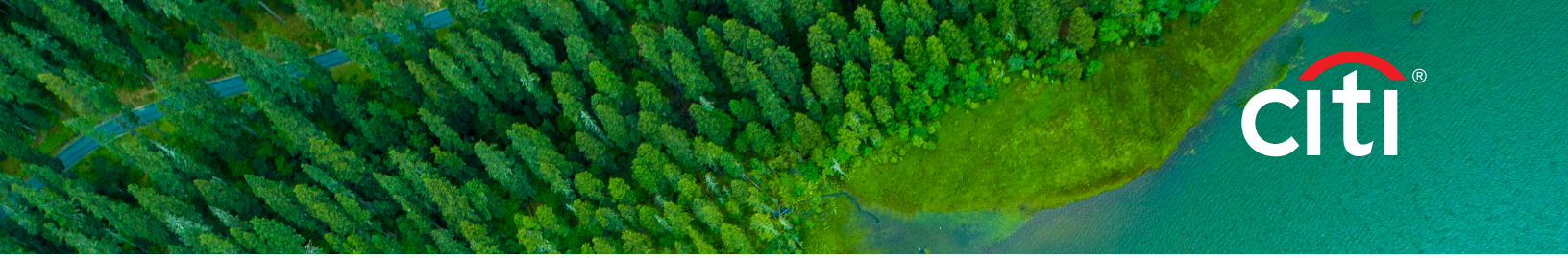
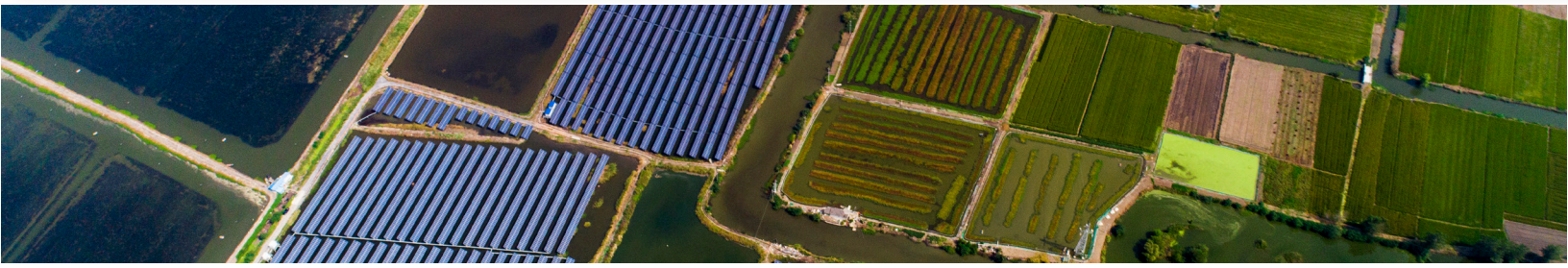


Taskforce on Climate-Related Financial Disclosures Report 2021

Citi's Approach to Climate Change and Net Zero



About This Report

This report presents information on Citi's efforts towards implementing the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). This is our third standalone TCFD report since we began reporting using the TCFD framework in 2018.

This report reflects a summary of our progress made to date towards our goal of incorporating climate risk and opportunity identification and management into our overall business strategy and disclosure efforts. Climate scenario analysis is a rapidly evolving area for many companies, including Citi, and we expect the methodology and tools for conducting such analysis to continue improving over time. Climate data, including the quantification of the greenhouse gas (GHG) emissions associated with our clients, will also continue to evolve, and we expect to update our disclosed data in the future. This report represents an important step upon which we will continue to build in order to expand our understanding of climate risks and opportunities moving forward.

Citi has committed to achieving net zero emissions associated with our financing by 2050, and net zero emissions for our operations by 2030. This report includes our initial assessment of our baseline emissions and 2030 targets for our Energy and Power loan portfolios as well as the methodology used for these calculations and initial transition plans for these sectors. Our climate risk and net zero work are related and reinforce each other. Whereas our climate risk work focuses on the integration of climate risk into Citi's risk management governance, processes and strategies, our net zero work focuses on Citi's impacts on the climate and achieving our net zero emissions targets. Common linkages exist between the two workstreams. For example, both rely on common data elements such as GHG emissions and better understanding of our clients' climate change mitigation and/or adaptation plans. Additionally, risk management tools can help achieve our net zero goals and our net zero plan can drive risk mitigation, particularly for credit, strategic and reputation risk.

Contents

Letter from the CEO

We know it is not enough to say Citi is committed to tackling climate change. That's the easy part. As the world's most global bank, we can help drive the transition to a net zero economy and make good on the promise of the Paris Agreement. We also know that the world has substantial energy needs and different countries are in different stages of development. I want to make sure Citi's transition plan reflects these realities.

Citi's Net Zero Transition Principles, which we have developed to serve as our North Star, will guide our efforts. In developing our path to net zero emissions by 2050, we are building on our sustainability track record of more than two decades and have set bold goals and commitments to accelerate this transition, including our recent $1 trillion sustainable finance goal. As we continue to finance clean energy solutions, realign our business models and work towards a net zero future, we know we cannot do this alone. Tackling climate change will require tremendous collaboration from everyone — our clients, industry peers, investors, NGO partners and in particular, governments around the world. There is a critical need for strong public policy to accelerate the global economy's transition to net zero.

Getting to net zero means we must support our clients in their own transitions to net zero, and we must understand where they are in their journeys to make progress. Our intention is to work with all our clients, including our fossil fuel clients, to develop credible plans and transition to net zero together. We will also encourage the responsible retirement of carbon-intensive assets rather than divestment as part of these transition plans. We will continue to assess our client relationships — a regular part of how we manage our business — and prioritize partnering on transition strategies before turning to client exits as a last resort.

Efforts from the private sector must be complemented by governmental action to create the conditions we need to meet our climate commitments — while remaining competitive in the global market — including policies that drive consistent standards for climate disclosure. We encourage the development of harmonized data disclosures using frameworks like the Task Force on Climate-Related Financial Disclosures (TCFD) to guide the private sector forward, especially as we see more and more institutions pledging to reach net zero.

Our TCFD report includes our 2030 emissions targets — for the Energy sector, a 29% absolute reduction in financed emissions, and for the Power sector, a 63% reduction in portfolio emissions intensity — which put us firmly on track to meet our 2050 net zero commitment. We will need to actively engage with our clients across all relevant sectors to map out what decarbonization pathways look like for each industry. And in our efforts, we want to ensure we're supporting a responsible transition for all, particularly in developing countries where there may be limited access to energy and the resources needed for the transition. We will strive to meet the current needs of developing countries without causing negative social impacts or exacerbating existing inequalities, so that we can help these markets prioritize the transition to net zero while balancing both environmental and social needs.

Climate data, disclosure and technologies continue to evolve, and we will adapt to the changing landscape as we pursue our net zero commitment and transition. Although there are many uncertainties, metrics and data — like those outlined in the pages that follow — are essential to helping us understand where we are and how we move forward. And as we continue to build out our plan to reach net zero, one thing will remain constant: we will continue to be transparent and accountable. We will continue to share how we are assessing and managing our net zero plan and broader climate strategy, integrating climate risk and transition finance opportunities into our business and overall strategy and reporting on our progress.

This report represents our continued leadership in climate change and disclosure in line with the TCFD recommendations and the progression of our efforts over the years. It has the full support of our management team, and our net zero plan was reviewed by our Board of Directors. Since publishing our second TCFD Report in 2020, we formed a new Global ESG Council consisting of senior members of management and grew our dedicated Climate Risk team to include expertise in credit risk, scenario analysis, stress testing and regulatory engagement. We also formed the Natural Resources & Clean Energy Transition team by combining the expertise and knowledge of existing teams to more effectively drive client engagement efforts in the energy, power and chemicals sectors.

The existential threat posed by climate change will be with us for generations, but we know that it is this generation's time to act. We will act with urgency while understanding that our work to achieve net zero will not be a short-term effort. Supporting a fair and inclusive transition remains a top priority for Citi. This is part of who we are, and we will continue to learn and lead as the global community enters this next critical stage of climate action.

Jane Fraser | Chief Executive Officer, Citi

Introduction

Introductory Statements

On March 1, 2021, her first day as CEO, Jane Fraser announced Citi's commitment to achieving net zero GHG emissions by 2050, a significant target given the size and breadth of our organization's portfolios and businesses. Citi made this commitment as part of its ongoing work to address the challenges that climate change poses to our economy and society. Fraser's announcement demonstrated how identifying, assessing and managing climate-related risks and opportunities remains a top business priority for Citi. This report updates our 2020 report and was developed to provide our stakeholders with information on our continued progress to address climate risk and to fulfill our commitments to publish an initial net zero plan within one year of announcing this ambition. Note that this report contains our initial net zero plan for our Energy and Power loan portfolios; the net zero plan for our operations will follow later in 2022.

Over the past 20 years, Citi has progressively built our understanding of climate-related risks and opportunities, updated our climate governance structure and pushed ourselves to set and achieve increasingly ambitious goals. We are proud of our demonstrated record of participating in the creation and adoption of external principles and standards for climate-related issues, and we believe we have the opportunity and responsibility to be a leader in helping to drive the transition to a net zero economy.

Timeline of Climate Action

1997
Joined the **UN Environment Programme Finance Initiative (UNEP FI)**

2003
Co-created the **Equator Principles** and established Citi's broader Environmental and Social Risk Management Policy

2007
Issued our **first Climate Change Statement**, supporting a globally connected market-based climate policy

First U.S. bank to set a **GHG reduction target**

Launched 10-year **$50B Climate Initiative**

2014
Co-created **The Green Bond Principles**

2015
Launched first **Sustainable Progress Strategy** and **$100B Environmental Finance Goal**

Signed the **Natural Capital Declaration**

2017
Announced goal to source **100% renewable electricity for our facilities by 2020**

Joined the **RE100 commitment to 100% renewable electricity**

2018
Published first **climate risk disclosure TCFD report**

Signed **"We Are Still In" Declaration** in support of the Paris Agreement

2019
Issued inaugural **€1B green bond**

First U.S. signatory of the **Principles for Responsible Banking**

Co-developed the **Poseidon Principles**

2020
Launched the **Sustainable Progress Strategy**

Launched **Impact Investing Fund**

Issued **$1.5B green bond**

Joined **Partnership for Carbon Accounting Financials (PCAF)**

Published second **climate risk disclosure TCFD report**

Joined 2° Investing Initiative's **Paris Agreement Capital Transition Assessment (PACTA) Pilot Program**

2021
Announced **net zero emissions** by 2050

Co-founded the **Net-Zero Banking Alliance**

Partnered with the **UN Framework Convention on Climate Change (UNFCCC)**

Joined **Breakthrough Energy Catalyst** as an anchor partner and also joined the **RMI Center for Climate Aligned Finance**

We are continuing to evolve and take the lessons learned from our various climate pilot programs and work to integrate them into our core businesses to enhance our climate expertise. We are now applying those lessons learned and leveraging our improved internal governance to advance our net zero plan.

We are proud of the work we have done to develop our climate initiatives and to support our clients in the transition toward a low-carbon economy, and we are thrilled to see the growing momentum behind recent similar announcements. Currently, hundreds of governments, companies, NGOs and investors — including pension funds and insurers responsible for directing trillions of dollars in investments — have committed to achieving net zero investment portfolios by 2050.[1]

Participation in Key Net Zero Frameworks

In 2021, we continued to expand our participation in the financial industry's net zero leadership initiatives. Citi is a member of multiple frameworks that enhance our understanding of climate-related issues, improve our access to data and promote efficient communication and coordination across the various climate efforts.[2] Of these frameworks, the Partnership for Carbon Accounting Financials (PCAF), the Net-Zero Banking Alliance (NZBA), and the Glasgow Financial Alliance for Net Zero (GFANZ) are converging as net zero guideposts across the financial industry.

PCAF is an open collaboration of financial institutions working to develop a global carbon accounting standard for measuring and disclosing Scope 3 financed and facilitated emissions. Our initial PCAF disclosures for our Energy and Power portfolios are reported on page 55 of the Metrics and Targets section below. For more information on PCAF, see page 45 of our 2020 TCFD report.

NZBA, convened by the United Nations Environment Programme Finance Initiative, brings together the world's leading banks to support their efforts to align their financing and investment portfolios with net zero emissions by 2050. We are proud of our work in helping to form this initiative, having been involved since its inception and its launch alongside GFANZ in April 2021. As an industry-led alliance, we believe that NZBA will be useful in facilitating collaboration among industry groups to identify and address key challenges faced and support the dissemination of innovative measures to assist all members in their net zero journeys.

GFANZ is a global alliance tasked with bringing together existing and new net zero financial sector initiatives into one forum to enhance efficiencies and facilitate strategic coordination among members. We are part of GFANZ as part of the NZBA banking vertical, along with the Net Zero Asset Managers Initiative, the Net Zero Asset Owners Alliance and others. We are hopeful that this partnership will promote the efficient allocation of resources towards the areas needed to accelerate the transition of finance and investment and the global economy to net zero emissions by 2050.

[1] *See, e.g.,* Net-Zero Asset Owner Alliance Adds 5 New Members Managing $900 Billion, UNEPFI (May 27, 2021), https://www.unepfi.org/news/industries/investment/net-zero-asset-owner-alliance-adds-5-new-members-managing-combined-900-bn/ (new members of the Alliance include the UK's largest life insurer and the largest pensions insurance specialist, Germany's largest pension group and an Asia and Africa-focused insurance group, expanding the Alliance membership to 42 asset owners managing a combined $6.6 trillion of assets).

[2] For other partnerships in which Citi participates, please refer to our Environmental and Social Policy Framework available at: https://www.citigroup.com/citi/sustainability/data/Environmental-and-Social-Policy-Framework.pdf.

Citi is a member of the GFANZ and NZBA steering groups to help guide the development of these initiatives. In addition, we are co-leading a GFANZ workstream focused on accelerating the adoption of sectoral decarbonization pathways by financial institutions. This workstream is aimed at leveraging the work that various consortia and initiatives have undertaken to develop decarbonization pathways for various sectors.

We are also working to develop those sectoral pathways through other related channels. Through our membership in the RMI's Center for Climate-Aligned Finance, we are working with other financial institutions to develop decarbonization pathways for sectors that, while important to decarbonization efforts, have not received the same amount of methodological attention as more immediate sectors, such as Energy and Power.

Through these initiatives, we seek to develop a ladderlike structure, in which we are able to incorporate existing sectoral decarbonization pathway methodologies into our net zero plan while helping to lead the development of methodologies for future sectors.

We are particularly motivated to support our clients in their emissions-reduction efforts. We expect that over time our clients will transition their businesses to support a low-carbon economy, and we are committed to engaging with our clients to support their transition plans. In addition, we are energized by our active advancement of various industries' collective advancements towards that future.

Increasingly, banks are facing growing pressure to divest from fossil fuels. In some instances, such as thermal coal mining, where credit risk from stranded assets is a material risk in addition to a climate risk, Citi has established a transparent time frame for its transition expectations of this sector. However, we are cognizant that large-scale, rapid divestment could result in an abrupt and disorderly transition to a low-carbon economy, creating both economic and social upheaval on a global scale. For example, certain carbon-intensive companies may play critical roles in channeling the necessary capital expenditures and providing the raw materials to support new climate technologies or may provide necessary baseload power for developing economies.

