

Insights into responsible investing



Wealth
Management

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Anti-greenwashing regulations: Improving transparency and accountability in environmental claims

RBC Wealth Management's 2024 U.S. client survey showed that interest in responsible investing continues to grow. One key takeaway is the importance of positioning and using plain language when discussing investment choices. Respondents favor "responsible investing" far more than any other term or phrase.¹

Transparency issues were cited by respondents as one of the top barriers to responsible investing as the issue of "greenwashing" is a growing concern. Greenwashing is often defined as misleading or inaccurate statements about the performance or environmental benefits of a product, practice, firm or investment.

With increased investor interest in responsible investing, we believe companies need to remain transparent and accountable. To that end, several countries are tightening regulations and industry disclosure frameworks to combat greenwashing, protect investors and encourage corporate responsibility.

Global examples of anti-greenwashing regulations

United States

Anti-greenwashing efforts in the U.S. have largely been driven by the amendments made by the Securities and Exchange Commission (SEC) in 2022 to the Investment Company Act known as the "Names Rule" to prevent misleading fund names. More specifically, the Names Rule requires that any investment product associated with a thematic focus must be at least 80% comprised of assets of the same type that the name suggests. This rule extends to any thematic fund, including those with environmental, social, and governance ("ESG")-related objectives.²



Additionally, the amendments require companies to update funds' prospectus disclosures to include the definition of the terms used in the fund's name as well as the criteria that the fund uses to select the investments that the term describes. This rule aims to help ensure that, just like with any other product, the investor fully understands the product and is aware of the fund's objective and any associated risks.

Canada

A similar stance has recently come to fruition in Canada. As of June 2024, Bill C-59 came into effect with new additions to Canada's Competition Act to address the risk of greenwashing.³ Explicit provisions now require companies to substantiate any environmental, climate, social and ecological claims with the proper tests. The regulation extends beyond the products and product names, and affects any claims about business, brand,

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Transition from brown to green operations

The responsible investing space can be confusing. Sometimes the words “green” and “brown” come to mind when describing certain activities. “Green” solutions are often considered those that are less carbon-intensive such as clean or renewable energy and electric vehicles (EVs), while “brown” solutions are higher carbon-intensive activities like oil production and gas-powered vehicles.

In the simplest form, a transition from brown to green involves the shift away from traditional fossil fuels toward lower-carbon sources to reduce greenhouse gas emissions, the planet-warming emissions that trap heat in the atmosphere.⁶ Such thematic investing is called transition investing as it focuses on investing in “greening” companies whose business models are traditionally brown and not currently adaptable but have a clear runway for change, which could lead to a more agile business model in the future.

As companies prepare and adapt for future policies and evolving consumer preferences, the topic of transition investing continues to gain interest from investors.⁷ Moving from higher carbon-intensive operations to those that are lower is no small task, and it requires a significant amount of funding and support, especially for the brown industries looking to decrease their carbon emissions.⁸

From our vantage point, there is an opportunity to capture the value creation from those that are able to navigate the climate transition broadly.

Oil and gas

Companies in the oil and gas industry are higher carbon emitters; however, due to increased access to capital, they have the opportunity to invest in cleaner, lower-carbon production and green technologies like carbon capture and sequestration that are designed to trap the planet-warming emissions.⁹ These investments in lower-carbon technologies can have an impact on higher-emitting companies as they work to transition their businesses and help find potential solutions to the long-term issue of lowering global emissions in absolute terms.

According to the International Energy Agency (IEA), the oil and gas industry invested around \$20 billion in “clean energy” in 2022, 2.5% of its total capital spending, and is looking to increase that investment to 50% of the industry’s overall capital spending by 2030. The first step of the transition includes reducing the industry’s own emissions, which accounts for 15% of global energy-related greenhouse gas emissions, per the IEA. Secondly, it involves tracking and preventing future methane leaks from the oil and gas industry.¹⁰

Automotive

When it comes to lower-emission vehicles, there are electric and hybrid models. Battery electric vehicles are powered solely by energy stored in their batteries, and there are no tailpipe emissions generated from use. Hybrids, on the other hand, contain both an internal



AI through an ESG lens

While artificial intelligence (AI) has been around for a number of decades, recent developments in the space have driven a dramatic increase in worldwide AI investment over the last few years. Statista has projected that the size of the global AI market will increase nine times by 2030.¹⁵

Investors are drawn by the allure of this cutting-edge technology and the potential benefits it offers to companies: enhanced efficiency, new capabilities and value creation. Historically, a similar influx of funds into innovations was evident during the railroad boom, the dot-com surge and the rise of blockchain technology and cryptocurrency.

