The Future is Greener

May 2023

Rose Marcello, MBA, CFA
Senior Director, Client Portfolio Manager
iA Global Asset Management Inc.

Jason Parker
Vice-President, Fixed Income
iA Global Asset Management Inc.

The energy industry and our economic system are at a critical juncture. Disruption to the world's ecosystem caused by greenhouse gas emissions and the attendant rise in temperatures has compelled the global community to recognize the need to materially transition away from a dependence on fossil fuels over the near to medium term, with net-zero emissions set to become the standard by 2050.

The dramatic shift in methods of energy generation required to achieve such a lofty target is nothing short of transformational for the global economy and the manner in which productive capacity is managed. A successful outcome will require an all-hands-on-deck effort, where capital providers, industries, and policymakers are all at the table to facilitate a just and smooth transition.

In this paper, we begin with an overview of the key factors driving the energy transition. We then cover the challenges faced by companies looking to raise capital to fund their transition strategies, as well as some of the value-creating opportunities we see across industries. We conclude with some thoughts on the specific steps we as investors can take to facilitate meaningful change.

The Drive Towards Energy Transition

Geopolitical

The war in Ukraine has focused attention on energy security to a degree not seen since the energy crisis of the 1970s. The immediate energy needs of the next couple of years are being balanced by the necessity to create a more nationally secure energy infrastructure while at the same time accelerating the shift towards renewables.

Social

There is a broad social consensus in favour of renewable energy that should help overcome structural and transitory obstacles to the low-carbon transition.

For example, recent inflation has caused concerns around the cost of conversion to renewables and greener energy. We believe the convergence of national energy security concerns with an entrenched global commitment to a greener future will likely offset any percolating short-term nationalistic fervour, although pockets of volatility may result. Energy and economic security are today inescapably intertwined and conceptualized in the context of answers for tomorrow.

Policy

Social pressure has led policymakers to make the fight against climate change a key priority. For instance, the recently passed Inflation Reduction Act in the U.S. promotes and subsidizes many sectors operating in clean and efficient energy. The latest Canadian budget has also made clean energy a primary area of focus.

Many feel that industrial policy does not yet go far enough towards incentivizing the transition to a net-zero economy. Yet, policy measures are clearly moving in the same direction across many jurisdictions as the urgency to achieve energy security is now being united with the goal to enhance environmental safety.

Investors

Once a niche in the asset management industry, sustainability-focused investing has seen exponential growth over the past 10 years. Facing ESG-driven pressure from both institutional and retail investors, public companies in most sectors and industries are finding it increasingly important to commit to sustainability as a way of attracting capital.

