Financing the Future
Sustainable Finance Newsletter

INSIGHTS, IDEAS, OUTLOOKS

2023 OUTLOOK

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2023 Market and Industry Outlook

Sustainable Finance Market Summary and Forecast

2022 ESG Volumes: **US$1,490 billion (-14.2% YoY)**
2023 Forecasted ESG Volumes: **US$1,600 billion (+7.3% YoY)**

2022 Review

The global sustainable finance market in 2022 was influenced by broader market conditions, hindering overall issuance. Total volumes dropped 14.2% in 2022, with downturns seen across all labels. Despite this, ESG issuance as a percent of total corporate and financial investment grade bond issuance remained steady in the CAD and USD markets, at 9% and 6%, respectively.

2023 Outlook

Focus on Use of Proceeds: Green bonds expected to lead issuance amid the global energy transition and growing regulatory support for green projects, with some issuers expanding to new biodiversity and climate change adaptation categories and exploring combined green and linked instruments.

Robust Structures: Issuers focused on establishing impactful sustainable finance structures to mitigate any greenwashing concerns as investor sophistication evolves.

Sovereign Issuance: Sovereign issuance is expected to remain robust in 2023, with several entities hinting at upcoming offerings and the rising popularity of sustainability linked labels.

ESG Trends

2022 Highlights

A surge in regulatory discussion and legislation shaped the 2022 ESG landscape. Significant developments included amendments to the EU Taxonomy classifying select nuclear and gas activities as sustainable and the publication of the final Sustainable Finance Disclosure Regulation Regulatory Technical Standards. Lastly, increased scrutiny and polarization on the topic of transition has led to a strategic re-calibration of priorities in both private and public markets, while positive developments continue in the carbon markets and cleantech landscapes.

2023 Outlook

Continued ESG Regulation & Reporting: As regulations continue to evolve, we expect polarization on the topic to ease as industry stakeholders digest regulations, align on common goals, and increase both mandatory and voluntary reporting.

Evolution of ESG Topics: As the concept of 'double materiality' emerges (both the financial impact of ESG factors on a company and the company's external ESG impacts), the disclosure of Scope 3 emissions, attention to biodiversity, and circular economy topics are expected to become increasingly relevant in the sustainable finance market in 2023.

Energy Transition: In the background of geo-political tension, energy supply, security, and stability will be essential themes moving forward. Cleantech investment and development will continue to focus on meeting growing energy demand with clean energy.

Scotiabank™
GLOBAL BANKING AND MARKETS

1 Global Sustainable Finance Market Summary

2022 ESG Debt: Key Themes

Adverse Market Conditions

A tumultuous broader market, driven by rising interest rates, persistent inflation, and unprecedented volatility, slowed ESG-labelled debt issuance.

Resilient Use of Proceeds Issuance

Use of Proceeds, including green and sustainability, represented majority of the ESG-labelled bond market with a share of 92%. The relevant spike occurred amid rising investor apprehension regarding linked instruments.

2023 ESG Debt: Trends to Watch

Green Bonds Expected to Lead Issuance

Green bonds are expected to drive issuance thanks to strong demand and continued green capex from issuers.

Robust Sustainable Finance Structures

With increasing ESG regulation and investor discernment, the market is focused on establishing ambitious and credible sustainable finance programs. We expect issuers to respond by focusing on quality sustainable finance structures, such as integrating Scope 3 KPIs for linked structures and increasing impact reporting disclosure.

Product Diversification & Hybrid ESG Structures

As the global sustainable finance market continues to transform, existing labels are expected to merge into new ESG offerings. The rise of hybrid instruments is most commonly discussed through marrying Use of Proceeds and Linked structures. The resulting products can be utilized in both public and private debt markets with several bond structures already issued.

In March 2021, both Takamatsu Construction Group and Verbund completed offerings of Green Sustainability-Linked Bonds (Green SLBs) with Verbund's orderbook reaching an oversubscription rate of four times. Yunnan Provincial Energy Investment Group followed these issuances in April 22' with the completion of its Green SLB.

