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COWEN'S BEST IDEAS ESG

MARCH 2022

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March 28, 2022

ESG, Sustainability, and Energy Transition are areas of intense research focus at Cowen. We aim to deliver investable ESG ideas that are actionable for generalists and specialists alike, marrying our top-down thematic and ESG data expertise with our bottom-up approach to company-specific stock-picking. We're very proud that this unique offering earned Cowen top recognition for Best ESG Research in *ESG Investing* magazine's 2022 awards.

As part of Cowen's leadership role in ESG-focused investing, we make a concerted effort to have ESG permeate ALL of our research. We were the first major Wall Street firm to include company-specific ESG scores on the cover of our research reports, and our analysts regularly incorporate ESG considerations into their fundamental analysis. We have expanded and re-imagined our stock coverage universe to represent more and different kinds of sustainability stocks, such as in Energy Transition and Sustainable Food & Healthy Living, and we have added to our Washington Research strength with a dedicated ESG and Sustainability policy analyst. Moreover, Cowen has developed an ESG Specialty Sales team with global reach, and our corporate access capabilities extend to a deep understanding of the issues most relevant to ESG investors.

The timeliness and urgency underlying ESG investment have driven us to produce more than 21,000 pages of ESG and sustainability research in the past 12 months, in addition to hosting over 30 relevant conferences, summits, thematic calls and virtual events.

We look forward to continuing our partnership with you in 2022 and beyond as investors, corporate leaders, policymakers, and other key stakeholders work to design and execute on ESG initiatives impacting portfolios and prospects for a brighter future.

Sincerely,

Robert Fagin
Director of Research
Cowen and Company

BEST IDEAS 2022

March 28, 2022

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COWEN'S BEST ESG INVESTMENT IDEAS FOR 2022 + VIDEO (HIGHLIGHTS)

THE COWEN INSIGHT

We expect a growing focus on geopolitical energy security while decoupling from fossil fuels to spur increased ESG investments and drive energy infrastructure policymaking in 2022.

This is an excerpt of the full report. To receive the full report, including stock selections, please contact your Cowen representative.

ESG Investing Becoming Mainstream; Substantial Opportunity For Growth In ESG-Focused Investments Continues (Cowen Research)

During 2021, flows into sustainable open-end and exchange-traded funds available to U.S. investors reached $70bn, a 35% increase from 2020's $51.2bn, according to Morningstar. This $70bn figure, however, represented a mere 6.4% of the total U.S. fund flow, which reached $1.1tn in 2021. In Europe, sustainable net flows reached ~$472bn in 2021, 63% higher than in 2020 and ~7x the comparable U.S. flows. In 4Q21, sustainable fund flows in Europe represented 79% of global sustainable flows ($113.1bn) and were 8x higher than the comparable $14.2bn fund flows in the U.S. Globally, a record £649bn went into ESG investments, according to Refinitiv Lipper. Notwithstanding these significant increases in inflows, ESG funds still only represented about 18% of assets under management in Europe at the end of 2021, up from 15% in 2020, or about $2.23tn invested. Globally, the number stands at 10% as of November 30, 2021.

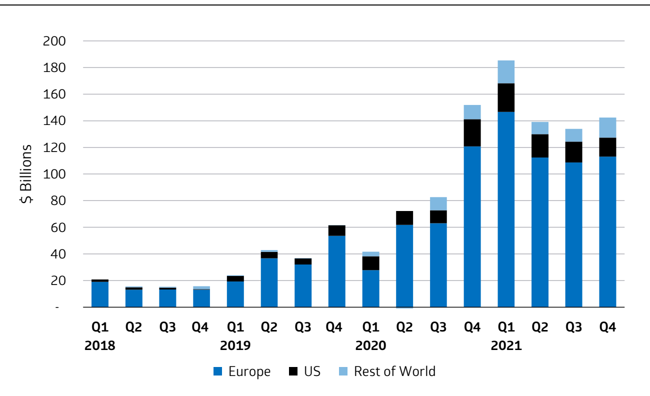
1Q21 was a record-breaking quarter for sustainable fund inflows (at over $180bn), followed by a gradual decline in 2Q and 3Q of 2021. Globally, inflows into sustainable funds were $142.5bn in 4Q21, up 12% from 3Q21 and up ~7x compared to 1Q19. Active funds accounted for roughly two-thirds of flows in Europe, while passive fund flow represents 62% of total flows in the U.S. Assets in sustainable funds increased to $2.74tn, up 9% from 3Q21 and up 53% year-over-year. Robust ESG investment product development contributed to this growth, with 266 new sustainable funds launched globally in 4Q21. 60% of these new launches emanated from Europe. The U.S. and Japan came in a distant second and third, with 45 and 24 new sustainable fund launches, respectively.