Citi believes that an orderly, responsible and equitable transition, which accounts for the immediate economic needs of communities, workers, environmental justice and broader economic development concerns, is essential to the retention of political and social support to move to a low-carbon economy. Under the goals of our net zero plan, we intend to balance these needs appropriately to facilitate this complex transition.

A Brief Note on Materiality

At Citi, we recognize that in general, assessing materiality requires thoughtful consideration not only of any applicable materiality standard, but also of our purpose in assessing materiality and in communicating to our stakeholders. Our public disclosures, including our voluntary environmental, social and governance (ESG) and climate-related disclosures, include a range of topics that we believe are relevant to our businesses and that are of interest to investors and other stakeholders. We use the definition of materiality established under U.S. federal securities laws for the purposes of complying with the disclosure rules and regulations promulgated by the U.S. Securities and Exchange Commission (SEC) and applicable stock exchange listing standards. However, in our voluntary ESG disclosures, including those that relate to our climate change-related efforts, we have adapted our approach to materiality based on both the subject matter and purpose of the disclosures. In particular, our approach to these voluntary disclosures often considers broader definitions of materiality promulgated by certain external frameworks and reporting guidelines that take into consideration a wider range of factors relevant to climate and ESG disclosures, including the views of our key stakeholders and our desire to be a climate leader in the financial industry. To accommodate this multi-lensed approach to materiality, Citi occasionally adopts new frameworks and standards when we believe that doing so will allow us to better address sustainability matters.

For the purposes of discussing climate risks and opportunities in this TCFD report, we use an approach to materiality that is consistent with the TCFD recommendations. This means this report incorporates a climate change "double materiality" perspective — looking at both the climate's impact on our company, and our company's impact on climate — and uses longer time frames to assess potential impacts than those time frames customarily used in our required disclosures, including those mandated by SEC rules and regulations. This layered approach means that this TCFD report and many of our other voluntary disclosures capture details on ESG issues, including climate-related risks and opportunities that may not be, and are not necessary to be, incorporated into our required disclosures. Our approach to materiality in this TCFD report and other voluntary ESG disclosures also means that statements made in this report and in our other voluntary disclosures use a greater number and level of assumptions and estimates than many of our required disclosures. These assumptions and estimates are highly likely to change over time, and, when coupled with the longer time frames used in these voluntary disclosures, make any assessment of materiality inherently uncertain. In addition, our climate risk analysis and net zero strategy remain under development, and the data underlying our analysis and strategy remain subject to evolution over time. As a result, we expect that certain disclosures made in this report and our other voluntary ESG disclosures are likely to be amended, updated or restated in the future as the quality and completeness of our data and methodologies continue to improve.

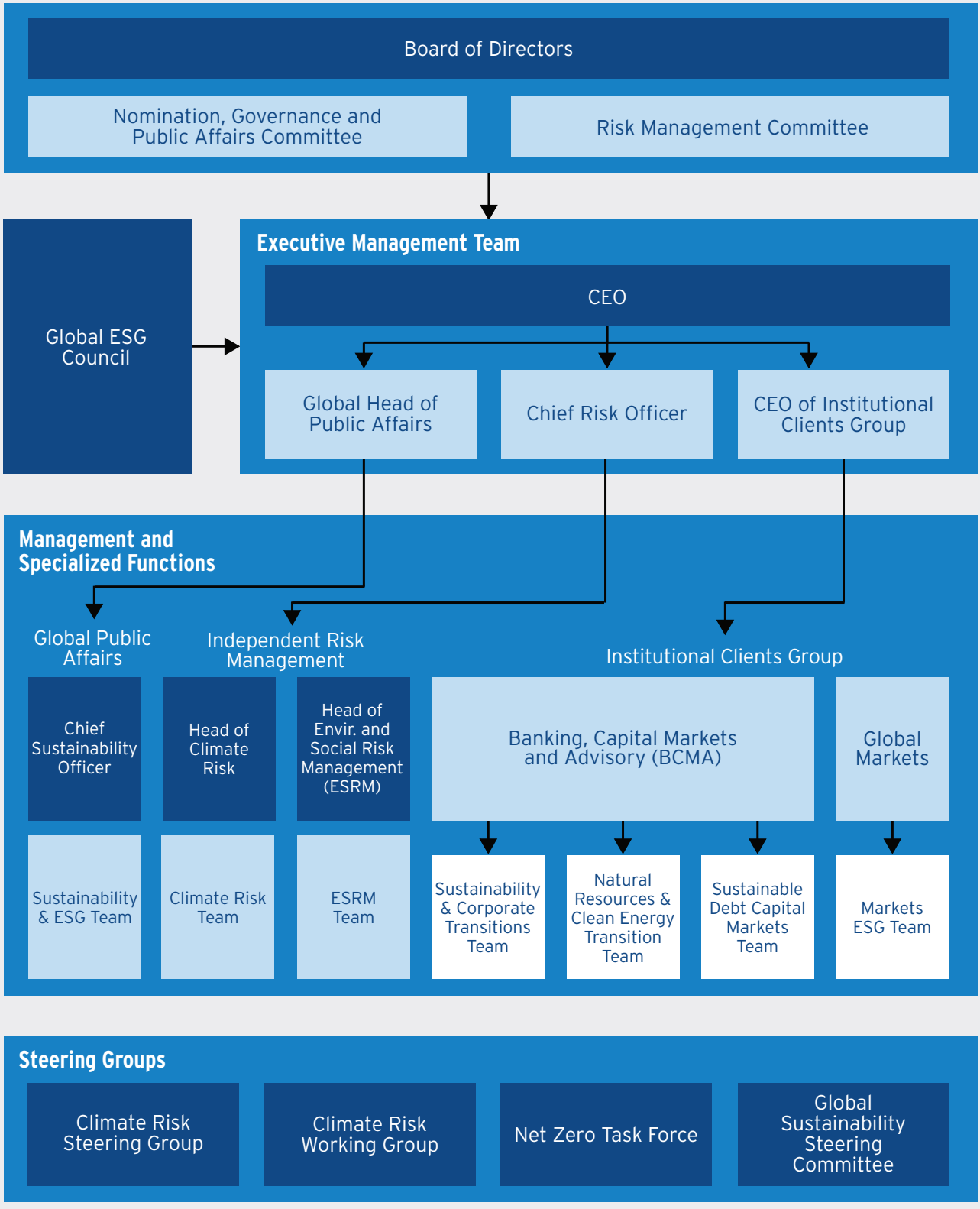
Governance

Citi's oversight of climate risk has continued to expand and evolve with our expanding commitment to our increasingly ambitious climate goals. Since Citi's 2020 TCFD report, we have:

- Stated our commitment to achieving net zero emissions, for our operations by 2030 and for our financed emissions by 2050;
- Formed a new Global ESG Council consisting of senior members of management in order to provide enhanced oversight of our ESG activities and goals;
- Grew our dedicated Climate Risk team with additional expertise in credit risk, scenario analysis, stress testing and regulatory engagement;
- Rolled out our first enterprise-wide training module on climate risk, which, to date, has been distributed globally to Risk personnel at Citi and covers aspects such as emerging climate risk standards, industry bodies and supervisory expectations and provides an overview of Citi's climate risk management efforts; and
- Created the Natural Resources & Clean Energy Transition team to combine our Energy, Power and Chemicals businesses in order to assist our clients across these sectors as they transition.

The following climate change and net zero-related governance diagrams illustrate how our governance is currently structured. Our 2020 TCFD Report included governance diagrams that illustrate how our climate-related governance was structured in 2018 and 2020.

Climate Change Governance at Citi



Board Oversight

As discussed in more detail in our 2020 TCFD Report, Citi's Board of Directors has ultimate oversight of Citi's work to identify, assess and integrate climate-related risks and opportunities throughout the organization. In addition to oversight by the full Board, the Nomination, Governance and Public Affairs Committee (NGPAC) of the Board and the Risk Management Committee (RMC) of the Board are the bodies primarily charged with oversight of our climate change efforts.

In 2020 into 2021, the NGPAC reviewed and discussed investor and market developments related to net zero, including a shareholder proposal pertaining to net zero, and considerations for Citi as it deliberated on the implications of a potential net zero commitment. These discussions continued with the full Board throughout 2021. During 2021, the full Board participated in a climate education session provided by the Head of Climate Risk, the Chief Sustainability Officer (CSO) and the Head of Corporate Banking. The full Board received reports from the CSO regarding sustainability activities and performance, including those related to climate change and Citi's net zero plan, and the RMC received reports from the Head of Climate Risk regarding emerging bank regulator trends on climate risk and Citi's approach to meeting them. Members of the Board also participated in investor calls on a variety of governance, environmental and social matters, including climate risk.

Details regarding our Board's oversight of climate matters, including the scope of the NGPAC's oversight of Citi's climate activities and performance and the RMC's oversight of risk policies and frameworks, are described in greater detail in our 2020 TCFD Report and in these committees' charters on our website.

Senior Management Responsibility

During 2020 and 2021, Citi's climate governance structure continued to evolve to respond to the demands of our climate strategy to meet global objectives. Our climate teams also have continued to expand their climate expertise and ability to identify, assess and manage climate-related risks and ultimately to integrate climate risk into our business. In July 2021, we formed a new Global ESG Council in order to provide a senior-level forum for oversight of our ESG commitments and ambition. The Global ESG Council, which meets on a near-monthly basis, is chaired by our CEO and includes members of the Executive Management Team as well as subject matter experts. Existing steering groups, including the Climate Risk Steering Group, Net Zero Task Force and Global Sustainability Steering Committee, continue to operate, and the leads of those steering groups are members of and provide reports to the Global ESG Council. The formation of the Council highlights Citi's commitment to ESG matters, including our climate-related strategies, at the highest level of our organization. The other enhancements we have made to our climate risk management and governance structure are described below.

We have not included details on most of the aspects of our climate governance structure that have not changed since we issued our 2020 TCFD Report. Additional information regarding the senior management structure of our climate governance including our corporate, risk management, operations and technology groups and certain business units, are described in greater detail in pages 13 through 15 of our 2020 TCFD Report.

Net Zero Governance

In 2021, we expanded our climate-related governance to address our commitment to achieving net zero emissions associated with our financing by 2050 and net zero emissions for our operations by 2030. Specifically, we established our Net Zero Task Force to support the development and launch of our net zero plan. The Task Force is led by our CSO and includes leaders from diverse business units such as Independent Risk Management; Banking, Capital Markets, and Advisory (BCMA); Global Markets; Global Wealth and Global Consumer as well as Global Public Affairs, Enterprise Operations & Technology (EO&T), Legal and Finance. We established this broad task force to collectively build knowledge on net zero, inform decisions on our methodology and ensure that information is flowing across Citi's businesses.

Efforts to achieve net zero emissions for our operations are led by the EO&T unit, in close coordination with the Net Zero Task Force and our broader net zero plan.

Risk Management

During 2021, we continued to pursue improved integration of climate issues into the company's broader business strategies, including with respect to risk management and oversight. The senior-executive level Climate Risk Steering Group consists of senior Citi leaders from across the firm who provide guidance, feedback and support with regards to the integration of climate risk management. The Steering Group facilitates engagement with senior global leadership, ensuring senior management commitment, and provides assistance to help coordinate resources across the firm. The Steering Group, which meets quarterly, provides senior support for the Climate Risk Working Group and Climate Risk team.

The Climate Risk Working Group is a global, cross-functional group that pulls expertise from Risk Management, Banking, Markets, Consumer, Legal, Compliance, Government Affairs, and Sustainability & ESG. This group meets on a monthly basis and has the central objective of building climate risk management capabilities and integrating climate risk into existing governance, risk processes and controls. This group is supported by sub-workstreams focusing on risk identification, risk assessments, scenario analysis and stress testing, data and analytics, governance and advocacy. Each workstream is co-led by a member of Citi's dedicated Climate Risk team which has grown in size since our last report and added expertise in credit risk, scenario analysis, stress testing and regulatory engagement on climate risk issues.

The Environmental and Social Risk Management (ESRM) team, comprised of subject matter experts across various environmental and social issues, continues to provide internal expertise to the Climate Risk team, Climate Risk Working Group, the Net Zero Task Force and our business units. ESRM also oversees our climate risk assessment processes for project-related lending under the Equator Principles and the ESRM Policy Sector Approaches, which include requirements for high-carbon sectors.

Our climate risk and net zero work are related and reinforce each other. Our climate risk work focuses on the integration of climate risk into Citi's risk management governance, processes and strategies, while our net zero work focuses on Citi's impacts on the climate and achieving our net zero emissions targets. Common linkages exist between the two workstreams. For example, both rely on common data

elements such as GHG emissions and better understanding of our clients' climate change mitigation and/or adaptation plans. Additionally, risk management tools can help achieve our net zero goals and our net zero plan can drive risk mitigation, particularly for reputation, credit and strategic risk. Leadership from both the Net Zero Task Force and Climate Risk Steering Group convene periodically to ensure alignment of objectives and efficient sharing of resources for each group's initiatives.

In 2021, Citi launched our first dedicated enterprise-wide training module on climate risk. Prior to rollout of the training module, our climate risk trainings have been bespoke for specific audiences to raise awareness on transition and physical climate risk, the increase in regulatory requirements and how climate risk fits into our risk management perspective and the climate journey Citi has taken to date. The training module allows us to reach a broader audience to support the ongoing integration of climate risk considerations into our risk management processes.

Business Units

Citi remains committed to working closely with clients to support their business plans as they transition to net zero. In March 2021, we created the Natural Resources & Clean Energy Transition team in order to drive client engagement efforts in the Energy, Power and Chemicals sectors. This team includes corporate and investment bankers with deep knowledge of the Energy and Power sectors and unites them under a single umbrella to more effectively evaluate and pursue opportunities to assist our clients with the net zero transition.

Our Sustainability & Corporate Transitions (SCT) team, founded in 2020, also continues to help us engage with clients across sectors to provide transition support. This team provides support to the industry and product groups with a focus on climate and broader ESG engagement, including providing assistance to clients in the furtherance of their net zero ambitions.

Our Sustainable Debt Capital Markets (Sustainable DCM) team, formed in 2020, has technical expertise on green, social and sustainability bonds as well as sustainability-linked bonds, and works with debt capital markets and industry bankers to originate and structure issuances for these types of bonds on behalf of clients around the world. The Sustainable DCM team also advises Citi Treasury on Citi's own sustainable debt issuance programs.

These teams, under our Banking, Capital Markets and Advisory group, are central to the integration of our climate strategies deep into our organization. Through these teams, we have increased the climate fluency of our business team leaders, allowing climate considerations to be better integrated into our business decision-making.

