrous metals | Aluminium | Glass | Plastic | Wood | |
|---|---|---|---|---|---|---|---|
| Austria | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | Austria |
| Belgium | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Belgium |
| Bulgaria | ✓ | ✓ | ✓ | ✗ | ✗ | ✓ | Bulgaria |
| Croatia | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | Croatia |
| Cyprus | ✓ | ✓ | ✗ | ✗ | ✗ | ✓ | Cyprus |
| Czechia | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ | Czechia |
| Denmark | ✓ | ✗ | ✓ | ✓ | ✗ | ✓ | Denmark |
| Estonia | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Estonia |
| Finland | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | Finland |
| France | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | France |
| Germany | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Germany |
| Greece | ✓ | ✓ | ✗ | ✗ | ✗ | ✓ | Greece |
| Hungary | ✓ | ✓ | ✓ | ✗ | ✗ | ✓ | Hungary |
| Ireland | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | Ireland |
| Italy | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | Italy |
| Latvia | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | Latvia |
| Lithuania | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | Lithuania |
| Luxembourg | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | Luxembourg |
| Malta | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | Malta |
| Netherlands | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Netherlands |
| Poland | ✓ | ✓ | ✓ | ✗ | ✗ | ✓ | Poland |
| Portugal | ✓ | ✗ | ✗ | ✗ | ✗ | ✓ | Portugal |
| Romania | ✓ | ✗ | ✗ | ✗ | ✗ | ✓ | Romania |
| Slovakia | ✗ | ✓ | ✗ | ✓ | ✗ | ✓ | Slovakia |
| Slovenia | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Slovenia |
| Spain | ✗ | ✓ | ✗ | ✓ | ✗ | ✓ | Spain |
| Sweden | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Sweden |

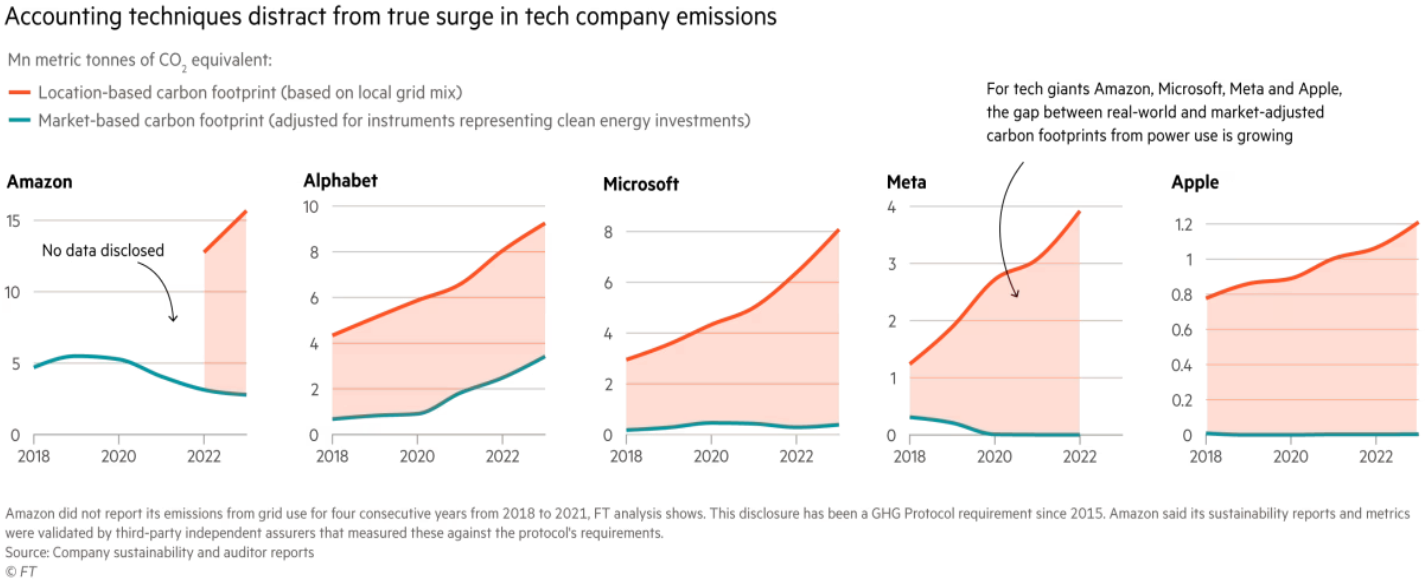
✓ Member State not at risk of missing the target ✗ Member State at risk of missing the target