Roughly one in every sixteen dollars invested in the U.S. in 2021 was ESG-related. We note this number is down significantly from one in every four in 2020 due to strong fund flow into value stocks and fixed income in 2021, with these asset classes generally having fewer sustainable product options. Despite the underwhelming fund flow in the U.S., Europe is continuing its strong trajectory and saw sustainable funds accounting for 58% of overall fund flows. Furthermore, it continues to be our view that if two equities under non-ESG integration processes "screened" identically around expected returns and risks, over time more investors would likely choose to invest in the equity with a better ESG profile assuming all other attributes of the two equities were identical. We highlight an increasing number of European funds have qualified or are seeking to qualify as Article 8 or Article 9 funds. Over time, this is likely to become a crucial criterion for fund selection.

Demand for ESG investing is on the rise due to:

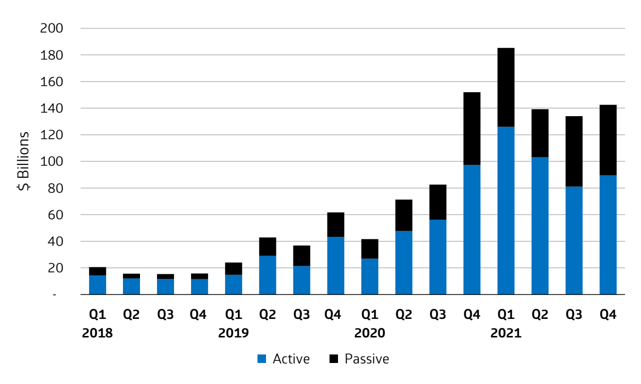
- *Government policies* – evolving government initiatives are prompting institutional and retail investors to allocate capital toward sustainable investments;
- *Demographic shifts* – younger investors are seeking impact and ESG investments as the core of their portfolio; and
- *Evolving view of risk* – evolving data and frameworks can identify risks and opportunities.

Figure 1 - Quarterly Global Sustainable Fund Flows – By Leading Regions ($ Billions)



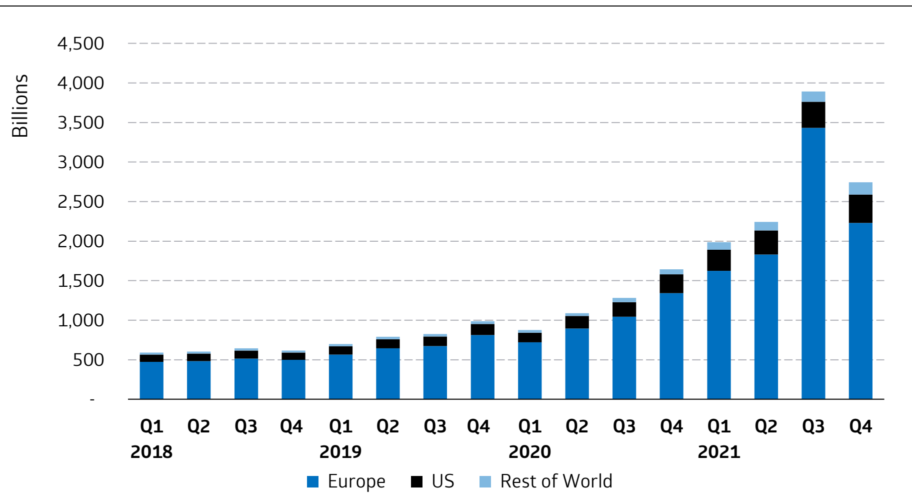
Source: Morningstar, Cowen and Company

Figure 2 - Quarterly Global Sustainable Fund Flows – Active and Passive ($ Billions)