Remuneration

The Personnel and Compensation Committee of the Board holds senior executives responsible, and senior executives hold their team members responsible, for managing our climate change efforts through incentive compensation decisions. Citi's incentive compensation program is discretionary, not formulaic. Management of climate change efforts is taken into account in the program in two ways. First, senior

executives are held accountable for business performance through specific metrics designated on a position-by-position basis. Progress on our $500 Billion Environmental Finance Goal and milestones for the development of our net zero plan are incorporated into the executive scorecards of our CEO and the CEO of Citi's Institutional Clients Group, and guidance on the development and publication of our net zero plan is also incorporated into the executive scorecard of our EVP of Global Public Affairs. Second, climate change strategy and risk management performance goals are incorporated into annual goals and performance review processes for a number of our senior managers and their teams who are responsible for developing and implementing our approach to climate change. These managers include the CSO, Head of ESRM, Head of Climate Risk and the Head of Facilities Management, whose team is responsible for our environmental footprint goals. Corporate performance against scorecard metrics and individual performance against annual goals are two factors, among others, that are taken into account in determining incentive compensation.

Strategy

At Citi, we continue to broaden and strengthen our efforts to identify climate-related risks and opportunities, the key first step in Citi's climate strategy. Once identified, Citi then assesses how the risks can be better managed, reduced or mitigated in line with Citi's risk management framework.

The three pillars of our Sustainable Progress Strategy each have climate-related elements, and this strategy framework serves as the foundation for our climate commitments. The first pillar, "Low-Carbon Transition," focuses on the financial targets set for supporting the green companies, industries and technologies that will accelerate the global transition. The second pillar, "Climate Risk," guides our measurement and management of climate risks and supports our net zero plan. The third pillar, "Sustainable Operations," focuses on our own impact-reduction efforts across Citi's facilities worldwide. These initiatives are each discussed in more detail elsewhere in this report.

THE THREE PILLARS OF CITI'S SUSTAINABLE PROGRESS STRATEGY

Low-Carbon Transition

Accelerate the transition to a low-carbon economy through our $500 Billion Environmental Finance Goal

Finance and facilitate environmental solutions in support of:

- Renewable Energy
- Clean Technology
- Sustainable Transportation
- Energy Efficiency
- Green Buildings
- Water Quality & Conservation
- Circular Economy
- Sustainable Agriculture & Land Use

Climate Risk

Measure, manage and reduce the climate risk and impact of our client portfolio

Enhance our TCFD implementation and disclosure through policy development, portfolio analysis and stakeholder engagement

Sustainable Operations

Reduce the environmental footprint of our facilities and strengthen our sustainability culture

Minimize the impact of our global operations through operational footprint goals and further integrate sustainable practices across the company

Climate-Related Risks

Citi's climate strategy is continually evolving as we improve the tools and expand the resources available to grow our understanding of the interconnection between the climate, our business, our operations, our clients and our communities. We seek to identify and advance the initiatives that will enhance our operational resiliency, decision-making and planning to mitigate climate-related risks and capitalize upon climate-related opportunities.

Our strategy and risk management initiatives are informed by each other and we adapt as needed based on our performance against established metrics and targets. We are working to advance our climate knowledge base and our resiliency to climate-related shocks.

To assess how various climate risk drivers may impact Citi, we use the TCFD framework's categorization of transition and physical climate risks. We view climate risk as a cross-cutting risk which manifests itself through or amplifies existing risk categories within Citi's Risk Taxonomy, as described further in the Risk Management section.

Examples of Transition Risk	
Policy and Legal Risk	Policy changes (e.g., carbon taxes, permit restrictions, etc.) and legal risks (e.g., lawsuits).
Technology Risk	Disruptive technologies reducing demand for clients' products or services.
Market Risk	Shifts in supply chain and consumer demand for products.
Reputational Risk	Changing public perceptions of products or companies.

Examples of Physical Risk	
Acute Physical Risk	Event-driven impacts, such as from extreme weather events and the increased frequency of such events, (including wildfires, droughts and hurricanes, among others).
Chronic Physical Risk	Overall shifts in climatic behavior, such as temperature and precipitation patterns, sea level rise, etc.

Citi also considers how climate risks can be primary and secondary drivers of our different risk categories. These transition and physical risks can manifest themselves differently across our risk categories in the short, medium, and long term. These time horizons are described here for reference.

Time Horizons	
Short	< 1 year
Medium	1-5 years
Long	> 5 years

Risks Inherent in Climate-Related Data

Climate data continues to be limited in availability, and even when available, is generally variable in terms of quality. Our understanding of the interconnected nature of climate-related risks and the global economy, as well as our modeling capabilities to analyze these interconnections, is improving but remains incomplete. The financial sector as a whole is grappling with risks related to data availability and quality. Voluntary and mandated climate frameworks vary in their data quality requirements, while clients vary widely in their collection and disclosure of asset-level climate data. For example, in FY2020, only 30% of our Power and Energy clients reported actual emissions data for Scope 1 and 2, and 0.1% for Scope 3. Of this 30%, only 11% represented verified (i.e., audited) data. Even as regulators begin to mandate additional disclosure of verified, climate-related data by companies across sectors, we expect there to continue to be gaps between needed and available data for more reliable climate risk analysis. Without accurate, high-quality data of the type and quantity we need, we must often rely on estimates backed by numerous assumptions and extrapolations based on high-level sector data to inform our climate strategy and risk analysis. As such, disclosure of emissions will become increasingly important to our client engagements.

Citi's cross-functional Climate Risk Working Group is tasked with enhancing our climate risk management capabilities, including climate data and analytics needs. The climate risk data workstream, led by our Citi Global Data Insights team, is focused on developing a firm-wide strategy for third-party and client climate data collection and integration at Citi.

Currently, there is no single, global, cross-sector data provider that adequately and consistently covers our needed scope for data to analyze emissions and assess physical and transition risks across our operations and portfolios. Instead, we have obtained historic reported data and leveraged certain third-party vendors, such as S&P Global TruCost and Wood Mackenzie, to supplement existing data to meet specific needs. We are also working on increasing our customer engagement to get more accurate and refined climate data directly as well as issuing vendor requests to explore available datasets and tools and assessing their viability for internal use as sources for the climate data inputs for our modeling and scenario analysis efforts.

As part of our strategy to manage, integrate and disseminate data, as data availability improves, we will continue to integrate it into our systems for ease of access.

Our modeling capabilities, as well as the availability, accessibility and suitability of climate data for financial risk analysis, continue to evolve. Although we strive to provide comprehensive and accurate information to our stakeholders, we continue to believe it is important to disclose the data and our methodologies as they currently exist, instead of waiting until such resources are fully formed and available to begin the climate risk integration and disclosure process. The available results of these analyses conducted to date have allowed Citi to advance our net zero ambitions and better understand where risks may exist in certain climate scenarios.

Citi has continued to conduct several climate scenario analyses considering both transition and physical risks, which are each discussed in more detail below. For more information on our approach to the identification of climate-related risks, see pages 39 through 41 of our 2020 TCFD report.

Transition Risk Analysis

As new data and modeling capabilities become available, we continue to build upon the transition risk scenario analyses described in our 2020 TCFD Report. Although we continue to use various models and programs in our risk assessment process to guide our climate strategy, our transition risk focus has recently been on our net zero work; we expect that managing our portfolio to net zero should also help mitigate transition risk.

Establishing our Net Zero Methodology

As discussed above, on her first day as CEO, Jane Fraser announced that Citi was committing to achieving net zero emissions associated with our financing by 2050, and announced that Citi intends to achieve net zero emissions for our operations by 2030. This is an ambitious goal that requires both rethinking our business and helping our clients rethink theirs. Given the urgent need for collective action to address the climate crisis, Citi sees both a responsibility and an opportunity to play a leading role in helping drive the transition to a net zero global economy. We know, however, that it will not be possible to achieve a net zero global economy without strong and enabling climate policy across key jurisdictions, and it is part of our net zero plan to support these policy advancements as well.

Shortly after announcing our net zero commitment, we joined the Net-Zero Banking Alliance (NZBA), which is part of the broader Glasgow Financial Alliance for Net Zero (GFANZ), to contribute to the continued development of our sectors' net zero approach. As part of our NZBA commitment we:

- Committed to transition our lending portfolios to align with pathways to net zero by 2050;
- Committed to setting the first round of 2030 emissions targets for key sectors within 18 months of the establishment of NZBA, and to set five-year interim goals from 2030 through 2050. These targets are expected to be developed using the UNEP FI Guidelines for Climate Target Setting for Banks (UNEP FI Guidelines); and
- Committed to annually publish absolute emissions and emissions intensity in line with best practices and, within a year of targets being set, disclose our progress and transition strategy with proposed actions and climate-related sectoral approaches.

Under NZBA, net zero commitments are expected over time to include numerous carbon-intensive sectors on a "comply or explain" basis, which provides market participants with the opportunity to comply with a set of requirements or explain why they are not applicable. These sectors are expected to include: Agriculture; Aluminum; Cement; Coal; Commercial and Residential Real Estate; Iron and Steel; Oil and Gas; Power Generation; and Transport.

This process is not simple. Although we are in the initial organizational and knowledge-building stages

for many aspects of this ambitious goal, we have already made significant progress in plotting the path towards net zero and have begun the process to set specific emissions targets for our most GHG-intensive sectors, Energy and Power. The remainder of this section is intended to provide insight into Citi's process for establishing these targets, and a detailed technical methodology is also included in an appendix to this report. More information on our approach to net zero operations is included in the Metrics & Targets section.

Step 1: Identifying Scope and Metrics

Our initial effort focuses on financed emissions from our commercial lending and certain project finance activities. We intend to begin including sectoral emissions associated with our debt and equity capital markets activities once the PCAF methodology for these products has been established. We plan to disclose absolute emissions and use emissions intensity metrics for certain sectors' targets, such as the Power sector, as there are appropriate physical-intensity based decarbonization pathways for carbon intensive sectors in the global economy. Moreover, intensity metrics are vital to enhancing comparability between disclosures on financed emissions.

Our current financed emissions disclosure encompasses our clients' Scope 1, Scope 2 and certain Scope 3 emissions (for sectors with high Scope 3 materiality) associated with the corporate loans and the activity for project finance. We expect the quality and availability of our clients' Scope 3 emissions data to improve over time, and our view of material Scope 3 emissions may evolve as this data improves.

While the overall objective is to decrease emissions on an absolute basis to net zero by 2050, pursuing this goal through rapidly decreasing our exposure to all carbon-related assets could lead to undesirable consequences. For example, it may disincentivize investments that contribute to other societal goals and may disincentivize certain mergers or consolidations that could in practice improve operating efficiencies in an industry. Instead, we seek to achieve our net zero ambition while also being mindful of a broader ESG perspective and continue to support projects that improve efficient resource delivery and advance energy access and affordability and the right to development and economic self-determination in developing countries.

Step 2: Establishing the Baseline

To establish actionable targets, we first needed to establish our financed emissions baselines for each considered sector. Developing these baselines required us to answer several methodological questions. First, we had to decide whether to use committed funds (the capital available to a client for a certain use) or outstanding funds (the funds actually drawn down on such available credit) in attributing client emissions to our financed emissions baseline. We report according to the PCAF methodology, which requires annual reporting of financed emissions metrics related to outstanding funds. The use of outstanding funds, instead of committed funds, reflects the actual Citi funds used by clients on that timescale, but can fluctuate for reasons unrelated to a clients emissions. However, for the purposes of forward-looking emissions management and target-setting, our committed funds provide a more accurate reflection of the maximum amount that Citi has agreed to finance for clients. As a result, we have concluded that using committed funds will allow us to better capture how changes in Citi's lending practices over time alter our exposure to climate risk and can contribute to the net zero transition.

This decision creates an additional layer of complexity to the methodology of attributing emissions. The PCAF methodology calculates a financier's contribution to a company by dividing the outstanding debt by the company's equity and drawn debt (for private companies). By adding unused committed figures to the numerator (thus creating a numerator reflecting total committed debt), divided by a figure only encapsulating a company's drawn debt (and not the full representation of committed facilities across other financial institutions), we are likely, and in many circumstances, significantly, overstating our attribution of emissions. Although this chosen calculation will result in a larger baseline, we have decided to use committed funds for the purposes of setting our emissions baselines for our net zero plan.

Next, determining emissions baselines requires the collection and refining of large pools of new data. Both the quantity and quality of available data can substantially impact these baseline figures. For our current analyses, we used the S&P Global Trucost dataset, Wood MacKenzie data and the PCAF emissions factor database to adjust production or revenue data for emissions estimations.

PCAF developed a data quality hierarchy that allowed Citi to score emissions estimates for all clients. Data scores range from 1 for disclosed and verified emissions — the highest quality — to 5, which account for varying degrees of estimation based on physical production or revenue data. Without client specific data, the sector-level estimations can result in incorrect estimations of client emissions. With substantial review, we were able to improve the data quality for the Energy and Power portfolio Scope 1 and 2 emissions to account for 55% of disclosed or derived emissions based on primary company data (data scores 1-2), 14% estimated based on revenue (data score 4), and 31% estimated based on industry sector emissions factors (data score 5). Overall, we found that only 29% of our parent-level Power clients and 17% of our Energy clients publicly reported their GHG emissions (Scopes 1 and 2). While many large public companies have reported emissions for years, companies in emerging markets and private companies were less likely to report. We view this as a future opportunity for client engagement and expect our data to improve as more of these figures are reported.

We are continually working to improve the data that we use, which will in turn refine our calculation results. As data quantity and quality improve, we expect we may periodically restate our baseline emissions and potentially our emissions reduction targets. As our baselines and targets continue to evolve, so too will our progress made against such targets. Although there may be a lag in our progress made against such recalibrated targets, we remain committed to pursuing the best data and modeling capabilities we have available and transparently updating our assessments over time.

Step 3: Setting Decarbonization Pathways and Targets

To reach net zero, we must move from our baseline, across a decarbonization pathway to our ultimate net zero target. Citi continues to monitor and evaluate a variety of scenarios — including scenarios published by the International Energy Agency (IEA) and the Network for Greening the Financial System (NGFS) — to better inform our decarbonization pathway and support the development of interim targets. As noted above, our NZBA commitment requires us to use the UNEP FI Guidelines as the framework for aligning our portfolios with pathways to net zero by 2050. However, the UNEP FI Guidelines do not specify the scenarios to be used in target-setting, only that the scenarios used must be widely accepted and science-based decarbonization scenarios. Given the widespread use and the industry-specificity of various scenarios issued by the IEA in its annual World Energy Outlook and interim special reports — notably the

IEA Sustainable Development Scenario (SDS) and Net Zero Emissions (NZE) scenarios — Citi has used these scenarios for the assessment of the Energy and Power portfolios.

Scenario Development for Energy and Power Sectors

Although the IEA has published multiple scenarios, the most relevant for our purposes are the Net Zero Emissions by 2050 Scenario (NZE 2050) and the Sustainable Development Scenario (SDS). Each of these scenarios works backwards from its stated goal in order to determine what pathway is necessary to achieve the specified target without violating the scenario's stated conditions. For the Energy portfolio, Citi selected the NZE 2050 scenario due to its alignment with Citi's commitment to be net zero by 2050. For the Power sector, Citi selected the SDS, due to the increased regional granularity. The SDS has unique pathways for OECD and non-OECD countries, rather than a single global pathway under NZE 2050. The SDS OECD pathway, which aligns with where the bulk of our current loan portfolio exposure lies within the Power sector, is a more ambitious reduction rate than the NZE 2050 global rate. As and when updates are released, Citi will consider and assess updating to the most relevant pathways. A comparison of the two scenarios is provided below.