Continued Momentum from Sovereign Issuers

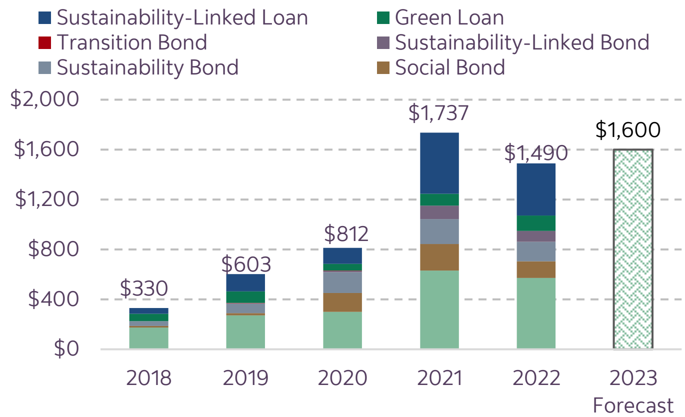
In 2022, ESG-labelled sovereign bond issuance remained strong with offerings from the UK, Canada, Italy, and Mexico, among others. Momentum is expected to continue with several issuers hinting at market entrances, including Greece and India with debut green and blue bonds, respectively. The sustainability-linked label is expected to remain popular among sovereign issuers, following the inaugural issuances from Chile and Uruguay in 2022.

The Greenium – Is it Here to Stay?

The greenium originally attracted new issuers to the market but issuers are now more driven by demonstrating resilient ESG strategies. The greenium is only a 'cherry on top.' In the US corporate and financial new issuance market in 2022, ESG labelled bond new issue concessions were on average 3 bps tighter than conventional, with the average new issue concessions on conventional bonds being +10.3 bps vs +7.3 bps for labelled issuances.

ANNUAL SUSTAINABLE DEBT VOLUMES

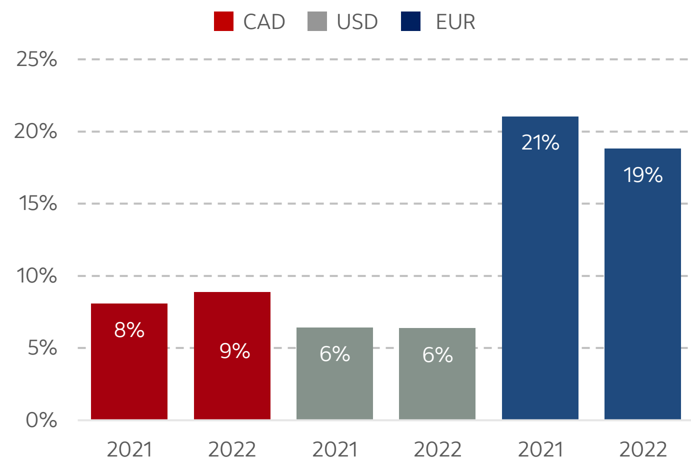
USDeq. Billions | Global Sustainable Bonds & Loans



Source: Bloomberg Finance L.P., Scotiabank | As of December 31st, 2022

PROPORTION OF ESG ISSUANCE

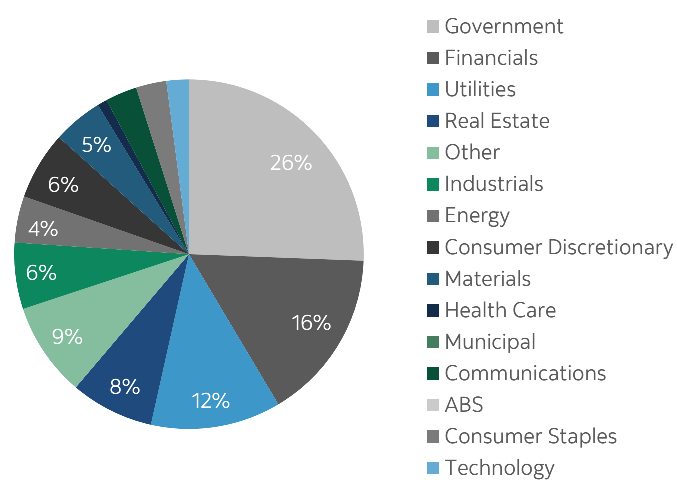
Labelled ESG Issuance as % of Total | Investment Grade Corporate & Financial