Source: Morningstar, Cowen and Company

Figure 3 - Quarterly Global Sustainable Fund Assets – By Leading Regions ($ Billions)



Source: Morningstar, Cowen and Company

Companies Beginning To Treat ESG Trends As An Opportunity And Not A Risk (Cowen Research)

Given societal pressure, government mandates and shareholder activism among many other factors, companies are beginning to treat ESG trends as a strategic opportunity and no longer as a headache or risk. In our view, ESG reporting and associated initiatives present opportunities to build resilience and integrate necessary capital expense projects that are viewed as more compelling when assessed through an ESG lens, particularly as many of these expenses have the potential to generate increased productivity and cost savings if done appropriately. In the U.S., under the Biden administration, the SEC may weigh in and help drive increased transparency around disclosures for ESG criteria. In the meantime, however, investors are pressing ahead and not waiting for mandated disclosures.

In the European Union, advances have already been made around ESG reporting, and we expect nonfinancial reporting requirements for sustainable investment funds under the Sustainable Finance Disclosure Regulation (SFDR), which came into effect on March 10, 2021, on a phased basis (Phase 1). SFDR phase 2 will be deployed on July 1, 2022. The EU also adopted the Corporate Sustainability Reporting Directive (CSRD) on April 21, 2021, which amends the exiting Nonfinancial Reporting Directive (NFRD). The NFRD governs ESG disclosures by large companies (more than 500 employees; the list covers ~12,000 companies). The CSRD extends the scope of NFRD to all companies listed on regulated markets with augmented reporting requirements including digital tagging of information. The international business community has taken steps toward the implementation of standardized ESG disclosure metrics, with the World Economic Forum's universal ESG reporting metric framework the latest development.

Shifting Desire From Investors For Financial Returns And Environmental Benefits (Cowen Research)

The motivation of the very first sustainable investment funds created over 40 years ago was often religious or ethical. Personal values meant funds sought to avoid certain businesses such as alcohol, tobacco, gambling, and weapons, for example. This approach was known as socially responsible investment (SRI) and funds employing this strategy started to proliferate in the 1970s and 1980s. The first socially responsible investment portfolio created was by the Church of England in May 1958.

The early period of sustainable investments in the 1990s was characterized by negative selection criteria. However, the tone of the buy-side started to change toward positive selection criteria and after an investigation into sustainability scoring of equities, traditional valuation methodologies were employed. In the early 2000s, investors became aware that among the many ESG factors, there were also a number of metrics that were highly financially relevant. At this period in time, financial analysis was extended to include environmental, social and governance factors which led to the concept of "ESG integration." In the early 2000s, there was an intense desire to come up with new solutions to combat global climate change challenges. The idea of thematic investing came to the forefront. Themes of these new funds ranged from sustainability themes such as climate change, water scarcity, renewable energy, and forestry. Today, most investors want to better understand the ultimate risks all equities in their portfolio face. Given accelerating climate change trends, some industries are more exposed to increased headwinds relative to others, ranging from access to capital issues and available resources to increased regulations. Investors are not only aiming for a financial return, but also want to see quantifiable data on the impact their investments are having on society or want to better understand the risk factors associated with the impact of a changing climate on their investment portfolio. We see ESG investing as becoming self-fulfilling: regardless of a fund's mandate, all funds are watching ESG. This is because if they know a company is scoring poorly, ESG funds will have to remove them from their portfolios. This, in turn, impacts fund flows and stock performance. And the opposite is also true. So even non-ESG funds monitor ESG and sustainability issues to be pragmatic.