Source: European Environmental Agency, Sustainable Plastics New, August 2024

## Carbon Capture and Emissions

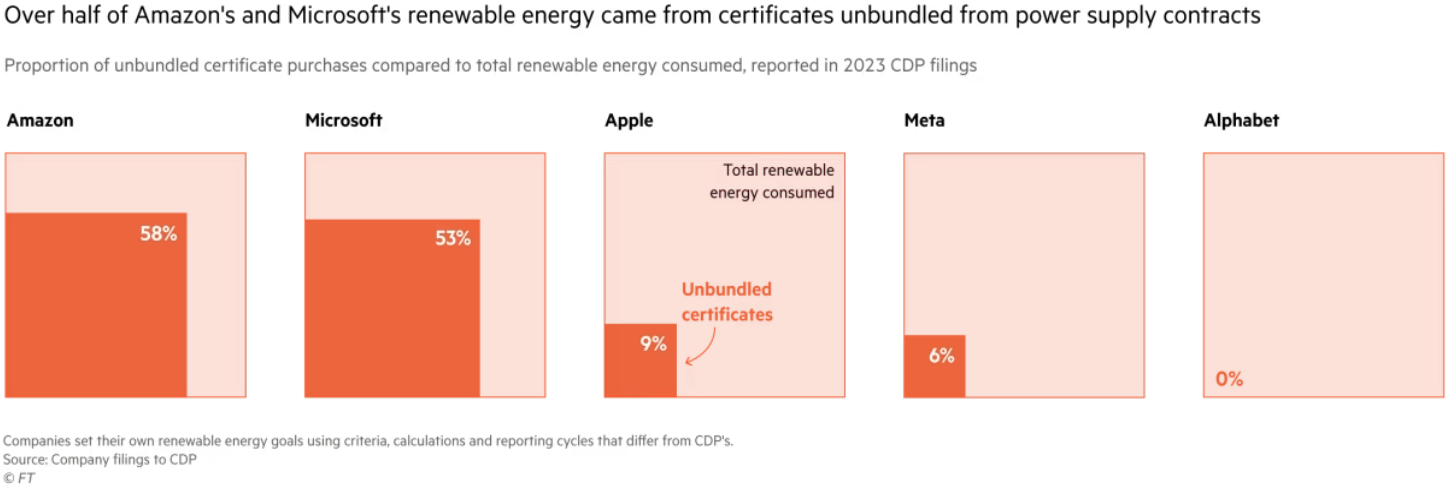
**Tech squares off over greenhouse gas emissions:** Amazon, while positioning itself as a leader in green energy, faces criticism for its significant greenhouse gas emissions, particularly in comparison to its cloud computing rivals. The company, along with other tech giants like Meta and Google, is involved in lobbying efforts to influence the Greenhouse Gas Protocol, the global standard for carbon accounting. These companies are divided over how emissions from energy use should be reported, with Amazon and Meta advocating for more flexible rules that critics argue could obscure true pollution levels, while Google supports stricter, localized accounting methods. This debate is critical as these tech companies, which are among the largest corporate buyers of renewable energy, continue to expand their energy-intensive data centers, potentially jeopardizing their net-zero commitments. The outcome of the ongoing review of carbon accounting rules, expected to conclude by 2026, will have significant implications for global efforts to limit climate change. With this general view in mind, it ties into our commentary above as the use of renewable energy certificates (RECs) are being viewed as playing a major role in most decarbonization plans, despite obvious pros-and-cons. We highlight the exhibits below from a FT article discussing this issue, and we view the struggle to source enough clean electricity that is also cheap will be increasingly difficult to source in coming periods – indeed, we see more maneuvers from consumers ahead, and we expect government actions to also follow, taking the view of emissions and not power sources as the issue.