Reference Scenario Options	Estimated Temperature Rise	Overview	Assumptions
Net Zero Emissions by 2050 **(NZE 2050)**	1.5°C	• Outlines necessary technology, policies and behavior change to bring about net zero emissions by 2050 • Meets UNEP FI guidelines	• 50-60% of required CO_2 reductions are from technologies currently at demonstration or prototype stage • $90 billion in annual investment by 2030 to increase the number of electric vehicle charging points
Sustainable Development Scenario **(SDS 2020)**	1.8°C (66% chance) 1.5°C (50% chance)	• Outlines a major transformation of the global energy system to meet three main energy-related Sustainable Development Goals (SDGs), aligned with the Paris Agreement • Permissible per UNEP FI guidelines, but not a true net zero scenario • Regional granularity for decarbonization pathways (OECD vs. non-OECD), which results in a more ambitious Power reduction rate under SDS OECD than the NZE 2050 global scenario	• 60-65% of required CO_2 reductions are from technologies currently commercially deployed • Lifetime extensions of nuclear power plants and some new builds • Strong support for electric mobility, alternative fuels and energy efficiency

Once decarbonization pathways have been selected for analysis, we must next evaluate our clients' forward-emissions trajectory using our 2020 portfolio emissions baseline for each relevant sector. We then can identify the difference between where our portfolio emissions are and where our portfolio needs to be

in 2030 under our chosen decarbonization pathway. We can evaluate options for achieving the targeted emissions reduction wedge based on our portfolio's current alignment and the expected trajectory of our clients by calculating the gap between the two, and thus assessing how aggressively Citi and our clients may need to reduce emissions to be aligned with the specified pathway. More information on our Baseline Emissions and Sector Intensity Methodology is available in Appendix A attached to this report.

The main objective of our net zero strategy and achieving our 2030 targets for our Energy and Power portfolios is to support the reduction of overall GHG emissions through the use of alternative energy resources, investments in technology and adaptation to policy measures which are reflected in the IEA NZE 2050 and IEA SDS OECD scenarios.

Given the complex and novel nature of many of the data and implementation challenges associated with our net zero plan, we are using multiple data sources and are participating in numerous industry collaborations aimed at developing a better understanding of the potential sectoral pathways for certain sectors. For example, we are co-leading a GFANZ workstream on sectoral pathways to understand and support efforts to develop pathways for carbon-intensive sectors, starting with the steel and aviation sectors. While the data availability and metrics applicable to sectors may differ, we anticipate applying the same general approach to setting decarbonization pathways and targets across all relevant sectors.

Step 4: Developing Strategies for Achieving the Targeted Emissions Reductions

Once the targets are established, the next step is to develop an implementation plan to achieve targeted reductions in each relevant sector. We are evaluating a number of strategies and tools to drive towards the established goals, though they may not all be applicable in every circumstance. Some of the emissions-reduction approaches and potential future tools include:

- **Client Engagement** – Deepen engagement with our clients on climate. Working collaboratively with our clients in decarbonizing and helping them in their transitions is a central focus of our net zero plan. Indeed, we believe systemic collaboration is essential for the global economy to reach net zero emissions. We are already engaging with numerous clients with respect to their climate exposure profile, and we intend to significantly increase our engagement with them to (i) understand their transition plans in greater detail as those plans evolve and (ii) help them in their strategies to realize opportunities inherent in transitioning to a low-carbon world.

  Engagement with high-emitting clients on their operational emissions over which they have direct control is also important. For example, in the Energy sector, Scope 1 emissions contribute significantly to overall emissions. Issues such as leakage, venting and flaring from oil and gas production are major sources of methane emissions. Addressing such issues, which are within the direct control of our clients, balances the need for large emissions reductions without disrupting the energy needs of the global economy – a key consideration in the early phases of a net zero transition.

- **Capital Allocation Strategy** – Broaden our capital allocation approach and strategy to incorporate important new opportunities that will arise in supporting existing and new clients as they invest in their decarbonization plans as well as low-carbon technologies.

- **Portfolio Management Tools** – Incorporate new measurements, metrics and other tools to further optimize our path to achieving 2030 and 2050 goals, as well as enhance the dimensioning of our climate risk exposure. Future metrics and potential tools may include limits with respect to certain climate or emissions exposures and/or (as data quality and transparency materially improve) implementing a carbon price element into our current portfolio management measures.
- **Compensation** – Incorporate climate-related scorecard metrics and climate change performance goals further into the annual goals and performance review processes for our senior executives and their teams.

At this time, with the exception of our ESRM Policy Sector Approaches that have established restrictions on financing of thermal coal mining and thermal coal power due to increased credit and reputation risk, we do not anticipate restricting financing particular sectors. Obtaining improved emissions data from our clients and information on their transition strategy is a priority. Where necessary, we will augment our client transition strategy and reallocate financing towards companies, activities and technologies with lower emissions profiles or with robust transition strategies.

Step 5: Reporting & Verification

We plan to continue reporting on our emissions, including select Scope 3 emissions, in our annual voluntary reports. Currently, our Scope 1, Scope 2 and a portion of Scope 3 emissions data associated with our operations undergo a third-party limited assurance review. We anticipate procuring some form of third-party verification for our Scope 3 financed emissions by 2024, as required by NZBA.

In the interim, we will continue to work internally to improve our financed emissions data, including using client engagement to increase publicly reported data and to encourage verification of that data. While we are working to increase our client engagement efforts, in many instances the client-level emissions data that is currently available to us is either (i) estimates of emissions data for companies that do not currently disclose their emissions, or (ii) self-reported data that may not be verified. Certain data quality hurdles may be overcome by a regulatory mandate for emissions disclosures. We expect that anticipated mandatory disclosure requirements in some jurisdictions will improve our clients' disclosures, and we will also continue to engage with our clients in other jurisdictions to encourage high-quality reporting.

Next Steps

As we move forward, we will broaden the scope of our emissions calculations and reporting. For emissions calculations, we will work towards calculating and disclosing the baselines for our priority carbon-intensive sectors, referring to the UNEP FI Guidelines and PCAF for guidance.

While our baseline emissions calculations and sector target setting will almost certainly continue to evolve as we obtain more pertinent and refined data, we plan to develop and publish initial baselines and targets for a number of additional sectors in the next few years. In 2022, we plan to focus on the Auto Manufacturing, Steel, Thermal Coal Mining, and Commercial Real Estate sectors for core analysis and target setting in alignment with the NZBA guidelines. We will consider the remaining sectors, including Aluminum, Aviation, Cement and Agricultural subsectors in 2023-2024. We will plan to incorporate capital

markets facilitation into our target setting process as the PCAF methodology is finalized.

At this time, we do not anticipate setting targets for our residential real estate portfolio given our need to understand how this could have unintended consequences for other regulatory obligations such as the Community Reinvestment Act in the United States. However, in any case, we anticipate that the emissions associated with our residential real estate portfolio will decrease over time with improvements in home efficiency and the decarbonization of energy supplies.

Citi's Net Zero Transition Principles

As we transition our business to net zero GHG emissions by 2050, Citi will be guided by the Transition Principles below. We expect these principles to evolve as we collectively learn with our clients, peers, investors and other stakeholders. We recognize that in addition to private sector action, a net zero future will also require public policy and technology solutions, which we will actively support. While we acknowledge that fully transitioning the global economy will take decades, we understand the urgent need for near-term actions that will deliver the rapid emissions reductions required. We will uphold our mission of enabling growth and progress and will be proactive in helping to drive an orderly transition, while also contributing to broad sustainable development objectives.

Net Zero Leadership – Set net zero targets that are ambitious, transparent and aligned with climate science, consistent with our leadership in sustainability over the past two decades. Help define net zero for the banking sector, including through our membership in the Net-Zero Banking Alliance.

Focus on Transition – Partner with our clients through their transition, ensuring appropriate alignment with our net zero commitment and helping them navigate the challenges they face. Assist clients and governments as they evaluate the carbon-intensive assets in their portfolios and consider responsible asset retirements or divestments, giving consideration to the destination, transparency and stewardship of these assets as we assess transactions and transition plans.

Social Responsibility – Strive to ensure that our net zero transition is consistent with other sustainable development objectives. We will also assess how our financing decisions could affect lower-income communities, developing countries and communities dependent on carbon-intensive sectors, balancing the need for carbon reduction with the potential negative impacts on access to energy and economic dislocation. We will be mindful that some of these same communities could also be faced with some of the worst impacts of climate change.

Client Transparency – Partner with our clients, with the ultimate goal of helping them decarbonize. If we decide to exit a client relationship, communicate the time frame and rationale in a transparent manner, taking into account worker and community impacts.

Constructive Engagement – Work with the public sector, clients, civil society and our peers to transparently promote and support climate policies, regulations and the scaling of new technologies that are required for an orderly transition.

Disclosure – Report annually on our progress and our transition as we learn.

Discussion of Offsetting & Sequestration

Our net zero plan and our client engagements prioritize emissions reduction. We recognize that not all scenarios or frameworks allow for offsetting; however, we anticipate that carbon removal offsets will be needed to supplement our net zero targets and the impact-reduction strategies of some of our clients. For example, some activities — including certain agricultural and industrial processes and oil and gas activities — cannot viably achieve absolute zero emissions. Those industries, however, still provide products and services that are important to society and are likely to remain relevant well into the future. In these instances, removal offsetting can help to address any residual emissions from such sectors.

In addition, carbon emissions reduction efforts are often discussed in conjunction with carbon capture and sequestration activities. While the IEA's Net Zero Emissions scenario does not contemplate offsets, it includes the development of robust carbon sequestration activities.

We plan to follow NZBA's guidance on offsets, which requires offsets to be additional, certified and restricted to carbon removals to balance residual emissions where there are limited technologically or financially viable alternatives to eliminate emissions. However, our offsetting approach may evolve as our climate strategy continues to develop. We support the development of both high-quality removal offsets and sequestration activities and expect they will play a role in providing some buffer for any shortcomings in certain companies' or sectors' net zero ambitions. We plan to evaluate the use of offsets and sequestration on a case-by-case basis and to take a variety of factors into consideration in assessing their applicability to Citi's and our clients' net zero efforts, including the disclosure recommendations of the various frameworks to which we are a signatory.

Ceres Stakeholder Dialogue

We continue to evaluate and engage with a variety of organizations and stakeholders as our strategy and methodologies for climate risk continue to evolve. In September 2021, we hosted a stakeholder engagement session facilitated by the nonprofit sustainability advocacy organization Ceres. Participants included clients, investors and representatives from nongovernmental organizations who provided commentary on Citi's ongoing TCFD-related disclosures and our approach towards setting net zero targets and measuring our baseline emissions. Feedback from that session has been integrated into this report, and will serve to further guide our progress as we continue to develop our net zero plan.

A summary of key takeaways is summarized below:

- Stakeholders are pleased to see Citi's progress, while encouraging faster movement on setting targets, engaging with clients in carbon-intensive sectors and establishing a clear trajectory toward full portfolio coverage.

- Our climate governance structure is comprehensive, but stakeholders requested more clarity and specificity around roles, responsibilities, cross-business integration and incentive structure.
- Despite challenges associated with data collection and development of decision-useful metrics, stakeholders urged Citi to strive for transparent communication in its disclosures on current progress and related challenges, including setting qualitative targets where there is an absence of quantitative data.
- Citi should not rely heavily on offsets as part of its net zero strategy with clients. In the instances when offsets cannot be avoided, proven methodologies for determining what constitutes a credible offset, third-party verification of the underlying offset and considerations of alternative types of removals are important.
- Target setting should include both absolute and intensity-based targets and focus on committed credit.
- Stakeholders would like to see more details on risk exposure and transition plans, business opportunities and value available in the low-carbon transition.

Net Zero Plan – Energy and Power

Transition plans for our Energy and Power portfolios build upon the calculation of our financed emissions and the setting of interim targets for these sectors. Our net zero plan incorporates a twofold approach: assessment of our clients' climate profiles and engagement to understand their transition opportunities. Additionally, we will employ a number of tools, phased in over time, to help move these portfolios towards our 2030 targets. Underlying the implementation of this plan is Citi's continued effort to expand our climate-related resources and directly engage with our clients. These approaches are explained in detail below:

Client Engagement and Assessment

The first step of our net zero plan involves engagement, client by client, to understand their GHG emissions disclosure and their perspective and plans for transition. Additionally, we will review public disclosures, climate governance and the commitments and actions they have taken to date. We are beginning this process of client engagement and anticipate this initial review phase will continue through the end of 2023.

In the following table, we highlight some of the key considerations that will frame client engagement.