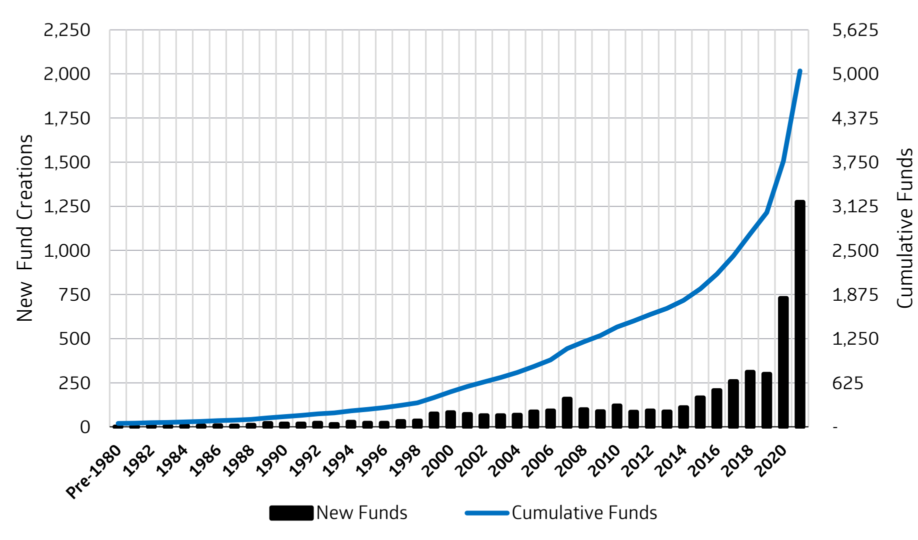
Figure 4 – Four Mainstream Approaches To Sustainable Investing

Approach	Description
1) ESG Investing	Analyze companies based on ESG business practices to identify risks and opportunities. This approach can be accesses by selecting companies with relative ESG outperformance
2) Screened Investing	Reduce exposure to companies or sectors (e.g. fossil fuels, firearms, or tobacco) that present risk or compromise values.
3) Thematic Investing	Identify companies that address a specific ESG issue such as renewable energy, diversity or accounting transparency
4) Impact Investing	Investments with the dual objective of generating measurable societal and/or environmental impact and a level of financial return.

Source: Cowen and Company

Demand for investments that offer positive environmental benefits alongside financial returns has skyrocketed in recent years, and the supply of thematic products, such as green bonds, sustainability-linked loans, and ESG funds (both active and passive) are surging in response. The rise of ESG investing can also be understood as a proxy for how investors and societies are changing, and how concepts of risk assessment and valuation are adapting to these broader societal changes.

Figure 5 – New And Cumulative ESG Funds



Source: Bloomberg, Cowen and Company

ESG And Sustainability – Key Themes For 2022 And Policies We Are Watching (John Miller, Cowen Washington Research Group)

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Key Themes

We believe four key themes will play a major role in ESG discussions through 2022:

- **Deep Links Between Climate Change, Fossil Fuels, And Geopolitics** – Russia's brutal invasion of Ukraine has served to unmask the geopolitical and economic power of fossil fuel exporters, bringing these linkages into everyday conversation. Russia's dominant position as an exporter of gas and oil to the EU undoubtedly played a role in driving the assumption that the EU would be reluctant to respond even to highly aggressive actions given the region's reliance on Russia as a primary fuel source. However, despite the grind higher in fossil commodity prices, we do not anticipate a major re-assessment of oil and gas in ESG investment frameworks. Rather, we anticipate ESG to maintain its negative outlook on fossil fuels while continuing to press for an acceleration of renewable alternatives. Indeed, the need for climate change and energy security achieved through decoupling from fossil fuels is likely to emerge as the primary argument to bolster ESG investing. Further, we expect a lumpy, but steady increase in impactful climate-focused regulations, laws, and policies targeting power generation, transportation, and industrial emissions.