Source: Bloomberg Finance L.P., Scotiabank | As of December 31st, 2022

SUSTAINABLE DEBT VOLUMES BY SECTORS

Labelled ESG Issuance by Sector | Global Sustainable Bonds & Loans



Source: Bloomberg Finance L.P., Scotiabank | As of December 31st, 2022

2 Sustainable Finance Market Summary – The Americas

Canadian Sustainable Finance Market

2022 Review

After a banner year in 2021, the Canadian ESG market fell ~20% YoY. Despite the challenging environment, ESG issuance as a percent of total corporate and financial investment grade bond volumes increased from 8% to 9% from 2021 to 2022. Market volatility and the incentive to issue labelled bonds (i.e., Greeniums) were the primary reasons for less activity overall.

2023 Outlook

Use of Proceeds instruments are expected to continue leading ESG-labelled issuance in 2023. Notably, transitions from green to sustainable finance frameworks may support additional sustainable bond offerings throughout the year. Issuers are expected to focus on inclusion of Scope 3 KPIs and social causes in linked structures.

US Sustainable Finance Market

2022 Review

The USD ESG debt market across bonds and loans was down 25% YoY, predominantly due to volatile market conditions. ESG investment grade bond issuance was down 18% YoY in line with declines in all investment grade bond supply, which was also down 18% YoY. ESG issuance as a percent of total corporate and financial investment grade bond volumes remained steady at 6.4%. Lastly, new issue concessions were approximately 3 bps lower for ESG bonds on average than conventional bonds in 2022.

2023 Outlook

2022's SEC proposal on climate disclosures and Inflation Reduction Act tax credits and incentives are expected to spur corporate climate action in 2023. Sustainability-linked instruments tied to greenhouse gas emissions reductions and Use of Proceeds instruments targeting renewable energy, energy efficiency, and clean transportation projects should see growth.

LatAm Sustainable Finance Market

2022 Review

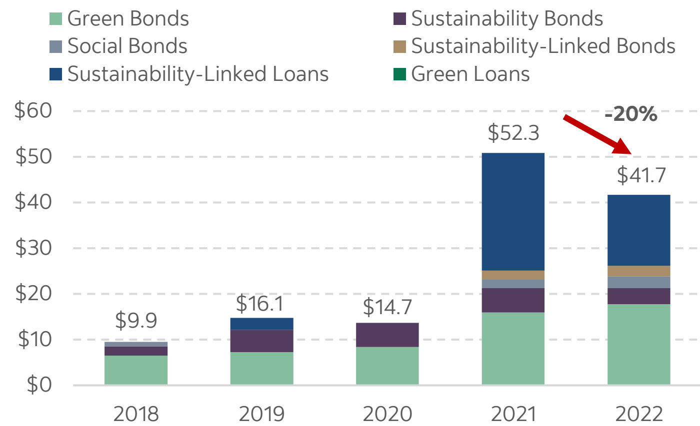
LatAm ESG issuance declined ~38% YoY, driven by a significant decrease in social bonds (down 95%), partially offset by an uptick in sustainability bonds (+33%). SSAs continued to lead innovation and ESG issuances in the region, making up 27% of all ESG transactions by volume; Chile issued the world's first sovereign sustainability-linked bond, Uruguay explored coupon step-downs, and Colombia published the first LatAm green taxonomy.

2023 Outlook

Local taxonomy development is expected continue with Mexico and Chile seen as being next in line following Colombia's 2022 launch. Further innovation is anticipated, with new structures being tested in sustainability-linked bonds and blue finance instruments, as well as through the focus on blended finance. LatAm will benefit from a growing focus on biodiversity, natural capital, and carbon credits.