However, much like in the aforementioned historical examples, we believe the AI revolution also poses considerable risks that cannot be overlooked. As AI evolves, it is crucial for investors to be aware of any potential downside. This is where incorporating ESG factors into the analysis may prove beneficial, in our opinion. Such an approach can help to properly identify any ethical or sustainability risks so that mitigating factors can be implemented.

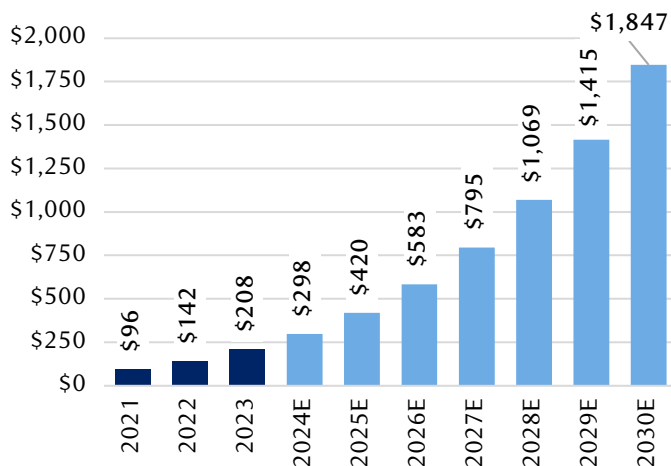
As per research conducted by RBC Capital Markets, the growing adoption of AI touches a wide range of ESG topics. It amplifies several existing concerns like data security, competitive behavior, energy management and more.¹⁶

Environmental factors

Emissions and electricity use

AI systems are developed and hosted through data centers, which require significant amounts of electricity to process and analyze data. This puts increasing pressure on electrical grids, which, if based on the use of fossil fuels, ultimately leads to an increase of emissions. Top AI companies have already reported more than a 30% increase in emissions in 2023 compared to 2020 values, mostly attributed to data center expansion. According to the IEA, training a single AI model uses more electricity than 100 typical U.S. homes consume in an entire year.¹⁷

AI global market size, 2021–2030 (USD billions)



Source - Statista; 2024 and later are estimates



Growing the grid: Lithium & batteries

The energy transition is in full swing, and electricity generation continues to shift from coal to lower-emissions sources. Much talk goes into the need to decarbonize and electrify energy usage, but less talk goes into growing the electricity supply available. “Growing the grid” represents the increasing demand for electricity and the support and growth needed for the energy grid.²⁵

As demand for electricity increases, it may require electricity producers to supply more than ever before. Implied in the energy transition is the demand for an assortment of metals and minerals needed to facilitate these aspirations. An increasingly important component of the energy transition is the battery, specifically the lithium-ion battery.

What is lithium?

Lithium is the least dense metal and solid element, known for its highly reactive and flammable properties. Lithium can be paired with other elements, such as cobalt to stabilize voltage and nickel to increase energy density, which better stores energy for battery applications. Combining these minerals strengthens and better positions lithium for reliable battery storage, powering the growing number of electronic devices and vehicles.

Batteries are the number one product use for lithium today, but demand for lithium is increasing as it is required for larger and more extensive applications. While common in smartphones and other consumer electronics, lithium production may need to rise to meet the demand for batteries in EVs and utility-scale electricity storage solutions, thereby stabilizing grids by bridging electricity

supply and demand. An example of rapidly growing use for lithium batteries is in grid-scale energy storage.

Where are batteries used?

According to the 2023 IEF Critical Mineral Outlooks Comparison report, EVs and battery storage technologies have passed consumer electronics to become the largest consumers of lithium. EV popularity has grown over the past decade and EVs are becoming an alternative to the common internal combustion engine vehicle. On a global scale, approximately 60% of all new electric car sales in 2023 originated from China, as reported by the IEA.