- **Investor Demand For Fund-Level Impact** - Historically, impact investing has been identified as one pole of the ESG spectrum where asset managers accepted concessionary returns in exchange for clearly identifiable

environmental or social 'impacts.' We believe this positioning is rapidly changing. With a rush of new entrants into the ESG management space, investor questions related to fund comparisons, data transparency and the risk of 'green washing' have elevated the role of fund-level impact reporting. At the same time, ESG investors are arguing more forcefully that the historically preconceived negative relationship between impact and returns in the short-, medium- and long-term is inaccurate. Going forward, we anticipate funds which self-label as ESG or sustainability oriented will need to report (on an ongoing basis) comparable quantitative metrics demonstrating environmental, social, and governance performance metrics. Metrics are likely to go beyond simple GHG emissions/revenue data points, and include wider measures of impact, including attempts to monetize the positive effect of employment, health care, and renewable energy. Outside investors will use these metrics in assessing the fund's impact relative to the broader market, and in assessing the yearly trajectory of fund holdings.

- **Increased Disclosure Requirements** – Mandatory ESG disclosure standards are set to tick higher. On January 1, 2022, the first of the EU Taxonomy Regulations (HERE) kicked in, requiring companies to report on taxonomy-aligned activities regarding climate change mitigation and adaption. In the U.S., the SEC is now set to debate initial rules which propose much delayed corporate disclosure requirements, beginning with climate, before shifting to social and governance topics. Further, we anticipate ongoing shareholder pressure for continued 'voluntary' disclosure - even in the absence of regulatory requirements. All in, expectations for ESG disclosure from public and private companies are set to rise.

- **Focus On Assessment Of Human Capital Performance** – Successfully assessing a company's 'S Pillar' performance has remained elusive. ESG rating firms tend to overly rely on policy statements (which are often lacking or unavailable) when generating social scores, as opposed to identifiable metrics (*e.g.*, CO2 emissions) which are often unavailable. Solving this data gap is paramount, particularly for companies with limited climate risks/opportunities, including technology, healthcare, and financials. Human capital is the driver of ESG value creation at these companies. Until human capital can be properly assessed, ESG frameworks are likely to remain less valuable in these sectors. We see ongoing efforts to meet this demand, with divergent proposals to assess unstructured data, external survey data, or deep disclosure of more traditional metrics such as turnover and employee diversity.

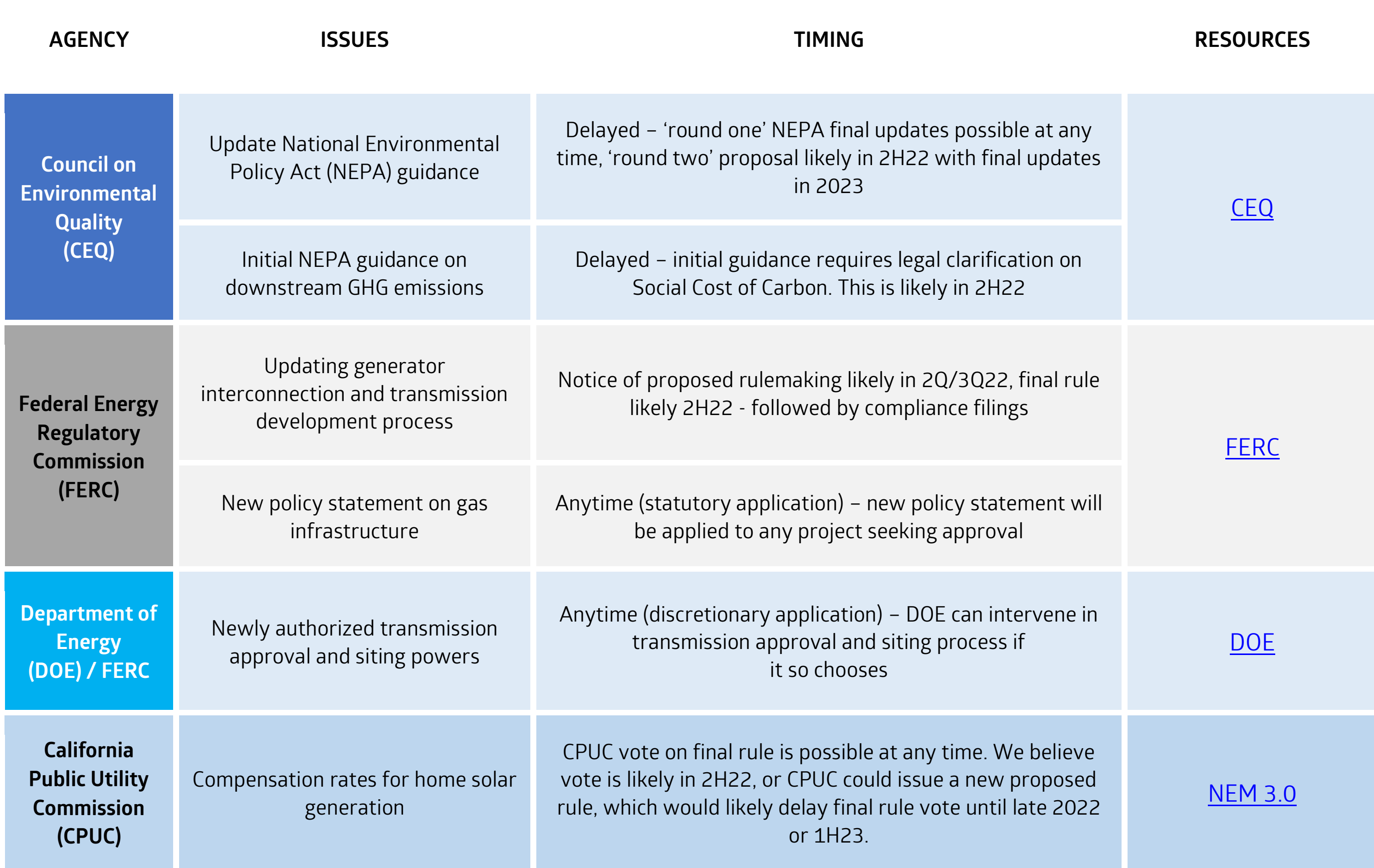
Key Sustainability And ESG Policies We Are Watching – Keeping Focus On Climate