**Exhibit 11: Big Tech's bid to rewrite the rules on net zero**




Source: FT, Company Filings, August 2024

**Exhibit 12: Renewable energy certificates play a major role in tech decarbonization.**



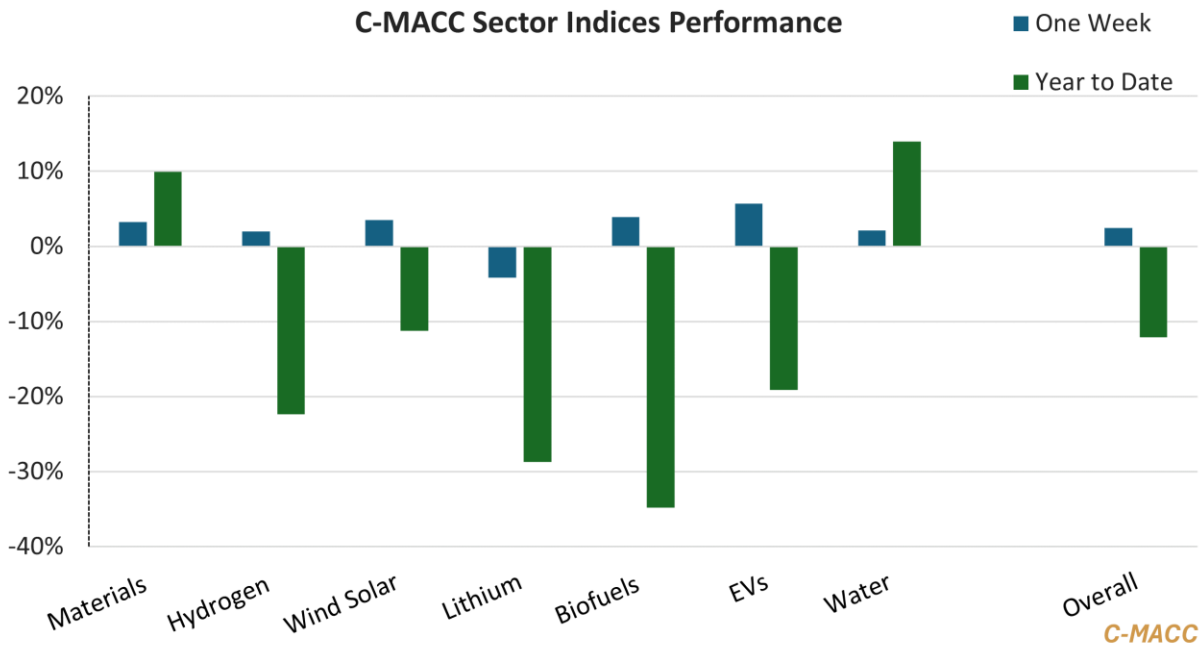

Source: FT, Company Filings, August 2024

## ESG Investing

**Another odd move from Air Products:** With many of the recent headlines pointing to challenges with keeping pace with renewable targets, raising targets seems filled with risk and an increased likelihood that you must walk back the targets. But 2030 is not that far away and it would be surprising if Air Products has made this claim without concrete plans as to how the targets would be met – i.e., the company has identified the exact renewable resources that will drive the higher targets. Mainstream shareholders of chemical and industrial companies are not basing incremental investment decisions on whether a company has adequate or believable renewable power targets, and consequently, it is not clear what audience Air Products is targeting with this release.