CAD SUSTAINABLE DEBT VOLUMES

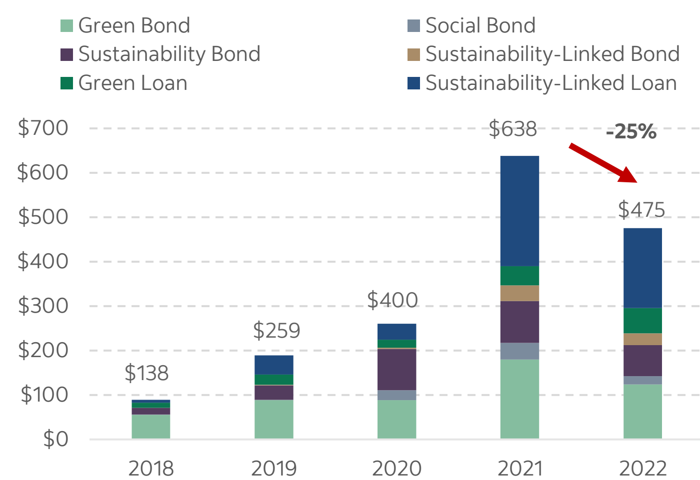
CAD Billions | CAD Sustainable Bond and Loans Volumes



Source: Bloomberg Finance L.P., Scotiabank | As of December 31st, 2022

USD SUSTAINABLE DEBT VOLUMES

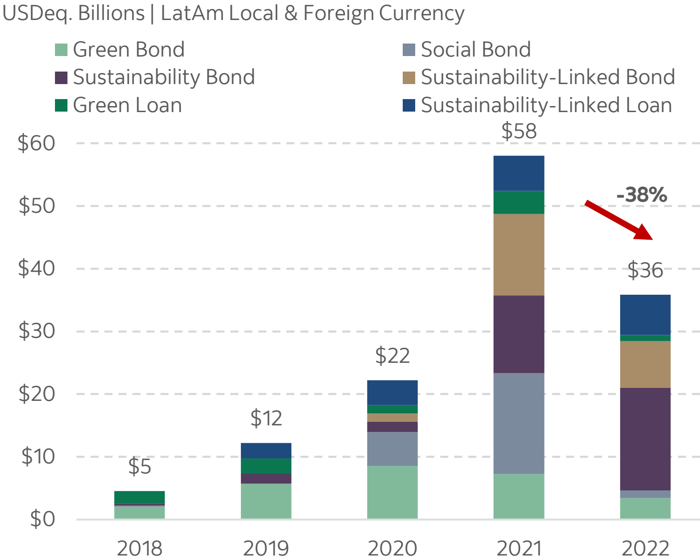
USD Billions | USD Sustainable Bond and Loans Volumes



Source: Bloomberg Finance L.P., Scotiabank | As of December 31st, 2022

LATAM SUSTAINABLE DEBT VOLUMES

USDeq. Billions | LatAm Local & Foreign Currency



Source: Bloomberg Finance L.P., Scotiabank | As of December 31st, 2022

3 ESG Trends to Watch

Global Regulation Development and Consolidation

As the evolution of sustainable finance continues, nations are releasing regulatory requirements for financial market participants on the treatment of products, with several updates launched in 2022. In the EU market, two initiatives were announced throughout the year and implemented on January 1st, 2023. The final Sustainable Finance Disclosure Regulation Regulatory Technical Standards (SFDR) were published in July and provided fund managers with mandatory disclosure templates. Amendments to the EU Taxonomy were also released during the year and notably classified select nuclear and gas activities as sustainable. In the UK, the Financial Conduct Authority (FCA) proposed its own guidelines in October 2022 for fund managers and products with implementation beginning in the middle of 2023.

North American regulators followed suit with several initiatives launched by the Canadian Securities Administrators (CSA) and the Securities and Exchange Commission (SEC), including the CSA's Staff Notice on ESG-Related Investment Fund Disclosure and the SEC's proposed disclosure enhancements. Both initiatives were structured with the objective of standardizing and enhancing disclosures from fund managers.

Further, following two exposure drafts launched by the International Sustainability Standards Board (ISSB) in 2022, the organization is aiming to publish its final disclosure standards this year. The standards will act as a global guide to provide consistent and verifiable sustainability and climate-related disclosures.