We continue to believe the most investible policy area – from an ESG perspective – remains climate-focused. DC policy is likely to be largely framed by the ongoing war in Ukraine, increasing energy price inflation, and the upcoming midterm 2022 elections. We, therefore, highlight three key energy-related policy themes, including a renewed focus on energy infrastructure, an increase in regulatory actions targeting sector-specific GHG emissions, and the rapidly closing window for Congress to act on President Biden's social and climate legislation.

- **Energy Infrastructure Policy** – Increasing consumer prices for gasoline, electricity, and home heating have refocused policymakers on the interconnected system of regulatory structures which assess and approve energy infrastructure. War in Ukraine has heightened this focus, with select

members of Congress calling on the president to leverage the Defense Production Act (DPA) to facilitate the construction of gas pipelines, increase fossil fuel production, or build electric transmission capacity. Advocates of a fossil energy future and a renewable energy future both agree that existing infrastructure policies are slow, opaque, and excessively vulnerable to legal challenges from states, landowners, and advocacy groups. We expect the Biden administration will introduce reforms, but believe that initial actions are unlikely to provide meaningful short-term relief and are also not likely to favor fossil infrastructure. Through 2022, we will watch for updated National Environmental Policy Act (NEPA) guidance from the Council on Environmental Quality (CEQ), in addition to an initial interpretation on how downstream GHG emissions should be considered. We anticipate FERC will propose new generator interconnection and transmission development rules. Further, we look to see how FERC will employ its new policy statement on gas infrastructure, and if it will require additional emissions abatement tools. Lastly, we will watch to see if the Department of Energy (DOE)/FERC leverages newly granted authority enabling the Federal government to effectively veto state-level objections to electric transmission infrastructure. States are also busy on this front. A central theme being efforts to find the correct incentive level needed to balance completing demands for renewable development, system reliability, and utility bills. California is currently revisiting its rulebook for how home solar systems are compensated through the net energy metering (NEM) process. We believe that California's final NEM 3.0 determination is likely to reduce ownership economics, increase the system payback period, and establish incentives that discourage solar-only systems (i.e., push new systems to include solar and paired storage). This outcome carries political and key stakeholder risk, but we believe is necessary in the long run to control the overall cost of California's energy transition and enable the state's utilities to continue making grid infrastructure developments.