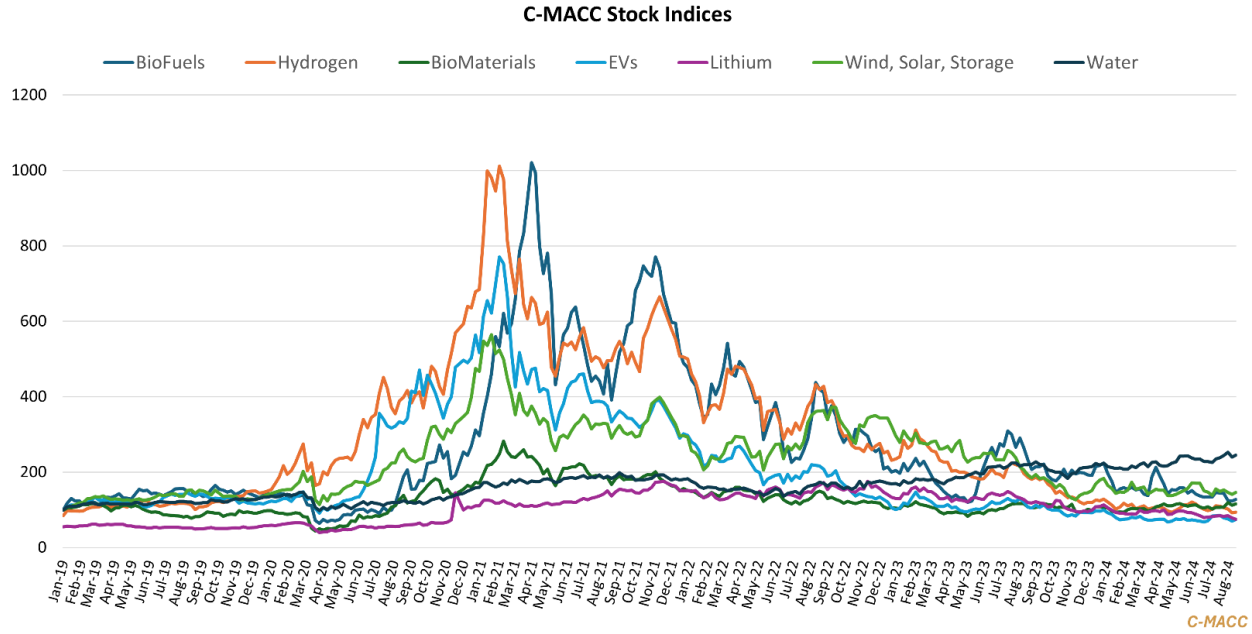
- Air Products quadruples 2030 renewable energy target, adjusts carbon baseline