Biodiversity, a Natural Progression for ESG

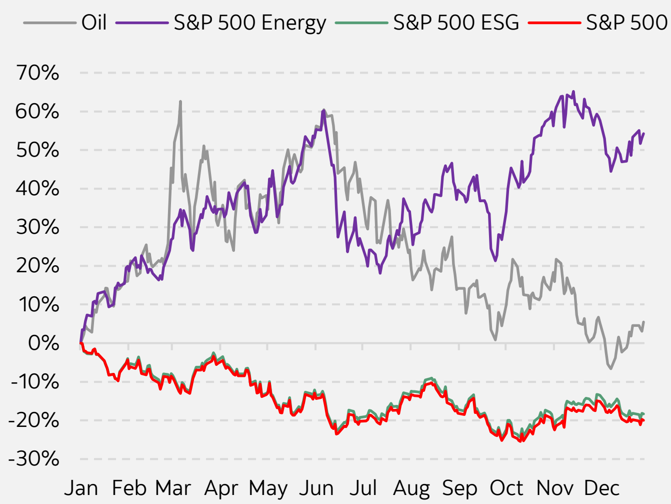
The amalgamation of biodiversity and sustainable financing gained significant momentum throughout 2022, capped off with COP15 on Biodiversity in Montreal. Attended by delegates from 195 nations and the EU, COP15 saw the launch of the Nature Action 100, an investor-driven initiative to engage corporations with significant biodiversity and nature loss footprints, and most notably achieved a landmark agreement on a Global Biodiversity Framework (GBF). The publication of the final Taskforce for Nature-Related Financial Disclosures (TNFD) framework is scheduled for September 2023, with expectations that the document will further drive biodiversity discussions. The approach of the framework broadly aligns with the Task Force on Climate-Related Financial Disclosures (TCFD) through the four pillars of governance, strategy, risk management, and metrics & targets.

Energy Security, a Key Pillar of the Energy Transition

Market volatility driven by geopolitical tension has brought the energy transition front and center on the international stage. While Russian gas supplies cut by more than 80% in 2022, energy assets outperformed other sectors; government responses included support and capital backing for energy-intensive companies to meet growing energy demand and subdue the threat of an energy crisis. As a result, for many countries, finding the right balance between energy security and decarbonization will remain a challenging task.

Energy Crisis Causing Energy to Outperform

Equity and Commodity Performance | 2022



Source: Bloomberg Finance LP, Scotiabank | As at December 31st, 2022

Investment Trends

Despite this year's market volatility, investors have allocated new capital into sustainable funds. Many European asset managers have established funds to be compliant with the EU SFDR and to integrate clients' sustainability preferences into the MiFID suitability assessment. ESG fund flows tend to be 'stickier' in times of stress, given the long-term-oriented nature of the ESG investor community.