Challenges & Opportunities of the Energy Transition

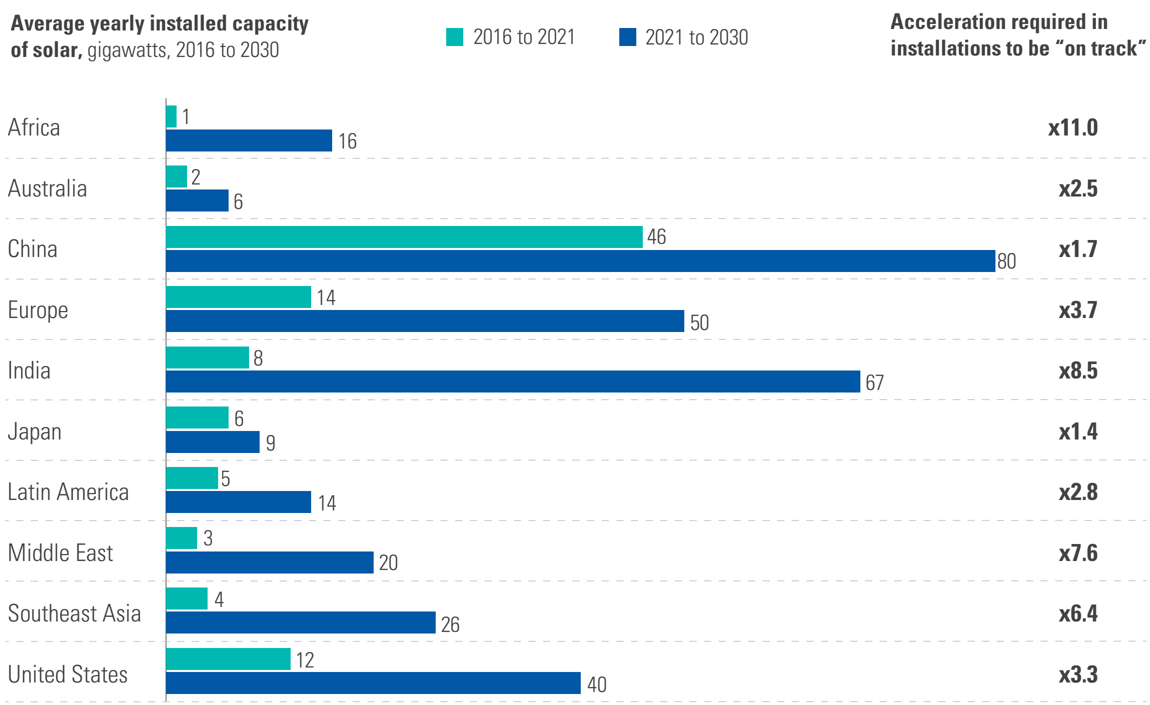
Economic

The redrawing of the geopolitical map in the wake of Russia's invasion of Ukraine is encouraging some lesser-developed countries to take advantage of newfound opportunities for fossil fuel and commodity supplies that were previously unavailable or uneconomical. For example, the previously unviable East African Crude Oil Pipeline running through natural parks in Uganda and Tanzania is now seen as viable, even though the 1500km pipeline will need to be heated by electricity to move the type of heavy oil being transported.

Many developing nations – which stand to bear the brunt of climate change's adverse consequences – do not agree with the prevailing narrative on how to best address the climate crisis. The divide between developed and developing nations – and the profound economic disparities at the heart of that divide – represent one of the greatest impediments to achieving a unified approach to combating climate change through energy transition.

But even in developed economies such as Canada, there are challenges stemming from the economic and social cost of the transition. Large swaths of our economy are dependent on the oil and gas and mining industries, so abruptly stopping production is not economically feasible. Significant investments and government support will be needed to reskill and retool workers, as well as help entire sectors develop and execute on a sustainable transition plan. Some have also recently acknowledged that the transition will be inflationary and must be accounted for within fiscal and monetary planning.

The acceleration in renewable-energy installations required to achieve commitments varies among regions



Source: McKinsey, 2022.

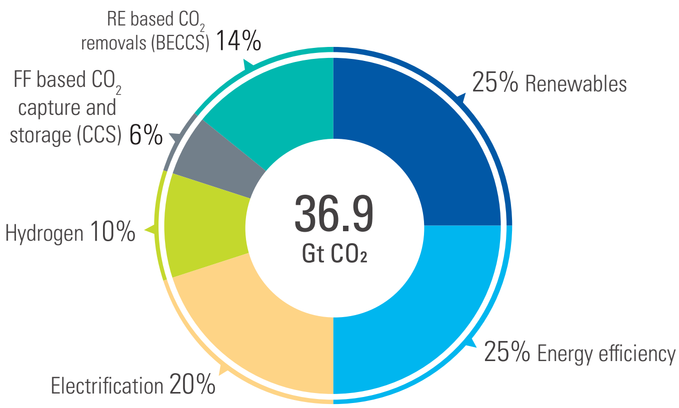
Science and academia

Businesses now have access to data as well as strategic and operational support in designing science-based targets and plans for their energy transition strategies. This information raises the level of comfort and trust of investors, who must analyze and assess transition targets for a variety of industries and economic sectors that have diverging profiles and unique challenges.

Technological opportunities

Onshoring has been a major theme post-pandemic, and the trend extends to green technologies. China will certainly remain a leader in many areas of renewables production, but the alignment of industrial development across regional lines, such as the EU and North America, could accelerate the economic viability of many emerging green methods of energy production in those jurisdictions, quickening the momentum.

Reducing emissions by 2050 through six technological avenues



Source: International Renewable Energy Agency (IRENA), 2022.