**Exhibit 13: A better week but it was a better week for the broader markets – lithium sentiment remains weak.**




Source: Capital IQ, C-MACC Analysis, August 2024

**Exhibit 14: While we may see a few stocks worth what is probably a gamble, we see more are risk of failure.**




Source: Capital IQ, C-MACC Analysis, August 2024

## Headline Appendix

### Recycling and Renewable Materials

- Honda, Nissan fast-track plastics recycling to meet new EU rules
- Positive CPG volumes, growing petchem involvement in recycling shared in latest corporate earnings results
- LG Chem Adds Eco-Friendliness to Flame-Retardant Plastics
- Recycling medical waste, a feasible option?
- Tough plastics broken down sustainably with common chemical, sunlight, air
- Commercial-Scale Production Proves Affordable, Accessible, and Sustainable Phosphorus Fertilizer Supply
- Alcamare Recieves FDA Letter of No Objection for Recycled Polypropylene
- Black Swan Graphene Unveils Fifth Graphene-Enhanced Masterbatch: HDPE for Sustainable Packaging
- Bio-based Polyethylene: A Sustainable Solution for Plastic Waste
- Carbios to licence PET depolymerisation technology for new UK plant
- Chemical recycling tracker
- Colorado company uses plastic from Dillon Marina and turns it into roads
- Consumers redeeming fewer bottles across US states, report says
- DataBeyond supplies technology for 300,000 tonnes PET bottle sorting
- ExxonMobil says new resin could reduce raw plastic use
- Europe R-PET bale prices drop in Italy, blue bale prices rise in eastern Europe
- Eastman is set to revolutionize plastic recycling by building the world's largest molecular recycling plant in Port-Jérôme-sur-Seine, Normandy, France 02-08-2024
- Freepoint Eco-Systems, Renewi plan advanced recycling feedstock plant
- Global brands drive China recycled packaging demand
- Honda and Nissan increase plastic recycling
- Italy's Versalis & Forever Plast to launch REFENCE recycled polymers
- Mechanical recycling, chemical recycling, bio-based plastics all needed to scale circularity
- Sustainability in packaging | McKinsey
- Mexico recycler Alcamare receives FDA approval for post-consumer PP
- Mura Technology wins grant to develop sustainability models for Hydro-PRT
- Novolex upped its PCR use, product recyclability in 2023
- Origin taps Reed City Group for US manufacturing of PET caps
- Origin Materials Unveils Engineering and Design Innovation in Its Manufacturing of Tethered PET Beverage Caps
- Origin unveils 100% PET tethered caps
- Packaging companies and CPGs prepare for EU's tethered bottle cap regulation
- PET recycler QC Polymers aims for £100m in revenue within 5 years
- Plastic Waste: A Sustainable Concrete Solution
- Polystyrene recycling is now available in Palmy
- R-HDPE Market in Germany Sees Steady Price Increases Amid Manufacturing Struggles
- Reconomy adds its first US operations with Lincoln Waste acquisition
- Recycling medical consumable should be an option to consider
- Solvent-based plastics recycling still faces hurdles
- Study claims basic polymers can be recycled up to 10 times
- Sustainable products give automakers an edge, suppliers say
- Técnicas to study chemical recycling of waste composites

- The roadmap to recycling polyolefins
- TotalEnergies Corbion signs PLA distribution deal in Japan
- Up-cycling petroleum waste into a high-performance yet sustainable triboelectric nanogenerator
- Veolia to recycle soft plastics into garden furniture
- Versalis launches recycled polystyrene grades for food-contact applications
- What brands and retailers are saying about sustainable packaging in 2024
- Zotefoams inks deal for mono-material barrier packaging machinery
- Industrial Research Project to Advance Mechanical Recycling of Flexible Polyethylene
- Low demand and high imports endanger the European plastics recycling industry
- PureCycle now making compounds
- Honda, Nissan fast-track plastics recycling to meet new EU rules
- Lower recyclate prices impact net income / Growth forecast for 2025 thanks to WEEE recycling / Feedstock supply for chemical recycling
- Ambercycle Raises $10 Million for Circular Materials Plant from Shinkong
- Enter Sandman - Atlas Energy Brings an Innovative Sand Solution to the Permian Basin
- Mechanical recycling, chemical recycling, bio-based plastics all needed to scale circularity
- Flow Beverage introduces new sparkling mineral water in aluminium bottles
- Tomra unveils material circularity initiative Retility
- Quadpack expands tottle range for on-the-go beauty
- Vital Proteins switches collagen peptides to 80% paperboard canister
- Berry introduces reusable PP milk bottles
- Can private value chains boost polyolefin recycling?
- EU member states failed to meet waste collection and recycling targets
- INSIGHT: Mechanical recycling, chemical recycling, bio-based plastics all needed to scale circularity - Borealis
- Report: Brands likely to shift focus from PCR to emissions
- Weak sales persist on German plastics recycling market in July