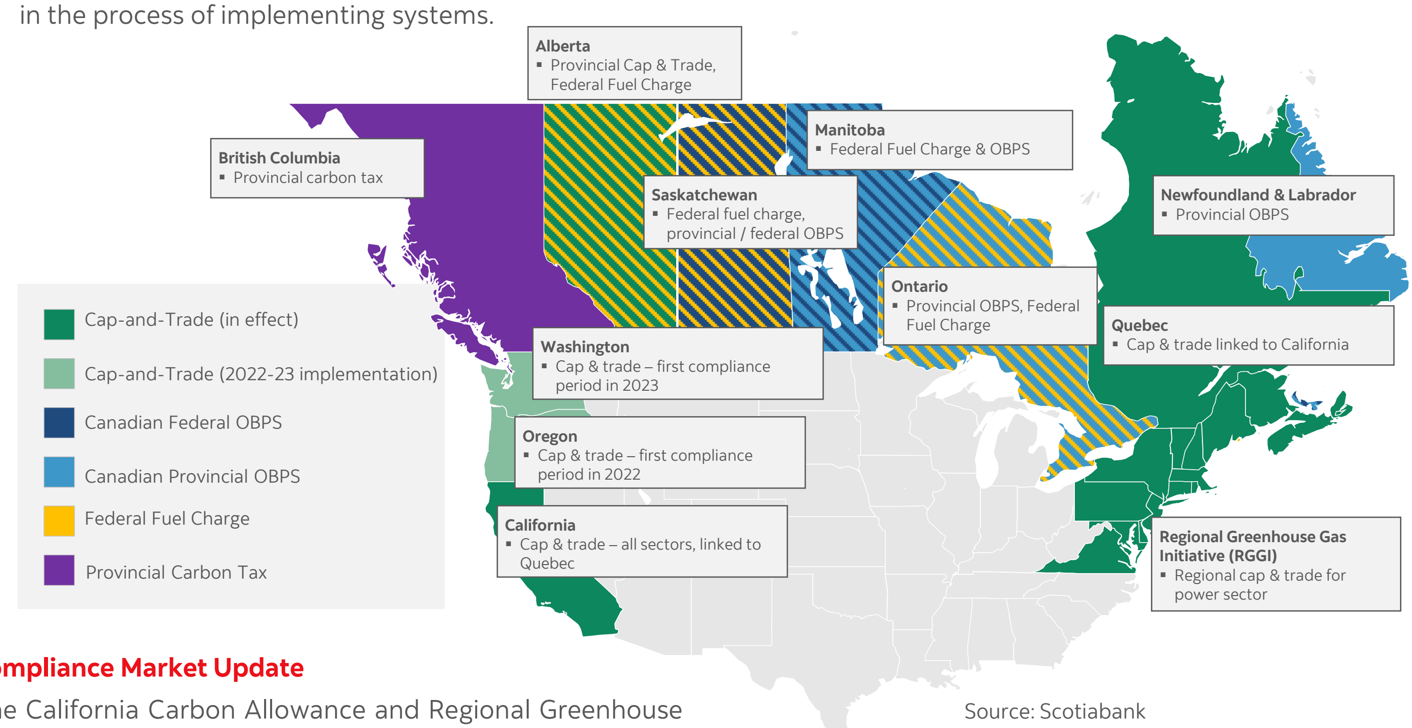
Market Sights Set on Double Materiality

While materiality addresses matters impacting a company's performance, the trending topic of double materiality requires consideration of the resulting repercussions on society, including environmental and social topics. In 2014, the EU launched the Non-Financial Reporting Directive (NFRD), representing the first disclosure requirements featuring the concept of double materiality. Under the NFRD, companies were required to publish environmental and social information. On January 5th, 2023, the Corporate Sustainability Reporting Directive (CSRD), entered into force, amending the NFRD. The new directive expands on the previous rules, including mandating audits of reported sustainability information. Companies subject to the CSRD will be required to apply to the new rules in the 2024 financial year for the respective 2025 publications. Across the globe, nations are expected to increasingly incorporate the concept of double materiality in reporting requirements, bringing sustainability impacts to the forefront of accounting disclosures.

4 Carbon Market Update

State of Carbon Pricing in North America

- Carbon Pricing schemes have been increasingly adopted by provincial/state jurisdictions in North America. Both compliance and voluntary schemes are becoming more transparent and encouraging for participants to seek emissions-free projects to gain a competitive edge.
- Carbon pricing schemes are federally mandated in Canada. Each province must implement their own system or be subject to a 'Federal Backstop'.
- Cap-and-trade systems are in place in California, Quebec, Alberta, and the US Northeast, with Washington and Oregon in the process of implementing systems.



Source: Scotiabank

Compliance Market Update

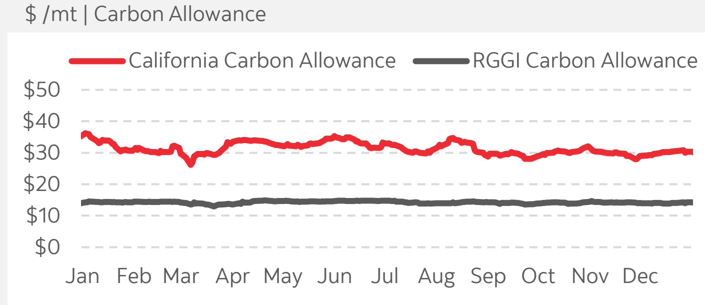
The California Carbon Allowance and Regional Greenhouse Gas Initiative programs are designed as 'cap and trade' programs where companies are required to emit less than a specified 'cap' of carbon emissions, and can buy/sell the amount of allowances below/above their cap to participating members. One allowance is equivalent to the removal or reduction of one metric tonne of CO_2 equivalent emissions. The California Cap & Trade initiative applies to large electric power plants, large industrial plants and fuel distributors, whereas the Regional Greenhouse Gas Initiative applies to certain fossil-fuel-fired electric power generators across 12 US states.