Developments in areas such as quantum computing and advanced material production are rapidly accelerating the evolution of technologies driving progress towards net-zero 2050. Movement towards greener technologies entails the kinds of value-added jobs countries are seeking to promote, albeit possibly at the expense of employment in fossil fuel extraction and related industries. With greater attention being placed on greener technologies, it is likely that associated changes will be measured in years rather than decades or centuries.

Canada is well positioned to leverage both its abundant natural resources and its technological expertise to benefit from the growth of renewable energy. For example, Canada is one of the very few places in the world capable of producing all the main metals and minerals needed for electrical batteries. In 2022, Canada was second only to China in the global ranking of battery-producing countries. Aside from its wealth in the most needed raw materials (lithium, nickel, aluminum, and copper), Canada's supply chain for producing battery cells is very sustainable due to ample availability of renewable energy and strong environmental regulations on mining.

Canada is also among the top 10 hydrogen producers in the world. Aside from 'clean' hydrogen production, combining Canada's carbon capture capacity with hydrogen produced from fossil fuels and coal represents a great opportunity if the production cost can be lowered. Indeed, Canada is at the forefront of the global carbon capture industry, with four projects up and running. In June 2021, the five major Canadian oil sands producers launched the Oil Sands Net Zero Alliance, creating a carbon capture hub in Fort McMurray and Cold Lake. Later that month a new pipeline network collaboration was announced that will transport CO2 from points of emission to sequestration. The cluster of emitters in proximity, abundant geological storage, industry expertise and strong regulatory regimes for transportation and storage give Canada tremendous advantages when it comes to carbon capture, usage, and storage.

Sustainable capital markets

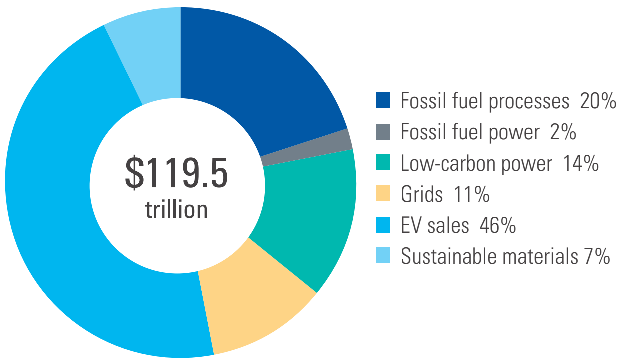
Over the past decade, it has become much easier to attract capital to sustainable projects. Most larger banks and consulting firms now have sustainable finance groups that partner with clients seeking to have a positive impact. Services typically include advising and offering solutions on ESG best practices in corporate strategy, capital expenditures, carbon allowances and offsets, structured investment solutions, and capital raising.

The growth of sustainable finance across global capital markets was especially impressive during the pandemic. Sustainability-themed investment products were up by more than 60% year-over-year in 2021, reaching US$5.2 trillion. However, this represents only about 4% of the market, so there is still significant opportunity for growth.

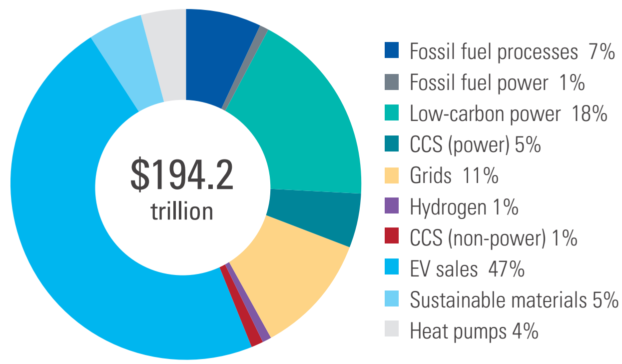
Newly introduced regulations for investment products, more detailed ESG auditing and reviews and the generally deeper focus of investors on the investment processes of ESG or sustainability-labelled products have fostered positive changes in the industry. The push for standardized reporting practices that will allow for more straightforward comparison is another expected development that would serve as a powerful catalyst in the investment industry.