## Carbon Capture and Emissions

- BHP, Rio Tinto, Qantas to invest $53 mln in Australian carbon credit fund
- Philippines sets out carbon pricing framework
- Carbon offset setback risks corporate backtrack on climate goals
- California narrows LCFS goals to tougher targets
- BlackRock, Temasek Decarbonization Fund Leads $31 Million Capital Raise for AI-Powered Factory Optimization Platform Guidewheel
- Altman-Backed Startup Opens Largest USA Facility to Pull Carbon From Air
- EET buys Thornton Science Park to spearhead low carbon drive
- Suez moves forward with UK carbon capture projects
- US DOE makes $54.4m carbon management funding announcement
- Solving the carbon market 'integrity crisis'

## Renewable Fuels, Power

- Australian rooftop solar reaches 81% high as demand hits record low
- August WASDE maintains forecast for 2024-'25 corn use in ethanol, reduces outlook for corn prices
- Battery Tech Startup Gaussion Raises $12 Million to Scale Rapid Charging Solution

- India installs 12.1 GW of solar in H1
- New $5.5bn UK electricity 'superhighway' to ease wind power bottleneck
- Sweden's nuclear plans to cost $38bn, commission says
- Ebon Solar announces plans for US solar cell factory
- Can Sweden deliver its much hyped green energy boom?
- OXCCU unveils world's first clean jet fuel plant at Oxford Airport
- BHEL gains EPC contract for 2x800MW thermal project in Jharkhand
- Europe's biofuels sector sounds alarm over Chinese imports
- Does Europe need Chinese wind technology to meet climate goals?
- NextEnergy Capital acquires 248MW solar PV portfolio in Spain
- Third battery fire at the same site in Germany
- US wind generation hit record in April 2024, exceeding coal-fired generation
- RWE secures two sites with 4GW total in North Sea offshore wind auction
- Lacklustre interest in German offshore wind tender a 'warning signal'
- Vestas upgrades Brazil factory to produce V163 turbine
- Offgrid PV-driven hydrogen vs. standalone solar-plus-storage
- 8 Rivers partners with Siemens Energy on zero-emissions turbine development
- $84 Billion in Clean Energy Projects Are Running Behind Schedule
- Alaska Airlines Invests in Sustainable Aircraft Developer JetZero
- Avangrid Eclipses 9GW of Installed Capacity at Wind and Solar Sites Powering Over 2 Million Homes
- BOEM completes EA for wind energy leases offshore Oregon
- Chemours opens battery technology lab in US
- Honeywell and Repsol to Partner on Biofuels Development
- Hong Kong investor buys UK wind farms for £350mn
- India's renewable energy storage capacity may surge to 6 GW by FY 2028: Crisil
- Indonesia to Launch Palm-Based B40 Biofuel by 2025
- Indonesia's renewables target likely to be revised lower amid slow additions: Ember
- Poland commits almost €5bn loan scheme to fund offshore wind
- OXCCU Unveils OX1 Sustainable Aviation Fuel Facility at Oxford Airport
- Repsol, Honeywell link up to study biofuel, chemical production pathways
- EcoCeres Completes First Supply of SAF to Evos Ghent terminal
- Oklo signs preferred supplier agreement with Siemens Energy
- US BATTERY STORAGE: 97% of US capacity additions in Q2 in ERCOT, WECC, CAISO
- Topsoe to supply tech for renewable fuels complex in Germany
- Holden Municipal Light Department, Lightshift Energy and MMWEC Unveil Battery Storage Project in Holden, MA to Strengthen Community Energy Resilience
- Salient Predictions Selected for the AWS Clean Energy Accelerator 4.0 | Grid Modernization
- World to 'double but not triple' wind power by 2030 under national targets

## EVs

- Leasing model behind Europe's EV drive at risk of breakdown
- Battery fires in South Korea prompt transparency requirements over EV battery origins
- South Korean EV producers pushed to reveal battery details
- South Korea holds emergency meeting as EV fires stir consumer fear

