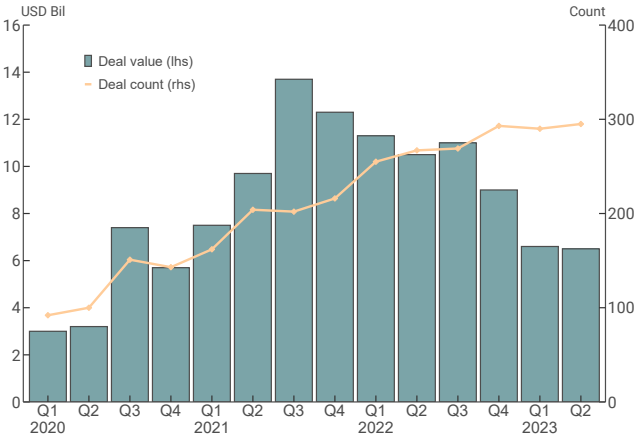
SUSTAINABLE INVESTING

The second quarter once again brought the impacts of extreme heat to the front door of investors. Throughout June, smoke from Canadian wildfires engulfed the East Coast and spread across the US, affecting nearly 1 in 5 Americans. It is a certain bet that the long-term consequences of drastic weather changes, and their economic and financial risks, will only grow. .

Fortunately, spending on the energy transition continues to grow as well, reaching $1.74 trillion in the 2023 H1. However, the more challenging macro environment over the last 18 months has made the need for nuance in sustainable investing even more apparent. Likewise, opportunities abound in the green transition, for investors and innovators. Promising developments in fundamental tech have buoyed investor sentiment, and companies operating in energy transition are among the biggest beneficiaries of the rally. In an economy hobbled by higher interest rates, seeking out pockets of dynamism is even more important.

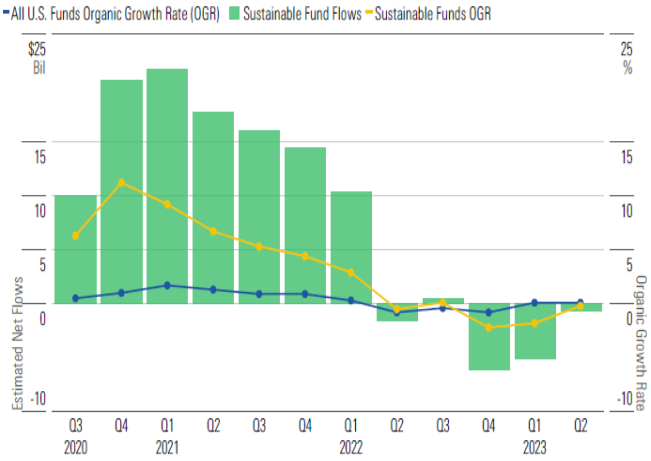
Despite a decline in climate venture transactions from the previous year ($6.5 billion in transactions across nearly 325 deals), early-stage funding saw a slight uptick, highlighting the growing appetite for hardware solutions and scaling early-stage innovation. In April, some of the biggest names in venture capital – including Tiger Global and Energy Impact Partners – formed the Venture Climate Alliance. The group of 23 firms, which represents 2% of all early-stage VC and PE deals, is the first alliance to help VCs and portfolio companies align climate approaches and decarbonize operations. By targeting early-stage venture, the VCA aims to provide resources for startups to overcome barriers and to support innovation that can accelerate the transition.

Figure 4. Early-stage VC drives deals in Q2



Source: ClimateTech VC.

Figure 5. US Sustainable funds continue to suffer outflows



Source: Morningstar Research.

Public markets continued to suffer outflows in the second quarter, as weaker sentiment and a pullback in energy stocks dragged down equity funds. Sustainability-linked funds shed $15.4 billion in the three months through June, largely driven by the US, despite mounting legal and political challenges to ESG-termed investments in Republican-led states.

There are hopes that an influx of incentives in Q2 will mobilize green spending. In the US, new guidelines for the Greenhouse Gas Reduction Fund (GGRF) and updates to tax credit transferability provide more momentum to such endeavors. The GGRF implementation framework builds on previous guidance issued in February and adds details on the distribution of grant funding via three competitions, as well as application requirements and accountability obligations for prospective grantees. Meanwhile, the new tax rules expand access to new sectors – like green hydrogen production, carbon capture facilities, and marine and hydroelectric production– and create two new monetization options so that tax-exempt and smaller entities can take advantage of the tax benefits. In the Euro area, reforms to the EU Emissions Trading System (ETS) seek to align the program to the EU's emissions goal by reducing emissions allowances, increasing climate spending provisions, and adding a carbon tax to imported goods.

After Q2 closed, the Biden Administration announced it was making $20 billion available from the EPA "green bank" for clean energy projects such as electric vehicle charging stations, community

cooling centers, and residential heat pumps. Non-profits, community development banks, and other groups can compete for grants from the green bank, which was created in the Inflation Reduction Act, with a focus on disadvantaged communities.