There are two main types of EVs: battery electric vehicles (BEVs) and hybrid electric vehicles (HEVs). BEVs are powered solely by energy stored in their batteries and there are no tailpipe emissions generated from use. HEVs, on the other hand, contain both an internal combustion engine and a battery system to lessen the use of the engine.

Lithium: The new oil?

According to the IEA’s data and its Stated Policies Scenario (STEPS) forecast, the global percentage of EV sales is projected to increase from 18% today to 44% by 2030, resulting in approximately 41 million electric cars on roads globally. This level of demand would require mining a significant amount of new lithium and the creation of more mines by 2030.

The energy transition emphasizes a handful of critical minerals. The growth of renewable electricity generation

Greenwashing continued from page 1

operations and other statements. One of the emerging concerns with the Bill C-59 additions is the lack of clarification on what tests and evidence would be sufficient.

UK

The Financial Conduct Authority (FCA), one of the main regulatory bodies in the UK, designed the Sustainable Disclosure Requirements (SDR) to improve transparency and trust for sustainability-related products.⁴

In November 2023, the FCA published its final guidance on SDR and investment labels that will come into effect in phases. The anti-greenwashing rule took effect in May 2024, requiring that all sustainability claims and references are fair, clear and not misleading.

The voluntary labeling system went into use in July 2024, which regulates labels for funds that specifically seek a sustainability objective. These labels include Sustainability Focus™, Sustainability Improvers™, Sustainability Impact™, and Sustainability Mixed Goals™. Companies anticipate additional guidance from the FCA on naming and marketing rules to come into force at the end of 2024.

The impact on responsible investing

Many countries around the world have been in discussions to create and potentially adopt similar anti-greenwashing policies. Anti-greenwashing concern is global in nature, and although these regulations are a step in the right direction, in our view, more progress is needed to achieve clarity and consistency among global regulations.

Potential consequences of greenwashing include penalties; loss of reputation, consumer trust and sales; and deterioration in a company’s performance. Such pressure might encourage companies to pay closer attention to their marketing practices and disclosures. Several companies already obtained limited third-party

assurance from independent auditors on ESG and climate reports to help ensure transparency.

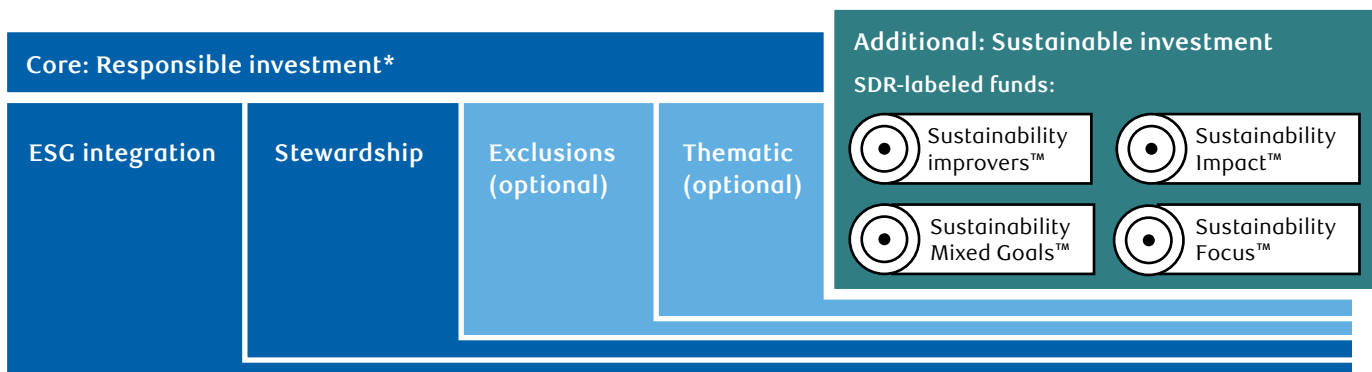
The release of such regulations can help improve market integrity, equipping investors with improved quality of data and availability of information. While increased regulation may require additional time and costs for companies, it can help guide them in a more confident and transparent manner regarding investors interested in the responsible investing space.

Greenhushing: Silent treatment to anti-greenwashing efforts

As governments act to combat greenwashing with new regulations, a new risk has emerged in response. The practice of “greenhushing” relates to the fear of disclosing environmental-related information.