- US Is Now a Global Leader in Attracting EV Investments
- Musk embraces Trump and scorns subsidies. But Tesla still lobbies for US benefits
- Vietnam plans electricity subsidies for EV charging stations
- Volkswagen delays launch of Trinity EV further, source says
- Public EV Charging Sees Consistent Progress for Two Consecutive Quarters, J.D. Power Finds
- Nuvera to supply fuel cells for Viritech's vehicle powertrain
- Electric vehicles – PLA Enters August with a Price Rollover Amidst Rising Demand and Sustainability Efforts
- EVgo Announces Major Network Enhancements Across Nationwide Fast Charging Network
- China's CATL to buy lithium iron phosphate from Jiangxi Shenghua over 2025–27
- Chinese carmaker overtakes Tesla to develop world's fastest-charging electric battery
- Chinese EV Makers Set Sights on Southeast Asia and Beyond
- Trump praises Tesla, worries about how much power AI uses in glitchy chat with Elon Musk
- Global EV sales up 21% in July as China records biggest jump of 2024, Rho Motion says
- The First Polestar Manufactured in the USA: Production of Polestar 3 Starts in South Carolina

**Hydrogen – See this week's Hydrogen Focused Report**

**ESG Investing/Activism and Litigation**

- NET Power Reports Second Quarter 2024 Results and Provides Business Update
- Plastic bags banned from import in Oman
- Microsoft Unveils New Multi-Framework ESG Reporting Solution
- GreenFirst Reports Financial Results for the Second Quarter of 2024
- Nobel winners hit out at removal of fossil fuels from draft UN pact
- Verde Clean Fuels, Inc. Reports Second Quarter 2024 Results
- 5 packaging stats from Amazon's sustainability report
- Patterson Companies Releases 2024 Corporate Responsibility Report
- Vestas cuts profitability outlook after service business costs hit
- It's in companies' own interests to adopt global sustainability standards
- Goldman Sachs Asset Management Exits Climate Action 100+
- Standard Chartered Rolls Out ESG-Linked Cash Accounts for Corporate Clients
- OPW expands clean energy portfolio with SPS Cryogenics acquisition
- AmSty spells out recycling involvement in sustainability report
- Geon 'blocked out the noise' to boost sustainability in tough fiscal atmosphere
- Bakelite Synthetics Releases 2023 Sustainability Report
- EU Cop 29 negotiating mandate light on finance goals
- ESS Tech, Inc. Announces Second Quarter 2024 Financial Results
- Origin Materials, Inc. Reports Operating and Financial Results for Second Quarter 2024
- EQT Acquires Majority Stake in Performance and Sustainability Software Solutions Provider AMCS
- Finnish Startup Collo Raises €5 Million for Tech Enabling Industrial Plants to Cut Costs, Emissions and Waste
- How US homeowners are using Joe Biden's climate law
- Spruce Power Reports Second Quarter 2024 Results
- UK Court Dismisses Challenge Against Net-Zero Gas Power Plant
- Danimer Scientific Announces Second Quarter 2024 Results
- Food maker Mars will miss 2025 packaging sustainability goals

- **PureCycle Provides Second Quarter 2024 Update**
- **PureCycle Technologies Engages Investors with New Presentation**
- **Repealing IRA tax credits would 'undermine investment and waste billions': Republicans**
- **The March of Folly Over ESG Investing - WSJ**
- **Delays hit 40% of Biden's major IRA manufacturing projects**
- **Vestas down on cut outlook but unclear higher costs 'will squeeze future margins'**

## Other Relevant News

- **The uninsurable world: rethinking how to cover for climate damage**
- **PSR and FICO Platform Help Mexico's CENACE Stop Floods and Boost Power Production**
- **Iberdrola Harnesses AWS Generative AI Technologies to Drive Innovation and Sustainability in the Energy Sector**

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