Voluntary Market Update

Nature-Based Global Emission Offsets (NGEOs) are merging in value with GEOs after a period of trading at roughly a ~$5 premium throughout early 2022. NGEO futures offer the ability for buyers and sellers to lock in future prices for offsets sourced exclusively from agriculture, forestry, and other land use projects. These contracts are physically settled, meaning the buyer receives the actual certificate of offset at the agreed upon date (rather than financially settled which are a standard hedging tool). These offsets meet the Verified Carbon Standard and Verra Registry's stringent Climate Community and Biodiversity Standard on climate change. See here for further details, or contact the Scotiabank Sustainable Finance team if any questions!

Evolution of Carbon Allowance Pricing

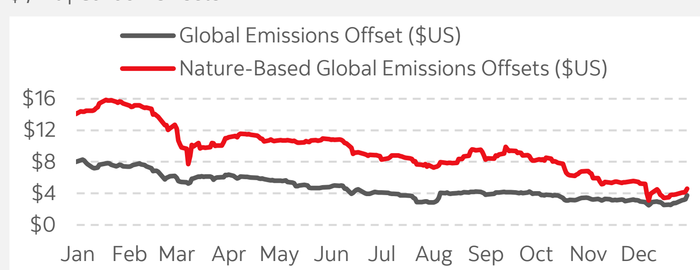
$ /mt | Carbon Allowance



Source: Bloomberg Finance L.P., Scotiabank | As of December 31st, 2022

Evolution of Emission Offsets Pricing

$ /mt | Carbon Offsets



Source: Bloomberg Finance L.P., Scotiabank | As of December 31st, 2022

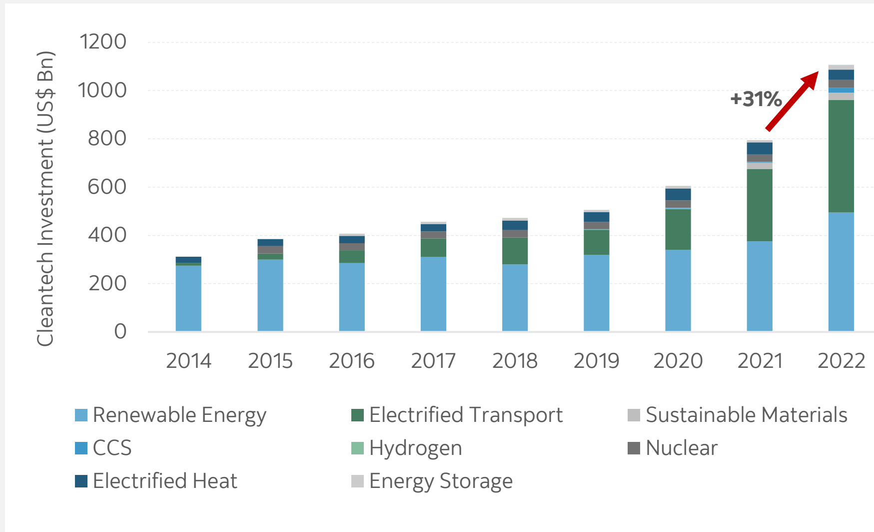
5 Energy Transition – Cleantech at the Core

The energy transition will require trillions of dollars of investment to achieve net-zero by 2050. In order to get there, investment in cleantech and clean alternatives today is required for the economy to deliver safe, reliable, and affordable clean energy at scale down the road. See below some highlights from the cleantech landscape.

Where are we today?

Global investment in the low-carbon energy transition totaled $1.11tn in 2022, up 31% from 2021.