CONSIDERATIONS FOR LOAN PORTFOLIO ASSESSMENTS – ENERGY AND POWER SECTORS

Key: ■ Applicable to both sectors ■ Power sector only ■ Energy sector only

GHG Emissions Public Disclosure

Review public disclosures such as sustainability reports or submissions to the CDP Climate Change Questionnaire and supplement with direct engagement with clients

- ❒ Scopes 1 & 2 (absolute emissions & physical intensity)
- ❒ Scope 3
- ❒ Baseline year
- ❒ Status of data verification

GHG Emissions Reduction Targets

Review public statements on Net Zero/ decarbonization commitments or alignment with external initiatives such as the Science Based Targets initiative. For the Energy sector, assess targets for GHGs such as methane

- ❒ Net zero commitment or science-based targets
- ❒ GHG emissions reduction targets
- ❒ Methane reduction targets
- ❒ Flaring reduction/phase-out targets

Climate Risk Scoring

Harness public disclosure and statements and third-party data as well as our ongoing client engagement, to develop an internal assessment for both transition and physical risk

- ❒ Transition risk assessment
- ❒ Physical risk assessment

Decarbonization / Transition Plan

Understand client's climate transition plan. Determine the tools that clients will employ, including capital allocation, product diversification and linkages to executive compensation

- ❒ Scope 1 decarbonization plan
- ❒ Scope 2 decarbonization plan
- ❒ Evolution of energy sources[1]
- ❒ Product diversification and Scope 3 reduction[2]
- ❒ Capital allocation[3]
- ❒ Governance – accountability, compensation links

Client Asset Evaluation

Where available, review asset-level data for further assessments of climate risk and emissions intensity; this is particularly applicable to project finance

- ❒ Existing generation assets (carbon intensity analysis)
- ❒ Existing reserves & assets
- ❒ Comparative economics of production
- ❒ Carbon-intensive asset retirement schedule
- ❒ Resilience risks

External Climate Scores

Reference third-party ratings for additional data on climate-related performance

- ❒ PACTA Score
- ❒ CA100+ Score
- ❒ World Benchmarking Alliance
- ❒ Carbon Tracker Initiative
- ❒ Transition Pathways Initiative

Other Data

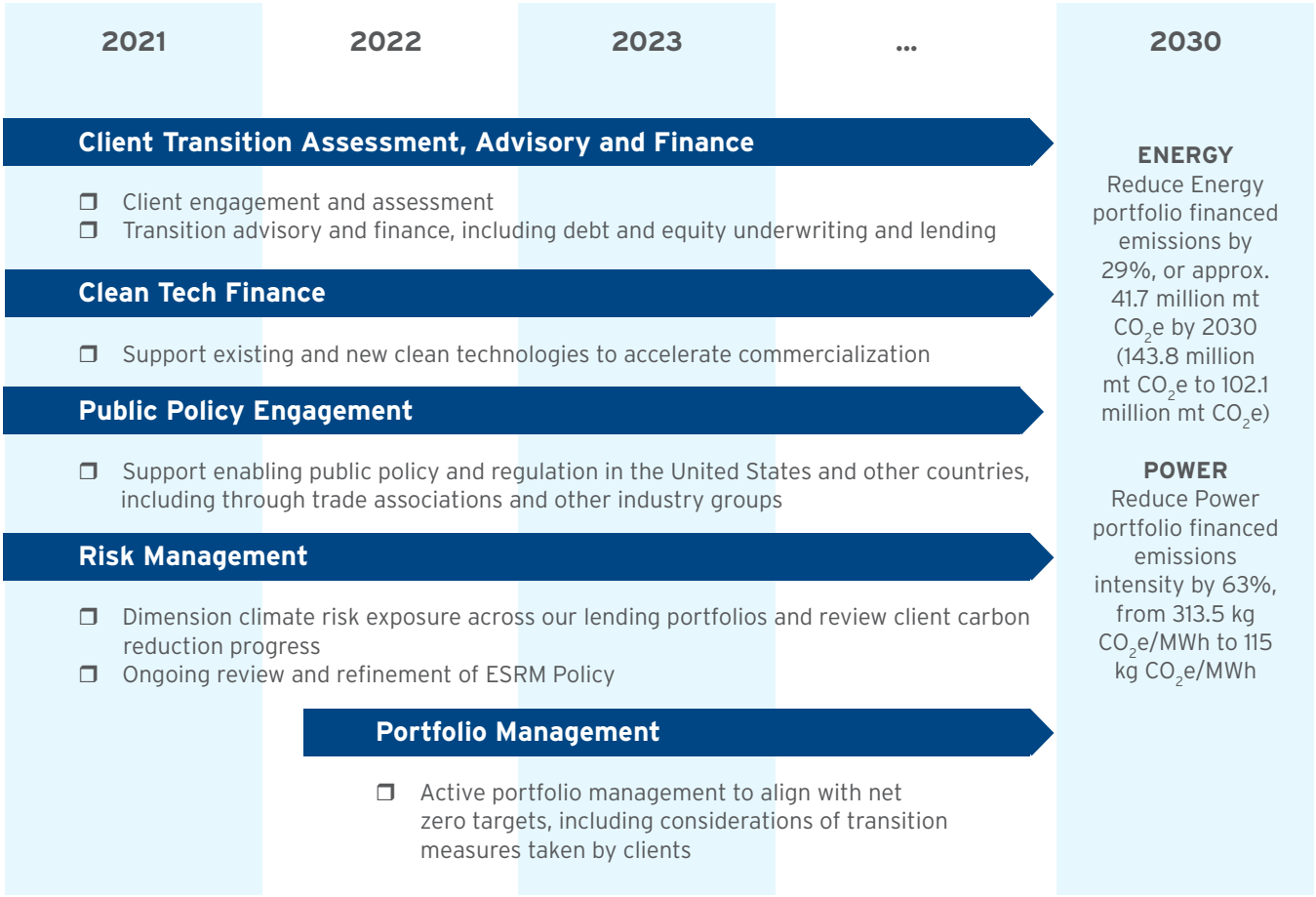
Consider the social elements of transition including human rights risks, access to energy for developing countries, livelihoods of communities and workers in these sectors as well as regulatory environment

- ❒ Sustainable development factors
- ❒ Country/regional regulatory environment

[1] For the Power sector, this could include battery storage; carbon capture, utilization and sequestration; energy efficiency; fuel cells/hydrogen; nuclear power and renewable energy including wind and solar.
[2] For the Energy sector, this could include bioenergy; carbon capture, utilization and sequestration; direct air carbon capture; hydrogen; renewable energy and renewable natural gas.
[3] For the Power sector: Allocation of capital towards traditional versus clean technologies. For the Energy sector: Allocation of capital towards oil & gas exploration and production; methane detection and reduction; clean technologies.

Achieving 2030 Targets

As we begin engaging with clients with respect to their decarbonization plans, we are also planning a phased approach towards reaching our financed emissions reduction targets for our Energy and Power loan portfolios. The timeline below indicates the individual stages of this plan, using a combination of approaches focused on five key areas of activity and described in further detail in the following sections.



Client Transition Assessment, Advisory and Finance

This area of activity builds upon the client engagement work already underway through our corporate and investment banking units that have been designed to help guide our clients in their transition – the Sustainability & Corporate Transitions team, and the Natural Resources & Clean Energy Transition team. Through these engagements, we seek to understand our clients' existing business strategies and work with them to develop their transition plans and advise on capacity building. One challenge that we foresee is a potential mismatch between our 2030 emissions targets and our clients' decarbonization or net zero trajectories. Investments that our clients make in the the near term to decarbonize or transition their businesses will take time to result in emissions reductions and could be realized beyond 2030. Client

engagement and understanding of their expected decarbonization timetable will be necessary to manage this risk.

An element of these engagements may include innovative financing, such as transition bonds and loans, to raise capital for clients to facilitate the decarbonization of their operations. Transition finance is still a relatively new concept, but is one that we expect to mature rapidly as companies begin to implement their decarbonization targets. Other elements of transition finance will include continued financing of renewable energy projects and support for the development of clean technologies, particularly for clients that may need to diversify.

Climate Tech Finance

As a large multinational bank, Citi has the opportunity to support our clients and expedite the commercialization and adoption of climate technology globally through transition and environmental finance, as well as public-private partnerships such as Breakthrough Energy Catalyst, which Citi joined as an anchor partner in 2021. Below are some of the climate technology opportunities for the energy and power sectors.

- **Energy**: bioenergy; carbon capture, utilization and sequestration; direct air carbon capture; hydrogen; renewable energy and renewable natural gas
- **Power**: battery storage; carbon capture, utilization and sequestration; energy efficiency; fuel cells/ hydrogen; nuclear power and renewable energy including wind and solar

Public Policy and Governmental Support

Citi is supportive of governmental action on climate change, including establishing a price on carbon. We are also a member of the CEO Climate Dialogue, which calls for strong U.S. climate policy, and encourages an economy-wide price on carbon to help direct activity towards global net zero emissions by 2050. Furthermore, we are leaders in industry groups such as the Glasgow Financial Alliance for Net Zero, which in 2021 released a Call to Action for governments of the G20.

Governmental support can also take the form of public-private partnerships. Mitigating climate change will require large amounts of capital, including in certain developing countries that lack access to capital. Citi recognizes the importance of public-private partnerships that allow for the provision of both technical and financial resources from the private sector to support public initiatives such as the development of infrastructure or new technology as well as the rehabilitation of existing infrastructure.

Portfolio & Risk Management

Integrating climate factors into our portfolio management activities will be another important element of our net zero implementation. Among other considerations, their GHG emissions profiles and the strategy and steps that they are taking to decarbonize will become an important element of credit assessments.

From a risk management perspective, climate risk, as well as our long-standing Environmental and Social Risk Management (ESRM) policy, will evolve and be central to our net zero work. Currently, our ESRM Policy

Sector Approaches include a commitment to reduce our exposure to thermal coal mining by 2030 and restrict financing for clients with coal-fired power generation by 2030 for clients in OECD countries and 2040 for clients in non-OECD countries, in alignment with the Paris Agreement. As part of these commitments, we expect clients to disclose their emissions and engage with Citi to develop low-carbon transition strategies.

For more information on our existing fossil fuel Sector Approaches under our ESRM policy, please visit pages 18-22 of our Environmental and Social Policy Framework.

Additional Considerations

While our transition plans for each loan portfolio will be based on a rigorous net zero methodology, Citi is still in the early stages of our plotting our net zero journey. We expect to modify our transition plans and targets as both the availability and quality of data improve and climate scenarios are updated. We also recognize that there will be uneven year-on-year progress towards our 2030 targets as clients and sectors differ in their capacity to transition and in the timeframes in which their carbon reduction plans will be realized.

Issues Intersecting Climate

As part of Citi's commitment to sustainability, we consider a broad range of sustainability and ESG topics. While these matters are discussed in more detail in our annual ESG Report, it is important to highlight the intersection of climate change with several of these topics. Addressing these intersections adds another layer of complexity and nuance to how we must approach our strategy for managing climate-related risks and opportunities. Below are several important issues that are of particular relevance for our climate strategy:

- **Biodiversity & Natural Capital** – We are continuing to expand our understanding of the complex dynamics between climate and biodiversity. These two topics are interconnected, and there are increasing concerns that climate change, along with other human activity, has significantly stressed natural systems and contributed to ongoing extinction events.[3] "Natural capital" is a way to conceptualize the various natural resources and services that are provided by resilient ecosystems. Although there is increasing focus on biodiversity, there has historically been limited information available to understand how companies rely on and impact natural capital as well as natural capital's impact on climate. Citi is a member of the Taskforce on Nature-Related Financial Disclosures (TNFD) Forum and participated in an informal working group prior to the TNFD's launch to develop its workplan to create a complementary framework to TCFD focused on reporting evolving nature-related risks.

[3] See Anthony D. Barnosky et al., *Has the Earth's Sixth Mass Extinction Already Arrived?*, 471 NATURE 51, 51 (2011); Gerardo Ceballos et al., *Vertebrates on the Brink as Indicators of Biological Annihilation and the Sixth Mass Extinction*, 117 (24) PNAS 13596 (2020); Belinda Reyers & Elizabeth R. Selig, *Global Targets that Reveal the Social-Ecological Interdependencies of Sustainable Development*, 4 NATURE ECOLOGY & EVOLUTION 1011 (2020).

- **Social Impacts** – The global COVID-19 pandemic has been a catalyst for the growing momentum to recognize the importance of the "S" in ESG, including understanding the human impacts of climate change. We have been accounting for and reporting on our environmental finance activity since 2007 and related environmental and social impacts since 2015. In 2021, we announced a $1 trillion commitment to sustainable finance by 2030 comprised of a $500 Billion Social Finance Goal and $500 Billion Environmental Finance Goal. Within the climate risk context, an important consideration is how climate-related risks manifest disproportionately in low- and moderate-income communities in developed nations as well as in developing countries across different regions. Reports show that marginalized communities will likely bear the brunt of any physical climate impacts.[4] Social finance transactions can help mitigate these risks and add to communities' overall resilience, financial security and ability to afford climate resilience strategies.

- **Energy Justice** – Similar to social impacts, energy justice concerns may be triggered by a transition to a low-carbon economy. Not all regions have equal access to wind and solar energy potential. Unlike oil, gas and other physical stores of energy, wind and solar energy cannot easily be transported, and the electricity they generate can dissipate over long-distance transmission. While some of these issues may be addressed with grid improvements or with new technologies such as no- or low-GHG emissions fuels like green hydrogen, it is possible that some areas may not be conducive to viable clean energy projects at rates that local communities can afford. A consideration for assessing the impacts of a low-carbon transition is the social impact of rising energy prices on communities and individual households. While climate change is a defining and critical issue of our times, other adverse environmental impacts may occur, particularly on already marginalized communities, if due consideration is not taken to fairly and equitably manage the transition to a low-carbon economy.

- **Just Transition** – While we recognize the imperative for a transition to a low-carbon economy, it should also be a just transition. Economically, certain workers and communities depend on the jobs created by carbon-intensive activities. While the low-carbon transition may naturally create certain jobs that these existing workers and community members can fill, we must also take steps to reduce the risk that they are left behind without adequate training to participate in a new economy. This is doubly important as the economic dislocation caused by the loss of good jobs could destabilize transition efforts. Separately, Citi recognizes that not all countries have the same ability to rapidly decarbonize while still effectuating the socioeconomic development and self-determination that often fundamentally rely on access to reliable and affordable energy.

Citi recognizes that climate and other ESG issues are inextricably linked, and that both rapid societal decarbonization and failure to rapidly decarbonize raise complex social and environmental concerns. Citi will continue to drive for positive impact not just on climate, but on ESG issues more broadly.

[4] *See, e.g.*, U.S. Global Change Research Program, *Summary Findings, in* Fourth National Climate Assessment Volume II: Impacts, Risks, and Adaptation in the United States (2018), *available* at https://nca2018.globalchange.gov/.

Physical Risk Analysis

Following the operational risk extreme weather scenario assessment performed for our facilities in New York City and Tampa (as summarized in our 2020 TCFD report), we have recognized the challenges related to a discrepancy between the projected time horizon for most scenario modeling and long-term physical climate risks, and the lack of detailed, accurate data for modeling projected risks for specific locations where we have facilities. Our realty services teams conduct due diligence for each proposed new location and reassess the properties' structural resilience periodically, based on risk, as well as following significant events. Internal Citi standards and local and international codes are considered in the assessment.

Hong Kong Climate Risk Stress Test

The Hong Kong Monetary Authority (HKMA) launched a climate risk stress test (CRST) pilot exercise in December 2020 for the banking industry to perform in 2021. The main objectives of this exercise were to assess the climate resilience of the banking sector as a whole and to assist participating banks to develop their abilities to measure both physical and transition climate risks. As the largest foreign bank in Hong Kong, we viewed our participation in this pilot exercise as particularly important.

HKMA expected this exercise to provide the local banking industry with useful insights into various aspects of climate risk management, including the identification of data gaps for risk identification, the establishment or enhancement of frameworks and strategies for climate risk management and the incorporation of climate risks into business planning processes. Our focus was the physical risk on retail residential mortgage exposures of our consumer banking business in Hong Kong, using the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathway 8.5 for the 2051–2060 horizon with a static balance sheet, per the HKMA CRST guidelines. The risk identification with lessons learned were shared with the HKMA at the end of March 2021.

The HK ESG Task Force assembled a core team — the CRST Working Group — to work on this project, including subject matter experts both locally and globally. The CRST Working Group completed the risk identification phase with the help of internal subject matter experts, identifying flooding and landslides as key acute physical risks and sea level rise as a key chronic physical risk for the mortgage portfolio. We then worked with a major financial risk analytics company to conduct the detailed stress test exercise, which involved their providing climate-adjusted metrics at the individual loan level. The results from the stress test were endorsed by the local board of Citibank (Hong Kong) Limited before submission to the HKMA at the end of September 2021.

The key challenges faced during this exercise were two-fold: (i) data gaps, particularly in relation to the availability of digital insurance data and our ability to geo-map our collateral, and (ii) a lack of robust modeling capabilities in relation to certain aspects of climate risk. For example, it is not currently possible to forecast the increased frequency and intensity of typhoons with an acceptable degree of certainty based on current scientific data.