In particular, the release of Bill C-59 in Canada has resulted in fossil fuel companies removing ESG-related content from their public sites as a mitigation to non-compliance.⁵ The reaction is caused by the vague nature of the statement found in the bill to “substantiate claims according to international methodology.” For example, The Pathways Alliance, a group of Canada’s largest oil sands producers, removed all online content about environmental goals due to “significant uncertainty” over the C-59 legislation. Companies await further guidance on what tests and methodology would be considered acceptable as per the regulation.

It is important to highlight that greenhushing might slow down progress toward goals. For example, if companies do not report the progress toward their ESG goals, it is harder for the public to keep them accountable. Further clarification of the aforementioned regulations can help strengthen transparent reporting requirements for companies and provide more clarity for investors.



* For discretionary investments.

From brown to green continued from page 2

combustion engine and a battery system to lessen the use of the engine. This is an example of transitioning to a lower-emissions solution that produces less carbon emissions. Further adoption is still needed when it comes to EVs as charging anxiety, battery range and high price tags are some of the key obstacles for many consumers.

As per McKinsey’s research, the automotive industry can decrease its material production emissions by 32% while decreasing costs.¹¹ Some techniques to reduce emissions include the use of recycled aluminum, new smelting technologies, lower-emissions electricity and hydrogen-based steelmaking.

Business operations

Not only is it important to consider the direct emissions from the end-product, but we think it is also important for companies to be conscious of their own business operations and look for ways to transition to more environmentally sustainable practices.

For example, heat pumps are more environmentally friendly than traditional air conditioning and gas-powered furnaces. The IEA estimates that heat pumps have the potential to reduce global carbon dioxide (CO2) emissions

by at least 500 million tonnes in 2030—equal to the annual CO2 emissions of all cars in Europe today.¹²

How investors can contribute to the transition

According to Bloomberg, global investment in the energy transition hit \$1.8 trillion in 2023, up 17% from the previous year and a new record.¹³ Boston Consulting Group points out that an \$18 trillion capital gap still exists between current company commitments and the investments needed for alignment with net-zero goals in 2030.¹⁴ Electricity and end-use sectors account for 90% of that shortfall. Some companies have already created investment products and solutions that aim to capitalize on such transitional opportunities.

From a risk perspective, governments might release more regulations and safeguards on the emissions limits and increase disclosure requirements. Companies that are on a transitional path may be better equipped to meet the new policies and decrease potential risk of litigation and administrative penalties for noncompliance. The brown-to-green transition is not only beneficial from an environmental sustainability standpoint, in our view, but it may also help investors meet their investment goals.

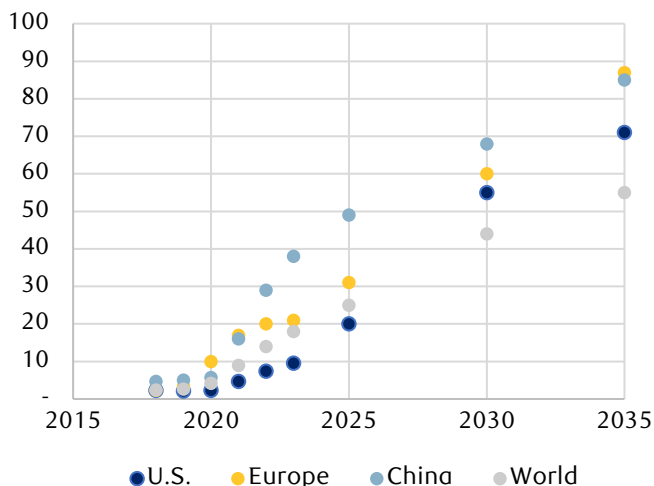
Lithium and batteries continued from page 4

and EV adoption highlights the increasing importance of energy storage, an area where lithium plays a major role. Lithium’s ability to store energy for later use draws parallels to oil; as a larger percentage of passenger vehicles shift to electric power over the coming decades, oil might begin to play a smaller role in energy security.

It is important to recognize some of the impacts that may occur during this transitional period. For example, the environmental impacts of mining critical minerals and metals, maintaining a sufficient supply of materials for EV batteries, the carbon emissions generated from battery manufacturing and the disposal of batteries at the end of their life cycle.