Figure 6 – Key Sustainability And ESG Policies We Are Watching – Energy Infrastructure Policy



AGENCY	ISSUES	TIMING	RESOURCES
Council on Environmental Quality (CEQ)	Update National Environmental Policy Act (NEPA) guidance	Delayed – 'round one' NEPA final updates possible at any time, 'round two' proposal likely in 2H22 with final updates in 2023	CEQ
	Initial NEPA guidance on downstream GHG emissions	Delayed – initial guidance requires legal clarification on Social Cost of Carbon. This is likely in 2H22	
Federal Energy Regulatory Commission (FERC)	Updating generator interconnection and transmission development process	Notice of proposed rulemaking likely in 2Q/3Q22, final rule likely 2H22 - followed by compliance filings	FERC
	New policy statement on gas infrastructure	Anytime (statutory application) – new policy statement will be applied to any project seeking approval	
Department of Energy (DOE) / FERC	Newly authorized transmission approval and siting powers	Anytime (discretionary application) – DOE can intervene in transmission approval and siting process if it so chooses	DOE
California Public Utility Commission (CPUC)	Compensation rates for home solar generation	CPUC vote on final rule is possible at any time. We believe vote is likely in 2H22, or CPUC could issue a new proposed rule, which would likely delay final rule vote until late 2022 or 1H23.	NEM 3.0

Source: Cowen and Company

- **Regulating GHG Emissions** – An economy-wide price on carbon, or renewable energy standard (RES) is not under serious consideration in the U.S., with Congress lacking the requisite majorities on either issue. However, we anticipate the Biden administration will use regulatory powers to introduce new rules targeting emissions from the transportation and power generation sector. Combined, transport and power account for more than 50% of U.S. GHG production. The EPA will be central to this effort. Rules are likely to establish increasingly stringent emissions requirements, demanding operators of fossil-fueled assets make capital investments in abatement technologies, or switch to zero or low emissions resources. Rather than establish a market price for GHG emissions, rulemakings institute penalties for non-compliance, which often increase the overall cost of the energy transition. Further, rulemakings introduce greater long-term policy risk, as they are highly susceptible to political shifts following presidential elections. We anticipate EPA will promulgate a series of new rules establishing tighter GHG emissions standards for Light Duty Vehicle (LDV), along with medium and heavy-duty vehicles under the Clean Trucks Plan. On the power generation side, EPA Administrator Michael Regan has outlined a three-part program, including an announced rulemaking targeting NOx emissions, followed by two additional rules addressing emission from new, and then existing, power plants. Rules targeting new and existing power plants under the Clean Air Act are awaiting guidance from the Supreme Court on the extent of EPA's authority in that space.

Figure 7 – Key Sustainability And ESG Policies We Are Watching – Regulating GHG Emissions

AGENCY	ISSUES	TIMING	RESOURCES
Environmental Protection Agency (EPA)	Light duty vehicle GHG emissions standards	Final Model Year 2023-26 rule issued 2021 - EPA will defend in court (including possible appeal to Supreme Court) through 2022	EPA Light Duty Vehicle Regs
	Medium and heavy-duty vehicle GHG emissions standards	Initial Clean Trucks Plan rulemaking proposed in 1Q122, final rule likely in 2H22; second and third rulemakings likely to follow in 2023	EPA Medium and Heavy-Duty Vehicle Regs
	Power plant emissions	NOx rule proposed in 1Q22, final rule likely in 2H22, new and existing power plant rules require legal clarification from Supreme Court, this is likely in June 2022	EPA Power Plant Regs