As the first climate risk stress test organized by a banking regulator that we have participated in globally, this pilot CRST exercise has served as a capacity building exercise for our colleagues across various business and risk groups around the globe to assess and evaluate climate risks and meet the evolving regulatory expectations on this topic.

Climate Opportunities

Although climate change poses many challenges to our company and the world at large, solving climate change can also lead to value creation. We are pursuing these opportunities through expanded client and stakeholder engagement, growth in new markets and development of a more sophisticated workforce with climate expertise.

Engagement

Our relationships are strongest when we can assist our clients to meet their strategic objectives and navigate the challenges that they face. The journey towards a low-carbon business model presents unique challenges for each company. Citi works with its clients across varying stages of transformation with a holistic view of client support. We assist our clients with transforming their asset composition and their fundamental business structures and strategies as they each develop a bespoke and coherent approach around transition. We work with our clients to provide incremental insights on climate risk, disclosure considerations and other matters with a goal of helping to facilitate their continued success and resiliency in a changing world. Another area of focus is climate-related opportunities for innovation, diversification and financial products and services. The comprehensive nature of our climate-related client outreach is demonstrative of our focus on energy transition as a strategic business opportunity.

As an engagement priority, the Sustainability & Corporate Transitions and Natural Resources & Clean Energy Transition teams have identified certain clients with high emissions footprints with whom we are beginning high-level discussions on climate matters including emissions-reduction plans. Assisting large, carbon-intensive clients is critical to achieving needed emissions-reductions. We also engage with clients of all sizes and in different stages of growth. We are particularly excited to work with small and mid-sized companies whose creativity and innovation increases the likelihood that a disruptive technology will emerge that accelerates the decarbonization of all industries.

Examples of Client Engagements

Citi's banking teams are engaged with clients across a range of sectors, sizes and geographies on the net zero transition, and we have participated in a wide range of significant transactions that help accelerate this progress and count towards Citi's $1 trillion commitment to sustainable finance. The following are a few select examples.

- **Advisory**

  In July 2021, Citi advised vertically-integrated renewable power company Altus Power on its acquisition by CBRE Acquisition Holdings, a SPAC sponsored by property giant CBRE. The resulting company is a category-defining clean-electrification company driving the electrification of commercial real estate across the U.S.

  In 2021, Citi also served as capital markets advisor to biofuels producer Gevo for a $350 million equity raise and as an exclusive financial advisor to Lilium for its merger with Qell Acquisition Corporation. Lilium, founded in Germany, is a leading electric vertical takeoff and landing aviation company.

- **Sustainability-Linked Bond Underwriting and Facilitation**

  Citi's Sustainable Debt Capital Markets team has helped numerous clients globally structure innovative new sustainability-linked bonds (SLBs) tied to sustainability goals. For example, Citi acted as Sustainability-Linked Bond Structuring Advisor and Active Bookrunner on Johnson Controls International (JCI)'s inaugural $500 million SLB in September 2021. As part of this transaction, JCI committed to (i) reduce absolute Scope 1 and 2 GHG emissions by 35% and (ii) reduce absolute Scope 3 GHG emissions from the use of sold products by 5%, all by 2025 from a 2017 baseline, supporting JCI's long-term net zero emissions by 2040 target. Failure to achieve these targets will result in a 25 basis point coupon step-up. JCI was also the first S&P 500 company to publish an integrated sustainable finance framework encompassing both use-of-proceeds bonds (green, social or sustainability) and sustainability-linked bonds, allowing JCI to issue any/all sustainable financing instruments.

  In Latin America, paper products company, Klabin, issued the second-ever SLB in Latin America in January 2021 (Citi acted as Joint Bookrunner). Klabin committed to meeting three sustainability performance targets, each offering a different possible step-up. By December 31, 2025, Klabin has to meet its water consumption intensity target (equal to or less than 3.68 m^3 water per metric ton of production), or face a coupon step-up of 12.5 basis points. Failing to meet its waste reuse and recycling target (equal to or above 97.5%) by that date would trigger a 6.25 basis point increase in the coupon. Thirdly, Klabin must meet its target for the reintroduction and/or reinforcement of wild species into the ecosystem (at least two extinct or threatened species), or it will also trigger a 6.25 basis point coupon step-up.

  In January 2021, Citi acted as Sustainability-Linked Bond Structuring Advisor and Active Bookrunner on Tesco PLC's €750 million SLB, which marked the first SLB from a U.K. corporate and the first-ever from a retailer, globally. As part of this bond issuance, Tesco agreed to cut its Scope 1 and 2 GHG emissions by 60% relative to a 2015 baseline. Failure to achieve this goal in Tesco's 2026 financial year will result in a 25 basis point step-up in the coupon, reinforcing Tesco's climate commitments to both external and internal stakeholders.

- **Sustainability-Linked Loan Underwriting and Facilitation**

  Citi has also been active in popularizing transition-oriented sustainability-linked loans around the world, leading on notable transactions. Among many other facilities, Citi acted as Coordinating Bookrunner on Volvo Cars' €1.3 billion sustainability-linked revolving credit facility. This was the first sustainability-linked loan for an auto OEM, and rates on the facility are linked to the company's progress towards reducing its carbon emissions — supporting Volvo's goal of being climate neutral by 2040.

Not only do we engage with clients on their climate risk management and low-carbon and net zero transition strategies, but we also engage with regulators on emerging climate risk supervisory guidelines and actively participate in multi-stakeholder initiatives where we benefit from information and idea sharing to improve our collective understanding of climate matters and build industry best practices. Citi serves as a resource to policy makers, helping them to understand both the financial needs and implications of specific policy objectives. Citi is engaged with local and national policymakers around the world about energy efficiency, sustainable banking, net zero initiatives and climate finance, modeling and disclosure topics. Our engagement on climate change and climate policy within our industry and trade associations is described in the following table.

Climate-related Engagements with Trade Associations

- **Business Roundtable**: Engaged with the Business Roundtable to update its Addressing Climate Change position statement, and participated in its Climate Change Task Force.
- **Bank Policy Institute (BPI)**: Engaged with BPI on regulatory issues related to climate disclosures, climate-related financial risk, climate scenario analysis, stress testing and the integration of climate-related risks into financial institution risk management practices.
- **CEO Climate Dialogue**: Member of the CEO Climate Dialogue, a cross-industry effort committed to advancing climate action and durable federal climate policy in the United States. In December 2020, we signed onto a joint statement with 46 other leading U.S. companies to encourage President Biden to develop an ambitious, science-aligned update to the U.S. Nationally Determined Contribution. During 2021, the CEO Climate Dialogue issued over 10 statements and letters in support of climate legislation, including a July 2021 statement, which we signed onto with 40 other U.S. companies and which stated our support for Congressional action on low-carbon infrastructure.
- **Financial Services Forum**: Forum members recognize that climate change poses risks to the global economy, and the Forum advocates for appropriate policies and international cooperation to ensure that climate policies and regulations related to the financial industry are based on science, risk, and sound methodologies. Citi provided input for their position on regulatory issues related to climate disclosures.

- **Global Financial Markets Association (GFMA) and affiliates SIFMA, AFME, ASIFMA**: Participate in sustainable finance working groups related to regional and global regulatory developments on ESG-related reporting frameworks, market supervision and climate-related supervisory efforts and coordination, primarily related to the E.U.'s Action Plan for Financing Sustainable Growth, the NGFS, and TCFD-related stress testing for banks.
- **Institute of International Finance (IIF)**: Member of Sustainable Finance Working Group Steering Committee focused on regional and global regulatory developments on ESG-related reporting frameworks, market supervision and climate-related supervisory efforts and coordination, and TCFD-related disclosure guidance for banks.
- **U.K. Finance Association**: Engagement focused on the E.U.'s Action Plan for Financing Sustainable Growth and the Bank of England climate-related stress test framework.
- **U.S. Chamber of Commerce**: Together with other Chamber member companies, formed a Climate Solutions Working Group of climate-leading companies to engage collectively with the Chamber on their climate change positioning. Engagement includes discussion of the Chamber's positions on climate change and shared interests among Chamber members in climate-positive technologies, climate policy solutions, and other related initiatives. In October 2021, the Working Group posted a statement urging the Chamber to take action on comprehensive legislation to help business accelerate the transition to a decarbonized economy. The statement recommended the development of policies to support options such as carbon pricing to drive development of emerging technologies, low-carbon infrastructure and carbon capture and sequestration programs.

Growth in New Markets

As mentioned, we also see climate change as an opportunity that has created new markets. Since 2014 when we co-created the Green Bond Principles, Citi has significantly expanded the number of ESG products offered, including green, social and sustainability bonds, sustainable supply chain finance and KPI-linked instruments such as sustainability-linked bonds and loans tied to ESG performance and many other climate-related offerings. Green bond issuances reached a new global record in 2020,[5] and are expected to double in the next three years compared to the previous three.[6] 2020 was a record year in the Sustainable Debt Capital Markets. According to Dealogic, total green, social and sustainability bond issuances in 2020 were 82% higher than in the previous year.

As previously referenced, Citi has committed $1 trillion to sustainable finance by 2030, supporting the agenda of the United Nations' Sustainable Development Goals. This includes a $500 billion environmental finance target, as well as a $500 billion social finance target.[7]

[5] Nina Chestney, *Global Green Bond Issuance Hit New Record High Last Year*, REUTERS (Jan. 24, 2020), *available at* https://www.reuters.com/article/greenbonds-issuance-idINKBN29U029.
[6] Emerging Market Green Bonds Report 2020, IFC (Spring 2021), available at https://www.ifc.org/wps/wcm/connect/publications_ext_content/ifc_external_publication_site/publications_listing_page/emerging-market-green-bonds-report-2020.
[7] More information on our social finance initiative is provided on page 48 (see "$1 Trillion Sustainable Finance Commitment").

Although we do see these new markets and client engagements as a growing opportunity, we acknowledge that we are navigating a complicated landscape as we work to help our clients transition. Ultimately, we are confident that we will serve our clients' needs and continue to seek a balance of supporting our clients across all sectors in their transition plans, while collectively raising expectations for rapid decarbonization and transparency related to transition plans.

Climate-Educated Workforce

The growing emphasis on climate and resources dedicated to identifying, assessing and managing climate-related risks has also created an opportunity to develop a workforce with greater climate literacy and problem-solving capabilities.

As discussed in the Governance section, in 2020 we created the Sustainability & Corporate Transitions team and Markets ESG team, and in 2021, we combined our chemicals, energy, and power groups to form the Natural Resources & Clean Energy Transition team and began to integrate ESG considerations and expertise within our Treasury and Trade Solutions (TTS) business. Citi also has a Global Sustainable Debt Capital Markets team, formed in 2020, with technical expertise on green, social and sustainability bonds as well as sustainability-linked bonds. These teams were created to promote a more interdisciplinary network of banking teams with subject matter experts capable of understanding and evaluating climate change's impact on the firm's business overall.

We are also working to cultivate a broader culture of sustainability among our global employees. Our Global Sustainability Network, comprised of over 150 internal partners, functions as an information-sharing network among different teams and individuals on various aspects of sustainability. Similarly, our Champions groups are helping to drive climate-related awareness and engagement. Our Banking, Capital Markets and Advisory (BCMA), Global Markets, and TTS businesses each have their own Champion groups, which are comprised of employee volunteers across coverage and products, globally. The Champions have quarterly global calls and monthly regional calls to share business updates and best practices for sustainable finance, net zero transitions and market developments.

As discussed in the Governance section above, we have also rolled out a new climate risk training module available to all employees which covers key climate risk concepts including: definition of climate risk, emerging climate risk standards, supervisory expectations and an overview of Citi's efforts to date and initiatives to enhance climate risk management.

These resources allocated to growing our climate knowledge signal our dedication to making the fundamental changes that we think are necessary to manage climate risks and capitalize on climate opportunities.

Challenges Faced

Despite the significant progress Citi has made in the past year, we face several challenges in the development and implementation of our net zero plan. As discussed throughout this report, both the availability and quality of data are major limiting factors on our climate risk visibility. Much of the raw

data used in our analyses is still based on estimated or unverified figures. Although imperfections remain, the urgency of climate change requires us to begin implementing our net zero plan without delay and with imperfect information. Therefore, we plan to advance our data improvement work in parallel with Citi's decarbonization efforts, which may require adjustments to our strategy as additional insights from data analyses become available.

Setting a target is only the first step. This target must subsequently be translated into policies, procedures and other programs that guide our financing and other business operations to drive towards our target. This partially involves establishing teams specifically designed to operationalize sustainable finance opportunities. As discussed earlier in this report, we have created teams to do this, but we are still developing internal processes in several areas, particularly in identifying metrics and performance indicators to demonstrate Citi's progress in achieving the targets in our net zero plan while simultaneously managing our level of risk and returns on our portfolios.

The challenges and means of addressing them can be greater in developing countries, where there are often less robust socioeconomic institutions in place to effectuate businesses' transition. For example, certain developing countries may have less developed regulatory schemes for the monitoring and reporting of emissions to help fill the regulatory gap with best practices and third-party frameworks. A careful balance needs to be struck between a just transition and an appropriate decarbonization path. A lack of global regulatory clarity, or cohesion, on climate and other sustainability matters also adds to the challenges Citi faces as we undertake our net zero plan. To help address this, we hope to work in tandem with regulators to enable climate policy, particularly in higher-emitting countries, by helping to provide support to achieve more ambitious decarbonization goals in these jurisdictions. While we recognize that private sector action is important, it does not replace the need for government action and a clear regulatory framework. Furthermore, developing countries may also have limited capacity to transition due to unequal access to cleaner or renewable forms of energy. This is a consideration as we operationalize our 2030 targets, as a singular focus on these targets could lead to unintended consequences, including early divestment from less clean forms of energy upon which the communities and households in these countries may rely. Therefore, care must be taken in our decarbonization efforts to take into account access to energy needs and minimize the marginalization of communities that may not be able to afford clean energy projects.

While the challenges listed above are just some of those that we believe are particularly important to highlight, we are aware that Citi will likely encounter further challenges as the transition to a low-carbon economy unfolds. We will face these challenges in stride while continuing to advance our climate strategy and working with our clients to successfully execute their own transitions to a low-carbon economy.

Risk Management

To formulate a comprehensive and effective climate strategy, we have continued to collect and analyze climate-related data to support informed risk management. For more information on the organizational structure Citi has developed to operationalize this risk management information, please see the "Governance" section above.

Climate Risk Identification and Categorization

The first step in Citi's risk management process is risk identification. Climate risk continues to be classified as an "emerging risk" under Citi's Risk Governance Framework.[8] Emerging risks are often difficult to assess due to limited data or other inherent uncertainties. Citi continues to view climate risk not as a stand-alone risk category, but instead as a transversal risk, capable of manifesting itself across each of the risk categories in our risk taxonomy. These impacts may be from either physical- or transition-related climate impacts and may vary depending on the time horizon.