The annual demand for key metals needed for energy transition technologies such as solar, wind, batteries and EVs will grow fivefold by mid-century from 2023 levels, according to BloombergNEF’s Transition Metals Outlook report.²⁶ The push to meet electricity demand while reducing carbon intensity may result in increased demand for a variety of materials. The energy transition not only reshapes how electricity is generated and consumed but also creates opportunities for investment in various thematic areas.

Battery and hybrid electric cars as a percentage of total car sales



Source - IEA Global EV Outlook 2024; figures for 2035 represent Stated Policies Scenario forecasts

AI continued from page 3

Demand for AI could reach double the 2022 values by 2026, which is roughly equivalent to the current electricity consumption of Japan.¹⁸

Water

The depletion of water in the cooling of data centers and electricity generation has also become a widespread concern. According to a study titled “Making AI less ‘Thirsty’,” AI demand could result in as much as 6.6 billion cubic meters of water withdrawal by 2027.¹⁹ To put that into perspective, it is equivalent to six times the annual water withdrawal in Denmark.²⁰

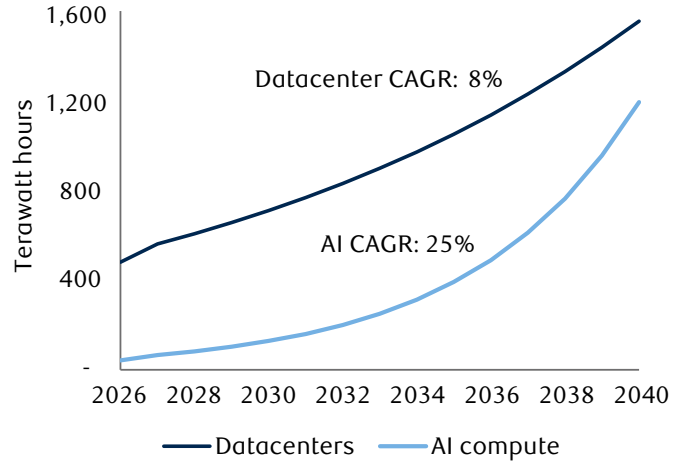
Social

Data security and privacy

AI is powered by data. As we think about the information used, we must consider unique implications on individual privacy and data security. According to a 2024 Stanford University study, new identity-based risks have emerged in relation to inferring personal information about individuals or providing users with the ability to create content that impersonates someone or something else.²¹ Personal and confidential information can also potentially be targeted through AI’s ability to memorize data and then expose it to other users. Extra caution is also necessary

Datacenters will need far more power

Datacenter power consumption (TWh)