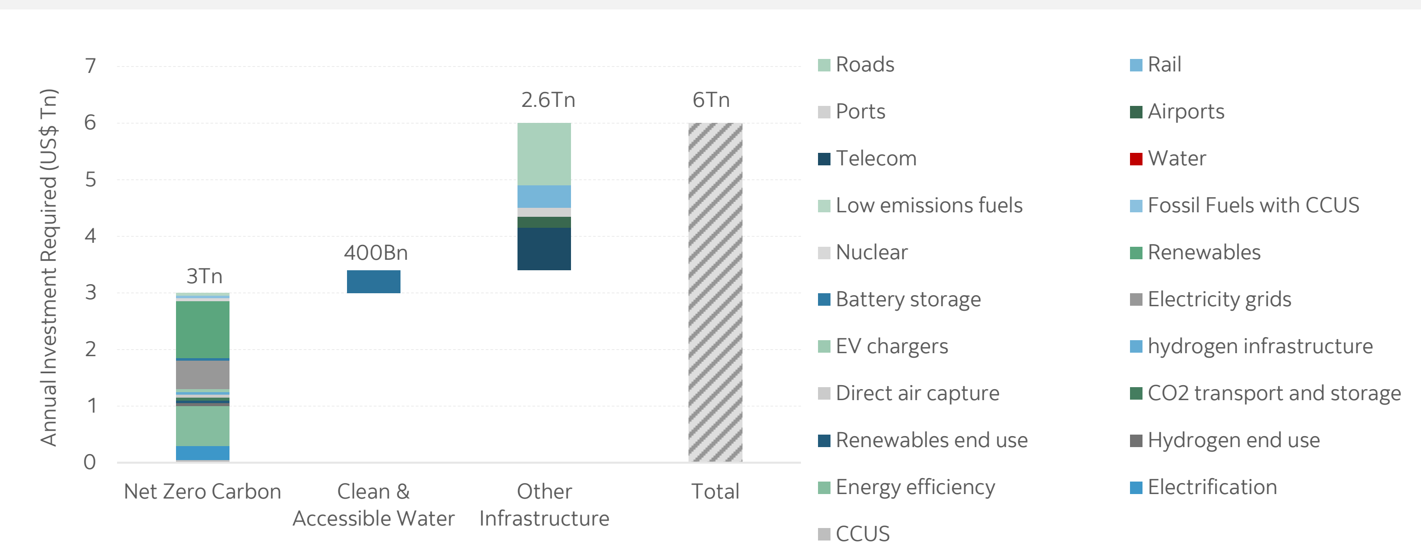
- The largest sector in 2022 was renewable energy, which attracted $495bn for new projects and small-scale systems (up 17% YoY), but the electrified transport sector grew the fastest and hit $466bn, which was up 77% YoY in 2021 and 54% in 2022.
- Climate-tech companies raised a total of $119bn from global public equity markets and private investors in 2022 (down 29% from the year prior due to challenging markets).



Source: Bloomberg New Energy Finance

Net-Zero by 2050 – How do we actually get there?

An estimate of total annual investments required to achieve net-zero by 2050. Includes growth and maintenance CAPEX.



Source: IEA, OECD

Footnotes

Definitions and Criteria

Renewable Energy: *wind (on-and-offshore), solar (large and small-scale), biofuels, biomass and waste, marine, geothermal, and small hydro.* ***Energy Storage:*** *stationary storage projects (large- and small-scale), excluding pumped hydro, compressed air and hydrogen (majority are battery projects).* ***Electrified Transport:*** *sales of electric cars, commercial vehicles and buses, and charging investments.* ***Electrified Heat:*** *residential heat pump investments.* ***Nuclear Power:*** *reactors under construction and major refurbishments.* ***Hydrogen:*** *hydrogen electrolyzer projects, fuel cell vehicles and hydrogen refuelling infrastructure.* ***Carbon Capture and Storage:*** *large- and small-scale commercial CCS projects, dedicated transport and storage.* ***Sustainable Materials:*** *circular economy (recycling) and bioplastics.*

For more information or to connect with our Sustainable Finance Group, please get in touch with us at: sustainable.finance@scotiabank.com

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