Meanwhile, as IRA spending ramps up, recent regional bank stresses may have lingering effects. A key component of the GGRF engages local institutions – like community banks and development NGOs – to provide credit for clean technology projects, as these lenders are likely to have deep ties to their communities that make their financing more impactful. With higher rates and funding costs squeezing margins, these banks may be hesitant to lend, leaving a financing gap that hinders the GGRF's goal to support marginalized communities.

Despite the headwinds, we see green opportunities as a secular long term investment thesis. In the wake of the US Inflation Reduction Act (IRA), the EU, Japan, and South Korea – after initially complaining about the US' industrial policies as protectionist – have introduced subsidies for their respective green and tech sectors to catch up. Despite the increasing concern about the term "ESG" and many companies – including oil companies such as Shell – backtracking on their environmental commitments, the growing list of beneficiaries of changes in climate policy represent an attractive opportunity for investors. Shortly after the end of Q2, ExxonMobil surprised many by acquiring Denbury's carbon capture infrastructure for $1.9 billion, giving Exxon access to the largest owned and operated carbon dioxide pipeline network in the US.

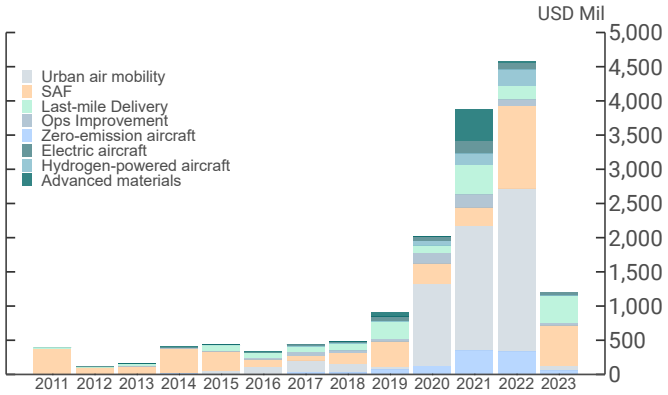
Macro and regulatory constraints also represent opportunities, particularly in growth-stage solutions. Focusing not just on clean energy but transformative energy – where traditional sources are converted to cleaner methods – requires significant investment. According to BloombergNEF, reaching emissions reduction goals by 2050 is a $196 trillion opportunity – over half of which will be needed to transform how energy is consumed (e.g., through EVs, sustainable recycling, heat pumps, etc.). The remainder will be needed to invest in low-carbon energy like wind and solar, as well as infrastructure like grids and carbon capture. Investments in high-emitting industries, such as aviation, offer the potential for real impacts via successful transitions and are typically underweight in sustainability portfolios (see Box 2). Meanwhile, the generative AI boom opens additional doors for clean energy/tech that can help accelerate energy transition efforts.

BOX 2. ENERGY TRANSFORMATION TECHNOLOGIES: SUSTAINABLE AVIATION FUELS (SAF)

Sustainable aviation fuel (SAF) is an alternative fuel source derived from biomass such as crops, household waste, and other non-petroleum-based feedstocks. It produces just a fifth of the emissions of conventional jet fuel and its various options for sourcing feedstocks and production technologies give it the ability to reduce greenhouse gas (GHG) emissions by up to 94%.

Currently, air travel accounts for 2% of global emissions and 12% of transportation emissions. And while there was a slight reprieve when emissions were nearly halved during the pandemic, the post-Covid boom, coupled with limited fuel alternatives, means traditional fuel consumption will continue to grow. While replacing old aircrafts with energy efficient options will provide some support for emission reduction efforts, the lifespan of a typical aircraft – usually 20 to 25 years – limits the opportunities to make meaningful reductions. Airlines will also need to start looking for carbon credit offsetting measures as the International Civil Aviation Organization's carbon offset and reduction scheme (CORSIA) comes into force in 2024.

Figure 2.1 SAF Investments have been growing in recent years



Source: BloombergNEF.

The bulk of decarbonization efforts will come from the development of new technologies that capitalize on fuel alternatives. But SAF production faces a challenge in scaling-up production due to high costs and limited feedstock. Current production is not only twice the price of conventional fuels but only has the capacity to replace about 1% of global aviation emissions.

Growing energy demand will have significant implications for climate, particularly as medium- to long-haul flights make up a significant portion of emissions. Efforts to decarbonize aviation will come not only from electrification of fleets and introduction of hydrogen fuel cells – which largely help short commuter flights – but also the use of SAF for longer flights that make up more than 70% of passenger air-travel emissions today. The growing opportunities to harness these technologies make the area of alternative fuel sources an increasingly attractive investment, particularly as billions of dollars of opportunities are unlocked via the Inflation Reduction Act and international policy measures.