Source: Cowen and Company

- **Build Back Better** – Our conviction on the possibility of Congress acting on a scaled-down version of President Biden's flagship social and climate spending BBB bill is low. However, the window for legislative action has yet to fully close, and the transformational nature of the proposal's clean energy and transportation spending requires ongoing attention. From a timing perspective, we see Memorial Day (May 30, 2022) as a soft deadline for Congress to act. After this date, the upcoming summer break and midterm elections (November 8, 2022) are likely to eliminate the possibility of discretionary legislative action. From a structure perspective, President Biden has signaled willingness to scale down the BBB, while retaining ~$500bn in climate and energy spending. Of that value, we see ~$325bn of tax incentives as key. This includes an expansion and extension (10 years) of existing renewable energy production tax credits (PTC) and investment tax credits (ITC), in addition to an expanded EV and EV charging tax credit. BBB would also introduce a new PTC for clean hydrogen (which we view as needed to stimulate nascent green or blue hydrogen production), nuclear power production, and investment in electric transmission capacity. We note that existing commercial nuclear plants are best positioned to capture the proposed nuclear credit. Regulatory roadblocks and timelines for new nuclear, including small modular reactors (SMR), remain challenging. Absent a solution on long-term spent nuclear fuel storage, we are cautious on the likelihood of a near-term change in outlook. While these items all carry varying levels of support within the Democratic party, the ask from Senator Joe Manchin (D-WV) – a centrist – is likely to now include elements of his 'all of the above' energy strategy. Demands for expanded oil and gas leasing, or fossil infrastructure permitting (LNG and gas midstream pipelines), are unlikely to be welcome by the progressive wing of the Democratic party.

Figure 8 – Key Sustainability And ESG Policies We Are Watching – Build Back Better

AGENCY	ISSUES	TIMING	RESOURCES
Congress	Scaled-down version of President Biden's Build Back Better agenda (BBB Act)	Memorial Day (May 30, 2022) viewed as soft deadline, September 30, 2022, hard stop for a reconciliation bill	House Rules Committee

Source: Cowen and Company

Figure 9 - Cowen's Summary Of Sector-Based Winners And Losers Due To ESG/Sustainability Policy In The Next 12 Months

NET WINNERS

- EXISTING AND NEW (PROPOSED) ELECTRICITY INFRASTRUCTURE
- EXISTING AND PRODUCING OIL AND GAS OPERATIONS
- LOW EMISSIONS GAS PRODUCERS
- ZERO EMISSIONS VEHICLE MANUFACTURERS AND SUPPLIERS
- ELECTRIC VEHICLE CHARGING INFRASTRUCTURE
- EXISTING AND NEW (PROPOSED) RENEWABLE ELECTRICITY GENERATION
- PROPOSED CARBON CAPTURE AND CLEAN HYDROGEN PRODUCTION

NET LOSERS

- EXISTING AND NEW (PROPOSED) FOSSIL INFRASTRUCTURE
- NEW (PROPOSED) OIL AND GAS OPERATIONS ON FEDERAL LANDS
- EMISSIONS INTENSIVE OIL PRODUCERS
- INTERNAL COMBUSTION ENGINE MANUFACTURERS AND SUPPLIERS
- GASOLINE AND DIESEL FUELING INFRASTRUCTURE
- EXISTING AND NEW (PROPOSED) FOSSIL ELECTRICITY GENERATION
- EXISTING UNABATED HYDROGEN PRODUCERS

Source: Cowen and Company

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Outperform (1): The stock is expected to achieve a total positive return of at least 15% over the next 12 months

Market Perform (2): The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

Underperform (3): Stock is expected to achieve a total negative return of at least 10% over the next 12 months

Assumption: The expected total return calculation includes anticipated dividend yield

Cowen and Company Equity Research Rating Distribution

Distribution of Ratings/Investment Banking Services (IB) as of 12/31/21

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	694	72.14%	227	32.71%
Hold (b)	260	27.03%	24	9.23%
Sell (c)	8	0.83%	0	0.00%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's equity research rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's equity research ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's equity research ratings definitions. Cowen and Company Equity Research Rating Distribution Table does not include any company for which the equity research rating is currently suspended or any debt security followed by Cowen Credit Research and Trading.

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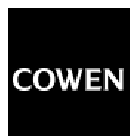

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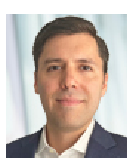

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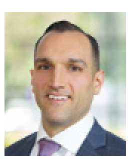

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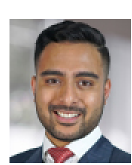

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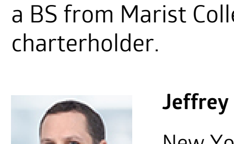

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