The TCFD divides climate-related risks into two primary categories: (i) transition risks, or those related to the challenges of transitioning to a low-carbon economy, and (ii) physical risks, or those related to the impacts of climate change. These risks overlap with existing risk categories but are amplified by the complexity of climate change concerns. Our 2020 TCFD report provides examples of potential transition and physical risks associated with Citi's seven key risk categories, and the table below indicates the impacts that climate risk drivers that can have on these same categories.

[8] "Emerging risks" are risks or thematic issues that are either new to the landscape, or in the case of climate risk, existing risks that are rapidly changing or evolving in an escalating fashion.

Risk Category	Definition	Climate Drivers
Credit	Risk of loss resulting from the decline in credit quality (or downgrade risk) or failure of a borrower, counterparty, third party or issuer to honor its financial or contractual obligations	Climate drivers can have an impact on an obligor's source of income/revenue, spend/cost and value of assets, resulting in the reduced ability to pay and value of the collateral as well as an increase in the utilization of credit facilities
Market	Risk of loss arising from changes in the value of Citi's assets and liabilities or reduced net interest revenues resulting from changes in market variables, such as interest rates, exchange rates, equity and commodity prices or credit spreads	Climate drivers, or change in expectation of drivers, can result in a change in market value of the bank's hold to maturity investments, or an increase in the volatility of market variables including interest rates, FX rates, equity and commodity prices and credit spreads, which can result in losses
Liquidity	Risk that the firm will not be able to efficiently meet both expected and unexpected current and future cash flow and collateral needs without adversely affecting either daily operations or financial conditions of the firm	Climate drivers can trigger unexpected demand for funds by counterparties/customers to fund their obligations, a reduction in the value of assets owned by the bank or limitations on the bank's ability to roll its debt, affecting the bank's ability to meet both expected and unexpected current and future cash flow and collateral needs
Strategic	Risk to current or anticipated earnings, capital, or franchise or enterprise value arising from poor, but authorized, business decisions (in compliance with regulations, policies and procedures), an inability to adapt to changes in the operating environment (e.g., economic, regulatory or legislative, competitive) or other external factors that may impair the ability to carry out a business strategy	Climate drivers can have an impact on the bank's ecosystem (i.e., supplier, customer, competition, regulation, investors and society) through changing economic conditions, regulations, low-carbon products and preferences, and legal action, which can lead to the need to make strategic shifts
Operations	Risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events	Climate drivers can affect the bank's locations (e.g., damage, inaccessibility), employees (e.g., productivity, ability to commute) or operations of third-party providers resulting in disruption of normal business operations. Climate drivers can also exacerbate several sub-categories of operational risk i.e., risk oversight errors (e.g., due to insufficient understanding of the impact of climate change), reporting risk (e.g., due to new reporting requirements from external stakeholders and newly established metrics and processes), data management risk (e.g., due to fragmented data and solution providers), model risk (e.g., challenges in validation of complex and non-traditional climate models) and fraud risk (e.g., customer forging of carbon footprint information)
Compliance	Risk to current or projected financial condition and resilience arising from violations of laws, rules or regulations, or from non-conformance with prescribed practices, internal policies and procedures or ethical standards	Climate drivers can lead to new public disclosures or products, which increases the risk of misrepresentation, increased regulatory requirements and scrutiny which increases the potential of non-compliance, increased use of external analytics providers which increases the potential for data privacy breaches, all of which could result in fines, civil money penalties, payment of damages and the voiding of contracts
Reputation	Risk to current or projected financial condition and resilience arising from negative public opinion	Climate drivers can increase reputational risk if Citi is perceived not to be meeting, sufficiently progressing or providing sufficient transparency on its climate-related commitments

Citi has been working to improve our ability to identify climate risks and integrate them into our risk management and broader business strategy. We recognize that the pace of integration will likely need to accelerate in order to achieve our climate risk management and net zero goals. While we continue to refine our identification process for climate risks, we have taken multiple actions to better integrate such risk identification. Below is a selection of some of the ways in which we have worked towards broader climate risk integration in our business.

- **Climate Risk Management Framework** – We are developing our end-to-end climate risk management framework.
- **Enterprise-wide Climate Risk Training** – Citi launched a new climate risk training module on our internal learning platform available to all employees, which covers key concepts such as emerging climate risk standards and industry bodies, supervisory expectations and an overview of Citi's climate risk management efforts.
- **Expanded Resources for Climate Risk Function** – We have grown our dedicated Climate Risk team as discussed in the Governance section. Citi continues to pilot tools to improve our access to climate data and ability to manage climate risks and impacts.

Risk Management

Climate change directly or indirectly impacts all risks included in Citi's risk taxonomy. We have highlighted some of our areas of focus below.

Credit Risk

Citi has reviewed climate risk in qualitative terms in the past under our longstanding Environmental and Social Risk Management (ESRM) Policy, focusing on the climate risk related to financed projects as well as climate risk related to clients in the highest-carbon sectors. More recently, we are continuing to explore and test methodologies for credibly quantifying how climate-related risks are impacting the individual credit profiles of our clients. Our credit risk framework involves both advancements of our ESRM Policy Sector Approaches for certain carbon-intensive industries and development of new data gathering and assessment tools.

Cautious of the credit risk of stranded assets, as well as the reputational risks associated with the coal sector due to its high emissions, Citi began a phasedown of our involvement in thermal coal mining in 2015[9] and coal-fired power financing activities in 2018. We have continued to update those policies over time — they include a prohibition on project-related financing of new coal-fired power plants and new or expanding thermal coal mines as well as the updated coal-related restrictions as described in the table below. These Sector Approaches allow us to set a comprehensive and industry-wide policy to clarify our positions and set clear expectations for our clients. These ESRM Policy Sector Approaches address climate risk driven credit risk concerns and also reduce reputation risk.

[9] We committed to reduce our credit exposure to companies in the coal mining industry that derived 50% or more of their revenue from coal. In 2020, we lowered this threshold to 25% or more revenue from thermal coal mining.

Coal-Fired Power Generation Financing Reduction Commitments			
By December 2021 Citi will:	**After 2021 Citi will:**	**After 2025 Citi will:**	**After 2030 Citi will:**
Expect its clients with coal-fired power generation to: • Publicly report GHG emissions annually, consistent with the GHG Protocol • Engage with Citi on their low-carbon transition strategy to diversify away from coal-fired power generation and align with the Paris Agreement	• Not provide acquisition financing or advisory services related to coal-fired power plants[1] • Not onboard new clients with ≥20% of power generation from coal-fired power plants unless such clients meet the "By December 2021" criteria • Not onboard new clients that have plans to expand coal-fired power generation	• No longer extend capital/provide financial services to clients without low-carbon transition strategies to diversify away from coal-fired power and align with Paris Agreement decarbonization pathways by 2030 (in OECD countries) or 2040 (non-OECD countries)[1] • Not onboard new clients with ≥5% of coal-fired power generation	• No longer provide capital/financial services for clients in OECD countries with ≥5% of coal-fired power generation • No longer extend capital/provide financial services for clients in non-OECD countries unless such clients have a low-carbon transition strategy designed to reduce the share of power generation from coal-fired power plants to less than 5% by 2040

Thermal Coal Mining Financing Reduction Commitments		
By December 2021 Citi will:	**After 2025 Citi will:**	**After 2030 Citi will:**
Reduce our credit exposure to these companies[2] by 50% from a 2020 baseline (2020 baseline: $1.141 billion)	No longer facilitate capital markets transactions or mergers and acquisition advisory and financing for these companies[2]	All remaining exposure to these companies[2] will be reduced to zero

[1] Exceptions may be considered if the proposed transaction is being pursued in the context of a low-carbon transition strategy.
[2] Defined in Citi's ESRM Policy as any mining company deriving ≥25% of their revenue from thermal coal mining.

These commitments advance Citi's net zero plan, but they are just a first step as we will need to evaluate what methods will be appropriate for the other carbon-intensive industries that will need to transition. We continue to address the challenges and opportunities in developing more robust tools to quantify the climate risks of companies in the sectors that we continue to support. We are diligently working to assess our portfolio's alignment with emissions reduction targets and other climate metrics. To assist in embedding climate risk assessments in our credit assessment process, we are developing sector-level climate risk assessments, which may incorporate questionnaires and scorecards.

Such climate risk assessments are designed to supplement publicly available client disclosures and data provided from third-party vendors, and facilitate conversations with clients on their most material climate risks and management plans for adaptation and mitigation. The assessments would be focused initially on sectors that have been identified as higher risk by our risk identification process. This will not only help us better understand our client's business and climate-related risks, but will also provide a new source of climate data.

Our net zero plan is accelerating the integration of climate risk discussions into client engagement and client selection.

Operations Risk

Our realty services teams implement various physical risk management programs to enhance the resilience of Citi facilities to acute and chronic physical risks. The first step in our operational risk management process is to evaluate and understand the risks — including physical risks — inherent to the geographic regions where our businesses and clients require us to operate. We then work to ensure the safety and soundness of our operations through a variety of measures, including installing electricity supply redundancy features such as backup generators, building flood control features and locating critical equipment away from exposed areas to minimize potential damage (including from flood, wind, earthquake and other natural disasters).

We have also taken several lessons learned from our response to the COVID-19 pandemic and applied them to improve our physical risk preparedness. For example, as an additional layer of operational resiliency, we have adopted various initiatives to support our remote work capacities, upgraded our server capacity to support faster distributed online connections to ensure continuity of operations and improved our supplier engagement to reduce supply disruptions, among others.

Compliance Risk

Globally, regulators have continued to increase their focus on climate matters, including in the financial sector. Because of Citi's global reach, we are continually monitoring and responding to emerging and applicable regulatory obligations. Citi has expanded its regulatory engagement efforts in parts of the world that are already or are likely soon to be subject to climate regulation and is actively tracking and responding to these enhanced expectations through our local subsidiaries. Citi has engaged with regulators in an increasing number of jurisdictions globally such as Australia, the European Union, Hong Kong, Israel, Malaysia, Morocco, Singapore, South Africa, the United Arab Emirates, the United Kingdom and the United States. The Climate Risk team and our local teams are in ongoing dialogue with regulators around the globe about climate risk issues, largely focusing on risk management, strategy and stress testing requirements.

We anticipate regulators imposing greater stress and scenario testing and disclosure obligations in the coming years and expect to see greater involvement of auditors in the assurance and verification of climate-related disclosures. To help us prepare to address current and anticipated climate regulatory obligations, we are strengthening our internal regulatory teams with legal and subject matter experts and we are continually seeking to improve our access to relevant, accurate data to sharpen our scenario analyses and enhance the utility of our public disclosures. We are also continuing to build a consistent global climate disclosure strategy that can monitor and manage requirements and consistently report across Citi's operations.

The proliferation of voluntary frameworks, regulations and mandated product classifications, such as via the European Union's Sustainable Finance Taxonomy, coupled with the possibility of changes in regulatory expectations, or varied requirements, each create compliance risks for Citi. To mitigate these risks, we are continuing to build an interdisciplinary team with climate sophistication and regulatory expertise while we improve our modeling capabilities and standardize our climate disclosure strategy.

Reputation Risk

Reputation risks can impact a firm on a short-term basis, but they may also have long-term implications. At Citi, we regularly assess reputation risks both for our operations and activities, and for those of our clients. Citi's Reputation Risk Committee reviewed, discussed and approved the latest coal mining and coal power sector related updates to the ESRM Policy in consideration of the growing reputation risk related to fossil fuel finance.

The concern of "greenwashing" is prevalent in climate discussions and is typically associated with entities whose communications of impact-reduction efforts are disjointed from the actual utility of such efforts. We acknowledge the importance of maintaining consumer trust in environmentally and socially conscious labels, initiatives and funds, and consider these concerns closely when advising clients, for example on the issuance of green- or sustainable-labeled bonds.

We also encourage the growing momentum behind funds that are integrating ESG and climate matters into investment decisions. We believe the proliferation of these funding sources provides an opportunity for companies to set certain KPIs around important elements of their business strategy to advance their ESG and/or climate goals. So long as there are verifiable metrics associated with such funds, we believe it is best to encourage all activities that provide incremental efficiencies, carbon-reductions or advancements to social causes. The collective benefit of small, but numerous programs will leave us better placed to achieve our ambitious net zero goals and the climate goals of our clients.

Quantifying and Monitoring Climate-Related Risks

Although Citi plans to use NZBA as the overarching framework for our net zero plan, NZBA does not provide guidance on how to quantify and monitor climate risks. Below are some of the frameworks we have previously discussed and the progress we have made.

Paris Agreement Capital Transition Assessment (PACTA)

We have road tested PACTA to analyze the alignment of our portfolio in certain particularly carbon-intensive sectors. For more information on the background of PACTA, please see our 2020 TCFD report.

We committed to PACTA before the development of certain other frameworks, such as NZBA, before our commitment to PCAF, and before our firm-wide commitment to net zero emissions by 2050. While we are disclosing our PACTA results in Appendix B of this report in keeping with our promise to report findings from the road test, we do not anticipate publicly disclosing PACTA results in the future, given the methodology's use of shorter, five-year horizons and limitations associated with using production-based data in the fossil fuel sectors. Instead, we anticipate that PACTA may be used as an internal tool to support our target setting work. We will be focusing future disclosure efforts on the new frameworks tailored to the banking sector, including NZBA.

Partnership for Carbon Accounting Financials (PCAF)

We are in an early phase of our PCAF implementation and are currently reporting only on our Energy and Power loan portfolio as well as a segment of our project finance portfolio. A summary of our present findings is discussed in the Metrics & Targets section of this report. For more details on PCAF and our involvement therein, please refer to our 2020 TCFD Report.

Going forward, we anticipate that our PCAF disclosure will primarily be an information-sharing tool that allows Citi to be more transparent in the process behind our net zero plan. However, PCAF is primarily focused on reporting financed emissions on an annual basis and it relies on figures of funds drawn by clients, not the total funds that Citi or another financial institution may have committed. While we intend to disclose on PCAF figures per the PCAF requirements and to provide this annual view of financed emissions associated with our activities, we intend to use the more fulsome "committed funds" figures for the baselines in our net zero plan. As discussed in the elaboration on our net zero plan in the Strategy section, the use of committed funds provides a more accurate reflection of the maximum emissions-generating activity that Citi has agreed to finance and is therefore better suited for the purposes of forward-looking emissions management and target setting. This will result in discrepancies between the metrics we report for PCAF and for our net zero targets, but we believe the "committed funds" approach is more aligned with how we expect to manage our net zero targets. We are also providing both sets of figures because we cannot predict how other banks may choose to present their own net zero metrics; by providing both sets of metrics, we can help improve comparability for investors regardless of whether other PCAF banks report on a "funds outstanding" or a "funds committed" basis.

The PCAF Standard currently covers six asset classes. Citi has most recently been involved in the Capital Markets Working Group to develop a methodology for attributing emissions for capital market instruments, which are distinct from loan products and are not captured by the current PCAF methodology. As this is a complex product in the corporate finance ecosystem, the working group published a discussion paper during the UN Climate change Conference of the Parties (COP26) to discuss the challenges and proposed methodologies for attributing emissions and seek stakeholder feedback on the topic. Once a methodology is finalized and published by PCAF, Citi plans to integrate these emissions into annual disclosures and targets.