Source - RBC Capital Markets, Avidthink, Digitalbridge

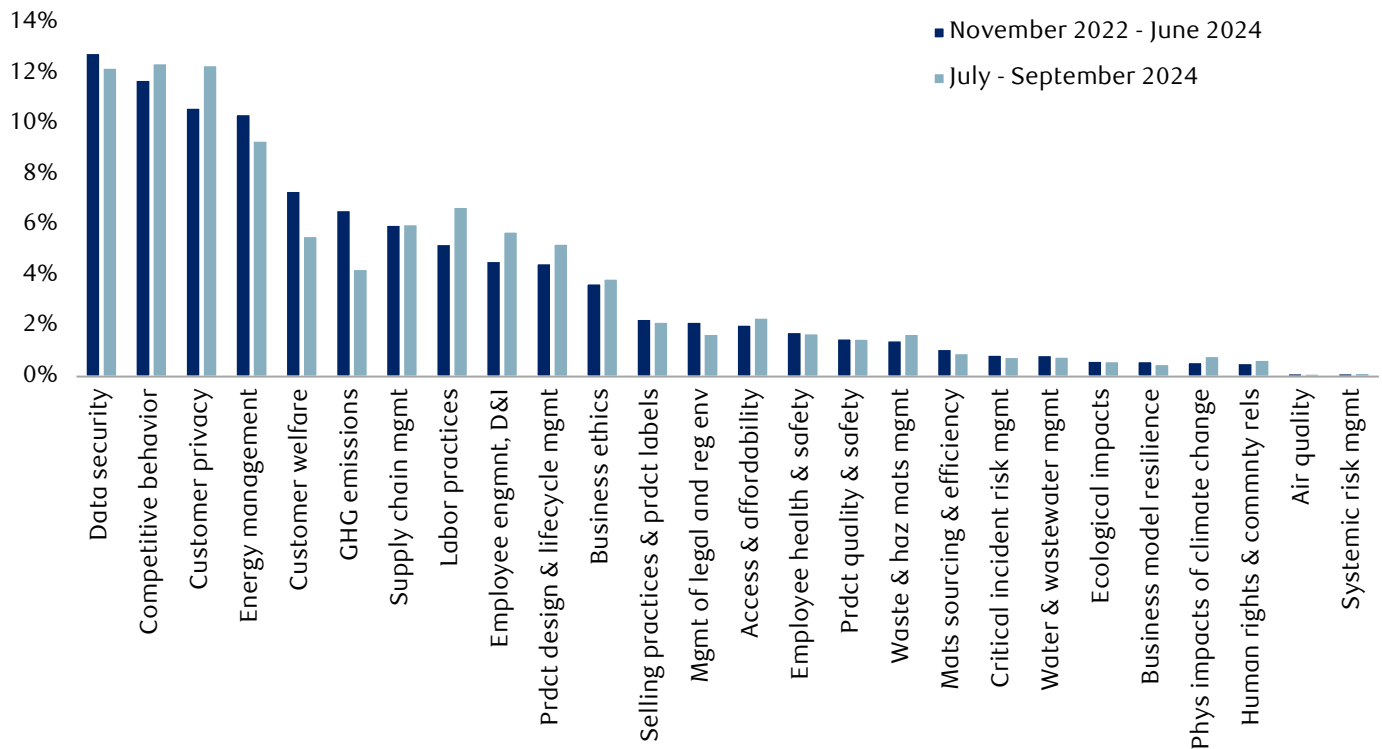
when using AI to ensure discriminatory biases are not inherited through the AI training process.

Human capital management

AI can help reduce human error, improve processes and contribute to making workflows more efficient. However, as with any technological progress, the question of job loss becomes prominent. The CEOs of Big Tech companies

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ESG-related news activity specific to ChatGPT/artificial intelligence by SASB topic (% total articles)



Source - RBC Sustainability Strategy, RBC Elements, FactSet

AI continued from page 7

have acknowledged that the proliferation of generative AI could lead to job losses in areas such as translation, accounting, entry-level coding and data entry. According to the World Economic Forum, AI is expected to perform 43% of workplace tasks in 2027 compared to 34% in 2022.²² Companies may look to dedicate resources to upskill and train their workforces as priorities shift.

Governance

As companies continue to deploy AI technology, we might see the emergence of AI ethics teams to help ensure proper governance and compliance with regulations.

For example, major corporate players have already included information on responsible AI practices in their ESG disclosure reports. According to IBM, responsible AI “is a set of principles that help guide the design, development, deployment and use of AI... that [align] with stakeholder values, legal standards and ethical principles.”²³

Common applications of responsible AI include optimization of energy resources used, prediction of extreme weather events and supply chain management. Whether these applications are sufficient to cover the initial energy costs of AI may depend on the scale and the technology’s application.²⁴

AI technology can also decrease the cost of and improve the collection and reporting of ESG data. Natural language processing can assist with reviews of media sentiment, financial releases, news and more. The application of satellite imagery can assist with identifying the effects on biodiversity and track deforestation and water usage. Computing capabilities may contribute toward better calculation of Scope 3 emissions from the supply chain.