Breakdown of global investment volumes

Economic transition scenario

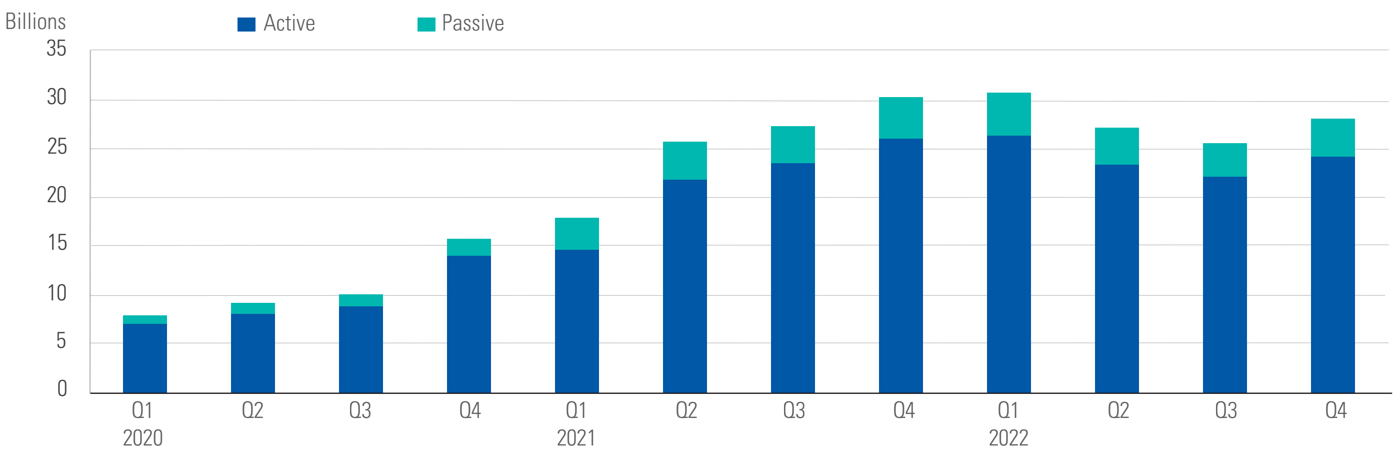


Net-zero scenario



Source: Bloomberg, 2022.

Sustainable fund assets in Canada



Source: Morningstar Direct, Manager Research. Data as at December 2022.

What's next?

The global energy transition represents a unique opportunity for investors. As industries are hard at work researching and developing new technologies and processes, established and looming regulations have shortened the timeline to viability and commercialization. Furthermore, previously profitable sectors will see their bottom lines under pressure as they face fines and/or mitigation or remediation costs. It now becomes essential for investors to review their portfolio allocations and exposures to assess their transition risk, preserve long-term value as well as capitalize on the low-carbon economy.

This evolution is reflected in iAGAM's approach to sustainable investing. Going beyond the simple integration of ESG factors, we now review our portfolios' long-term exposure to climate change as well as transition risks and opportunities, ensuring they are optimally positioned for the future. In 2022, we launched our first Sustainable Canadian Equities mandate, which seeks to deliver long-term capital appreciation by investing in both sustainable corporate leaders and thematic allocations for the Canadian context, allowing the portfolio to capitalize on themes such as carbon capture, green metals and mining, and energy efficiency. Our U.S. Thematic Innovation mandate is another example of how our portfolios allow for exposure to innovative companies that will be catalysts for change and progress in a low-emission economy.

A key pillar of our approach is our active program of shareholder engagement. Our proxy voting and advocacy activities with investee companies are aligned with our sustainable investment policy and best practices. We also work with other investors and engage with regulatory authorities to uphold and achieve ambitious goals and standards. It is through that collaboration that we will be able to achieve a fair and just transition within a reasonable and achievable timeline.

About iA Global Asset Management

A magnet for top investment talent, iA Global Asset Management (iAGAM) is one of Canada's largest asset managers, with over $100 billion under management across institutional and retail mandates. We help investors achieve their long-term wealth creation goals through innovative investment solutions designed for today's complex markets. We are building upon our historic success, supporting the growth of our core strengths, and exploring innovative ways to meet investor needs. We are rooted in history and innovating for the future. Our experienced portfolio managers use a proprietary investment methodology, rooted in iAGAM's unifying commitment to strong risk management, analytical rigour and a disciplined, process-driven approach to asset allocation and security selection.

Rooted in history, innovating for the future.

(23-0797) 04/23