RBC Global Asset Management

Climate change and the energy transition

This article is part of a new series based on the results of the 2020 RBC Global Asset Management Responsible Investment Survey. The survey, entitled '[Responsible Investing: Global Adoption – Regional Divide](),' revealed meaningful insights on the considerations of environmental, social and governance (ESG) factors by global institutional investors.

The RBC Global Asset Management 2020 Responsible Investment Survey found that climate change is one of the top ESG issues on institutional investors' minds. To limit the extent of climate change will require a transition in our global energy system – away from fossil fuel-based energy production and consumption such as coal, oil and gas and towards renewable energy sources such as wind, solar and hydropower.

While the energy transition has already begun, to date the speed, scale, and scope of this transition has been uneven and inconsistent across regions and countries. The pace of change is however accelerating - driven by increasing climate regulations, declining costs for renewable electricity, growing demand for power due to electrification, and evolving market expectations.

As the global energy system continues to transform in the years and decades to come, the concept of a just transition is critical, as it recognizes the need to create a bridge from where we are today to an inclusive and sustainable low-carbon future. This transition must be done thoughtfully and in consideration of issues such as energy security and resilience, employment and re-skilling, community transformation and revitalization, poverty alleviation and equality. The energy sector is an important partner in this transition as they have the infrastructure, resources, technology, and the expertise to implement the structural changes required to enable this transition. More and more energy companies are taking steps to address climate risks and position themselves for a low-carbon world. Actions that they are taking include diversifying assets (e.g., investing in renewable energy), selling off at-risk assets, integrating climate costs in capital investment decision-making, adjusting internal price assumptions, increasing investments in negative emission technologies or carbon capture and storage, setting emission reduction targets, and aligning compensation with climate performance.

There isn't always agreement however on the direction and speed of the energy transition. For example, in a recent shareholder vote at Exxon Mobil, one of the world's largest oil and gas companies, investors voted for the appointment of three new board members in place of those recommended by management, due to concern regarding the company's actions to address climate impacts. And in the Netherlands, the courts recently ordered Royal Dutch Shell to slash carbon emissions 45% from 2019 levels by 2030, which may set a precedent for other climate litigation currently underway. According to the United Nations, as of July 2020 there were 1,550 climate change cases filed in 38 countries.[1]

Governments are also increasingly playing an active role by laying out regulatory requirements and expectations for reducing greenhouse gas emissions and enabling the energy transition. With the signing of the Paris Agreement in 2015, over 195 countries committed to limiting global warming to well-below 2 degrees C by 2100, with the ambition of achieving 1.5 degrees C[2]. Under the Paris Agreement, every five years countries must submit more ambitious targets, called nationally determined contributions, which are due this year. In the lead up to the 2021 United Nations Climate Change Conference (COP 26), delayed by one year due to COVID-19, countries and corporations are announcing climate change commitments that seek to align to net-zero emissions by 2050 in the proclaimed "race to zero campaign." To date, over 30 countries have established net-zero emissions targets within policy documents, proposed legislation, or that are already implemented into law. This includes the European Union, United Kingdom, United States, Canada, China and Japan.[4] It's not just governments that are taking action, but companies as well. A recent benchmarking report by Climate Action 100+ found that 52% of the world's largest global emitters have made net-zero commitments for all or part of their operations.[5]

The energy sector will play a key role in global ambitions to reach net-zero emissions by 2050, with the energy transition largely driven by growth in renewable electricity, the electrification of transportation and other industries, and improvements in energy efficiency. According to a recent report by the International Energy Agency (IEA), to achieve net-zero emissions, solar and wind power alone will need to account for 70% of global electricity generation by 2050.[6] In 2020, the share of renewable power in global electricity generation was already 29%, and is expected to grow by a further 7% in 2021, with almost half of that increase coming from China, followed by the United States, European Union, and India.[7] Growth in renewables comes as the cost of new solar and wind installations have fallen. Over the past ten years the price of electricity from renewables has decreased by 89% for solar power and 70% for onshore wind power.[8] In fact, it has been estimated that by 2030 renewables will become cheaper than existing coal and gas in most regions.[9] The rise of renewable electricity generation will require a parallel increase in electricity system flexibility, demand response, energy storage and more to ensure the reliability of electricity supply.

The electrification of transportation and improvements in energy storage are additional drivers of the energy transition. Progress is moving rapidly due to increasing government incentives and regulations for clean transportation, the reduction in costs of lithium ion batteries and technology improvements, and increasing adoption of electric vehicles (EV). To date, 17 countries have announced a ban on the sale of internal combustion engine (ICE) vehicles (with timelines between 2025 and 2050) including Canada, Norway, France, and Spain as well as a number of U.S. states.[10] In late 2020, China joined other nations by announcing that as of 2035, half of new cars sold need to be electric, plug-in hybrid or fuel cell vehicles – they currently account for about 5% of the new car market.[11] Not too surprisingly, spending on electrified transport has also increased, from USD $65.4 billion in 2016 to USD $139 billion in 2020, with Europe leading the way.[12] While a lack of EV infrastructure and the long lifespan of legacy ICE vehicles continue to hamper adoption, it is estimated that the global EV adoption rate may reach 10-12.5% by 2025.[13]

Climate change and the energy transition underway impact economies, markets, and societies, posing both financial risks and opportunities for issuers and investors. It is for this reason that RBC Global Asset Management (RBC GAM) has published Our approach to climate change, which sets forth the commitments and actions we are taking to fully integrate climate change into our investment processes, conduct thoughtful proxy voting and engage with issuers on climate-related issues, and provide clients with climate solutions, insights and reporting that meets their needs. In 2021, we published our first annual climate report, which aligns with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), available here. As active investors, we recognize the importance of our role in the climate change conversation and the transition to a low-carbon economy.

1 The UNEP Global Climate Litigation Report: 2020 Status Review. Link
2 The Paris Agreement, United Nations Climate Change. https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement
3 United Nations Climate Change: https://unfccc.int/climate-action/race-to-zero-campaign
4 Energy & Climate Intelligence Unit: https://eciu.net/netzerotracker
5 Climate Action 100+. https://www.climateaction100.org/news/climate-action-100-issues-its-first-ever-net-zero-company-benchmark-of-the-worlds-largest-corporate-emitters/
6 IEA, Net zero by 2050, A roadmap for the global energy sector, May 2021. Link
7 IEA. https://www.iea.org/reports/global-energy-review-2021/renewables
8 Source: Lazard Levelized Cost of Energy Analysis. Version 13.0. OurWorldinData.org
9 Source: McKinsey Energy Insights' Global Energy Perspective, January 2019
10 The Driven. https://thedriven.io/2020/11/12/the-countries-and-states-leading-the-phase-out-of-fossil-fuel-cars/
11 Electrek. https://electrek.co/2020/10/27/china-plans-2035-gas-car-ban-that-doesnt-actually-ban-gas-cars/
12 Source: Bloomberg NEF
13 S&P Global Platts: https://www.spglobal.com/platts/en/market-insights/latest-news/metals/102819-global-electric-vehicle-adoption-rate-around-10-125-by-2025-lme-seminar

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