Sources cited

- 1 RBC Wealth Management. 2024. New RBC Wealth Management survey finds interest in responsible investing continues to grow. <https://www.rbcwealthmanagement.com/en-us/newsroom/2024-05-30/new-rbc-wealth-management-survey-finds-interest-in-responsible-investing-continues-to-grow>
- 2 U.S. Securities and Exchange Commission. 2023. SEC adopts rule enhancements to prevent misleading or deceptive investment fund names. <https://www.sec.gov/newsroom/press-releases/2023-188>
- 3 Parliament of Canada. 2023. Fall Economic Statement Implementation Act, 2023. <https://www.parl.ca/LegisInfo/en/bill/44-1/c-59>
- 4 UK Financial Conduct Authority. 2024. Sustainability disclosure and labelling regime. <https://www.fca.org.uk/firms/climate-change-and-sustainable-finance/sustainability-disclosure-and-labelling-regime>
- 5 CBC News. 2024. Unhappy with new greenwashing rules, Alberta and fossil fuel companies push back. <https://www.cbc.ca/news/climate/greenwashing-bill-c59-consultations-1.7260546>
- 6 RBC Wealth Management. 2023. Insights into responsible investing (Q4 2023). https://dsnet.fg.rbc.com/assets/advisornet/docs/investment-management/portfolio_advisory_group/advisor_commentary/responsible_investing/2023/insights_into_responsible_investing_q4_2023.pdf
- 7 BloombergNEF. 2023. Global low-carbon energy technology investment surges past \$1 trillion for the first time. <https://about.bnef.com/blog/global-low-carbon-energy-technology-investment-surges-past-1-trillion-for-the-first-time/>
- 8 TheCityUK. 2022. Enabling the net zero transition: The role of financial and related professional services. <https://www.thecityuk.com/our-work/enabling-the-net-zero-transition/>
- 9 McKinsey & Company. 2022. How oil and gas companies can be successful in renewable power. <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/how-oil-and-gas-companies-can-be-successful-in-renewable-power>
- 10 International Energy Agency. 2023. The oil and gas industry in net-zero transitions. <https://www.iea.org/reports/the-oil-and-gas-industry-in-net-zero-transitions/executive-summary>
- 11 McKinsey & Company. 2020. The zero-carbon car: Abating material emissions is next on the agenda. <https://www.mckinsey.com/capabilities/sustainability/our-insights/the-zero-carbon-car-abating-material-emissions-is-next-on-the-agenda>

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Continued from page 8

- 12 International Energy Agency. 2024. Heat pumps. <https://www.iea.org/energy-system/buildings/heat-pumps>
- 13 BloombergNEF. 2024. Energy transition investment trends. <https://about.bnef.com/energy-transition-investment/>
- 14 Boston Consulting Group. 2023. Bridging the \$18 trillion gap in net zero capital. <https://www.bcg.com/publications/2023/bridging-the-vast-gap-in-net-zero-capital>
- 15 Statista. 2024. Artificial intelligence (AI) market size worldwide from 2020 to 2030. <https://www.statista.com/forecasts/1474143/global-ai-market-size>
- 16 RBC Capital Markets. 2024. A cross-sector view of GenAI. https://www.rbcinsight.com/wm/Share/ResearchViewer/?SSS_6C7C665014A4FA6BFD0542C73B7BAA0E
- 17 International Energy Agency. 2023. Why AI and energy are the new power couple. <https://www.iea.org/commentaries/why-ai-and-energy-are-the-new-power-couple>
- 18 International Energy Agency. 2024. Electricity 2024. <https://www.iea.org/reports/electricity-2024/executive-summary>
- 19 S. Ren et al. 2023. Making AI less “thirsty.” Archiv.org. <https://arxiv.org/pdf/2304.03271>
- 20 S. Ren. 2023. How much water does AI consume? The public deserves to know. OECD.AI Policy Observatory. <https://oecd.ai/en/wonk/how-much-water-does-ai-consume>
- 21 J. King and C. Meinhardt. 2024. Rethinking privacy in the AI era: Policy provocations for a data-centric world. Stanford University HAI. <https://hai.stanford.edu/white-paper-rethinking-privacy-ai-era-policy-provocations-data-centric-world>
- 22 World Economic Forum. 2023. These are the jobs most likely to be lost – and created – because of AI. <https://www.weforum.org/agenda/2023/05/jobs-lost-created-ai-gpt/>
- 23 IBM. 2023. What is responsible AI? <https://www.ibm.com/topics/responsible-ai>
- 24 RBC Capital Markets. 2024. A cross-sector view of GenAI. https://www.rbcinsight.com/wm/Share/ResearchViewer/?SSS_6C7C665014A4FA6BFD0542C73B7BAA0E
- 25 P. d’Entremont. 2024. Growing the grid: Lithium and batteries. https://www.rbcinsight.com/wm/Share/ResearchViewer/?SSS_A6F3127D92D742B7F717451A492CFA0E
- 26 BloombergNEF. 2023. Transition metals become \$10 trillion opportunity as demand rises and supply continues to lag. <https://about.bnef.com/blog/transition-metals-become-10-trillion-opportunity-as-demand-rises-and-supply-continues-to-lag/>

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