Poseidon Principles

Citi's initial discussion of the Poseidon Principles, and the results for 2019, are available in our 2020 TCFD Report. Since our last publication, we have updated our trajectories to reflect the latest emissions data from the International Maritime Organization's Fourth GHG Study that was published in 2020. These trajectories reflect an improved methodology for estimating carbon emissions, and the carbon intensity for vessel types and size categories, as well as the world's fleet generally. This provides a more accurate representation of vessel emissions and the targets to be reached.

Our alignment score of 11.7% for 2020 was impacted by changes in the trajectory targets and evolving target levels driven not only by the optimization of the calculation methodology, but also most

significantly by the unique circumstances of the COVID-19 pandemic. The Cruise segment has been most significantly impacted, with a +10.7% impact on our alignment score – without the Cruise segment our alignment score would have been +1.1% for only the Cargo segment of Citi's Shipping portfolio. Although the total carbon emissions for the Cruise segment were significantly lower during 2020, the reduced distance travelled has led to an increase in the Annual Efficiency Ratio (AER) over the period resulting in the high misalignment from this part of the portfolio. An estimated alignment of our portfolio (excluding the Cruise segment) based on the UMAS Fuel Use Statistics and Emissions (FUSE) model, which accounts for the latest emissions efficiency data and advances in the operational performance of ships, resulted in a -4% alignment score which is encouraging.

In compliance with its annual reporting obligations under the Poseidon Principles, Citi has delivered its inaugural Poseidon Principles disclosure to the Secretariat, which is published on the Poseidon Principles website.

Challenges Faced

Our participation in multiple industry collaborations has allowed us to continue our leadership role in developing the frameworks and methodologies required for climate risk management. However, fully incorporating climate risk management across our business is particularly complex, especially in light of the continued challenges in sourcing and evaluating climate-related data of varied scope and quality.

In addition, we commit substantial resources annually to complying with the requirements of various regimes, as well as building out our climate risk-related functions generally. These compliance requirements are also increasing in number, scope and complexity. For example, we have started to see the proliferation of frameworks addressing similar, or overlapping disclosure matters. However, as the language and methodologies of these frameworks are not harmonized, this often results in companies, including Citi, reporting multiple times on the same or related matters in order to address different sub-groups of stakeholders' preferred regimes.

Regulators are also increasingly developing requirements for disclosures on similar topics, which are not always aligned with the frameworks developed by the private sector or civil society. This increases the complexity of our disclosure processes as well as and the scrutiny of those disclosures, as expectations continue to develop rapidly alongside methodological and data updates.

Metrics & Targets

We have gathered and disclosed our performance on climate-related metrics and targets for well over a decade. We use such metrics and targets to provide quantitative information on our climate strategy and performance. These figures are regularly assessed by senior management and through the governance channels discussed earlier in this report. In the following pages, we summarize the operating and financial information we have collected to date to guide our progress towards our established impact-reduction and financing goals and our net zero plan.

$1 Trillion Sustainable Finance Commitment

We believe that the financial sector has an important role to play in addressing the climate crisis by providing the capital needed to expedite the transition to a low-carbon economy that balances our world's environmental, social and economic needs. We are prepared to support the drastic changes needed in our business and in the world's industrial processes, land-use, buildings, transport and other infrastructure to align with the goals of the Paris Agreement.

In April 2021, we committed $1 trillion to sustainable finance by 2030, which aligns with the ambitious agenda of the UN Sustainable Development Goals (SDGs) and builds on the work we outlined in our updated Sustainable Progress Strategy, launched in 2020. We continue to be committed to supporting the industries, companies and technologies that will make the global low-carbon economy transition a reality. This commitment includes extending our prior five-year, $250 Billion Environmental Finance Goal – established under our updated Sustainable Progress Strategy – to $500 Billion by 2030. A description of our environmental finance criteria is below. Certain exclusionary criteria also apply, including large-scale hydropower plants that have a generation capacity of over 25MW and projects that use refined or alternative coal technologies, gas-to-liquid projects and natural gas projects.

CRITERIA FOR OUR ENVIRONMENTAL FINANCE GOAL

Circular Economy
Substitution of virgin raw materials with recycled or recyclable materials, elimination and replacement of hazardous/toxic materials with sustainable or recyclable materials or recovery of materials from previously discarded products or projects

Clean Technology
Products, equipment, methods and projects that mitigate GHG emissions

Energy Efficiency
Residential and commercial energy efficiency improvements that reduce energy consumption

Green Buildings
Construction or renovation of certified buildings for reduction or efficiency in energy use, resource consumption or for lowering GHG emissions

Renewable Energy
Generation and/or storage of energy from renewable energy sources

Sustainable Agriculture & Land Use
Sustainable ecosystem management leading to carbon removal from the atmosphere, reduced emissions, improvement of soil fertility and conservation of natural resources

Sustainable Transportation
Zero- and low-emissions vehicles, public transportation or related infrastructure construction and efficiency improvement

Water Quality & Conservation
Improvement of water quality, improved efficiency and increased availability and conservation of freshwater resources

Progress towards our $500 Billion Environmental Finance Goal is presented below.

$500 BILLION ENVIRONMENTAL FINANCE GOAL PROGRESS IN 2020

($ IN BILLIONS)

Environmental Criteria	$	% of Total
Circular Economy	$0.4	1%
Clean Technology	$0.6	2%
Energy Efficiency	$1.2	4%
Green Buildings	$1.5	5%
Renewable Energy	$6.8	24%
Sustainable Agriculture & Land Use	$0.2	1%
Sustainable Transportation	$3.4	12%
Water Quality & Conservation	$1.2	4%
Multiple Criteria	$12.8	46%
Total*	**$28.0**	**100%**

**Figures may not sum to total due to rounding.*

For additional details on the first year of progress towards our Environmental Finance Goal, please see page 34 of our 2020 Environmental, Social and Governance Report.

The $1 trillion commitment also includes $500 billion in social finance towards investments in affordable basic infrastructure, affordable housing, diversity and equity, economic inclusion, education, food security and healthcare. These criteria are detailed below, and we will begin reporting on progress towards our social finance goal in 2022.

CRITERIA FOR OUR SOCIAL FINANCE GOAL

Affordable Basic Infrastructure
Improve and/or expand access to clean drinking water, sanitation, clean energy, sustainable transportation and telecommunications infrastructure in low-income or developing countries

Affordable Housing
Construction, rehabilitation and/or the preservation of quality affordable housing for low- and moderate-income populations

Diversity & Equity
Promote and support equitable participation in the market, asset ownership and access to opportunities for racial, ethnic, LGBTQ+ and gender minorities and/or other underrepresented populations

Economic Inclusion
Improve access to credit and financial services in vulnerable or underserved communities, including small- and medium-sized enterprise financing. Generate employment opportunities. Improve public spaces and community resources

Education
Expand access to affordability and/or quality of primary, secondary and vocational education facilities and programs

Food Security
Enhance agricultural productivity and access to safe, nutritious and sufficient food

Healthcare
Improve access to, affordability of and/or quality of healthcare services

Risk Exposure

We have updated our climate risk heat mapping framework to refine our understanding of the sectors we finance that are most sensitive to climate risk. In doing so, we have established a more formal and detailed methodology for determining the vulnerability scores we assign to each sector. The climate risk heat mapping categorizes sectors under one of four vulnerability scores, ranging from "low" to "high." We have established sub-scores using the rubric in the following table for various aspects of transition and physical risks.

CLIMATE RISK HEAT MAPPING FRAMEWORK: VULNERABILITY RUBRIC

Low ← Vulnerability Score → High

		1	2	3	4
Transition Risks	Regulatory	No regulatory/policy changes are expected to meaningfully impact the sector financially such as through asset devaluation, increased expenditure (e.g., compliance costs) and/or loss of revenue	Minor impact to the sector expected from potential regulatory/policy changes (e.g., building efficiency) resulting in financial impact asset devaluation, increased expenditure (e.g., compliance costs) or loss of revenue; impact only on a subset of the sector, subset of geographies and/or only indirect impact	Moderate impact to the sector expected from regulatory/policy changes (e.g., carbon taxes) relating to the sector's carbon intensity; direct impact with noticeable economic implications on the sector through impacted asset valuation, increased expenditure (e.g., compliance costs) and/or revenue loss	Major impact to the sector expected due to expected regulatory/policy changes relating to the sector's carbon intensity; significant shift expected in the business model or economics of the sector impacting asset valuation, expenditures (e.g., increased compliance costs) and/or revenue
	Technology	Outside of general modernization of technology, no technology shifts are expected for the sector	Minor impact to the sector expected from technology changes (i.e., impact only on a small subset of the sector, or only indirect impact through supply chain) that result in market share loss	Moderate impact to the sector expected from technology changes, resulting in some shift in the economics of some companies in the sector leading to market share loss	Major impact to the sector expected from technology changes, resulting in substitution of a significant portion of existing companies (i.e., market share loss)
	Stakeholder	There is no expectation of stakeholder composition or preferences changing for the industry	Minor stakeholder impact due to expected shift in preferences, with minor financial impact on companies (e.g., revenue, vendor pricing)	Moderate stakeholder impact is expected for the sector in terms of stakeholder preferences and composition with modest financial impact (e.g., revenue, vendor pricing)	Major stakeholder impact is expected in terms of both client preferences and composition of stakeholders resulting in significant financial impact (e.g., revenue loss, vendor pricing)
	Legal	No increased litigation concerns are expected to impact the industry that would lead to increased financial burden (e.g., legal fees, settlements)	Minor litigation concerns are expected to impact the sector with minor financial consequences (e.g., legal fees, settlements)	Moderate litigation concerns are expected to impact the sector with modest financial impact (e.g., legal fees, settlements)	Major litigation is expected to impact the sector, with significant financial impact (e.g., legal fees, settlements)
Physical Risks	Acute Hazard	Acute physical hazards have no impact on the day-to-day operations of companies in the sector	Sector would experience minor impact from acute physical hazards on operations (e.g., revenue loss due to business disruption), or minor damage to assets (e.g., asset devaluation)	Sector would experience moderate and protracted impact from acute physical hazards on operations (e.g., revenue loss due to business disruption), or moderate damage to assets (e.g., asset devaluation)	Sector would experience major and protracted impact from acute physical hazards on operations (e.g., revenue loss due to business disruption), or significant damage to assets (e.g., asset devaluation)
	Chronic Hazard	Chronic physical hazards have no impact on the operations or valuation of assets/companies in the sector	Chronic physical hazards have minor potential impact on the operations (e.g., increased insurance cost) or valuation of assets/companies in the sector	Sector would experience moderate and sustained impact on the operations (e.g., increased insurance cost) or valuation of assets/companies in the sector	Sector would experience major and irreversible impact on the operations or valuation of assets/companies in the sector

The overall score is determined by assigning the highest sub-score as the sector's overall score. While this may result in some sectors being assigned a vulnerability score that is higher than the average of all climate risks, we have decided to take this more conservative approach in order to recognize that the sector is exposed to climate risks up to that level under our methodology.

The results of our heatmap assessment will help us to prioritize portfolios when further evaluating the risks within each business unit. We intend to initially focus on the higher-risk, higher-exposure sectors. However, additional due diligence will be required to differentiate the vulnerabilities of individual counterparties within each sector (taking into consideration differences in business models, geographic footprint and climate adaptation/mitigation plans).

It is important to note that these risks are not expected to manifest in every sector immediately. For this reason, the table on pages 53 to 54 should not be interpreted as imminent risks to existing exposures, but rather, exposures we are proactively identifying to focus on, where we will work methodically in the coming years to better understand, analyze and manage our climate risk exposures in these sectors.

A comprehensive table of our credit exposures is provided below, including a further detailed breakdown of identified sectors into subsectors and, for each, the level of risk relating to physical and transition climate risk. By looking at the subsector level, we can further distinguish between the levels of risk within an individual sector.

CLIMATE RISK HEAT MAP AND CREDIT EXPOSURE

Low 1 2 3 4 High

$ in Millions	2020 Total $ Exposure	2020 % of Total Exposure	2020 Funded	2020 % of Funded Exposure	Climate Risk[1] Transition Risk	Climate Risk[1] Physical Risk
Energy & Commodities[2]	**49,524**	**6.3%**	**15,086**	**4.4%**		
Integrated Oil & Gas	13,332	1.7%	2,844	0.8%	4	2
Oil & Gas Exploration & Production	13,316	1.7%	4,380	1.3%	4	2
Oil & Gas Storage & Transportation	7,169	0.9%	1,808	0.5%	4	2
Oil & Gas Refining & Marketing	6,976	0.9%	2,632	0.8%	4	2
Oil & Gas Equipment, Services and Drilling	4,914	0.6%	1,082	0.3%	4	2
Other	3,816	0.5%	2,340	0.7%	4	2
Power	**26,916**	**3.4%**	**6,379**	**1.9%**		
Alternative Energy	2,011	0.3%	1,015	0.3%	1	2
Electric Utilities	6,430	0.8%	2,373	0.7%	3	3
Gas Utilities	1,497	0.2%	571	0.2%	3	2
Independent Power Producers & Service Operators	2,449	0.3%	591	0.2%	3	3
Multi-Utilities	12,117	1.5%	1,343	0.4%	3	3
Water Utilities	986	0.1%	134	0.0%	2	3
Other	1,426	0.2%	353	0.1%	3	3
Transportation	**81,567**	**10.4%**	**39,417**	**11.4%**		
Autos	53,874	6.9%	25,310	7.3%	4	1
Automobile Manufacturers	16,939	2.2%	6,690	1.9%	4	1
Auto Parts & Equipment	10,476	1.3%	4,298	1.2%	4	1
Auto-Related Financing, Leasing and Rentals	23,836	3.0%	12,811	3.7%	3	1
Other	2,623	0.3%	1,511	0.4%	4	1
Aviation	10,257	1.3%	5,033	1.5%	3	3
Shipping & Maritime Logistics	9,979	1.3%	6,785	2.0%	3	2
Logistics	7,457	1.0%	2,289	0.7%	3	3
Air Freight & Logistics	1,139	0.1%	329	0.1%	3	3
Rail	1,395	0.2%	273	0.1%	1	2
Trucking	716	0.1%	427	0.1%	3	1
Other[3]	4,208	0.5%	1,260	0.4%	3	3
Industrials	**65,651**	**8.4%**	**20,705**	**6.0%**		
Building Products & Related	8,162	1.0%	2,453	0.7%	3	1
Capital Goods	42,564	5.4%	12,615	3.7%	3	3
Paper Forest Products & Packaging	7,113	0.9%	3,416	1.0%	3	1
Professional Services	7,812	1.0%	2,220	0.6%	2	1
Metals & Mining	**14,654**	**1.9%**	**6,462**	**1.9%**		
Coal[4]	592	0.1%	144	0.0%	4	4
Steel	3,526	0.4%	2,017	0.6%	3	2

$ in Millions	2020				Climate Risk[1]	
	Total $ Exposure	% of Total Exposure	Funded	% of Funded Exposure	Transition Risk	Physical Risk
Aluminum	961	0.1%	710	0.2%	3	2
Stainless Steel	153	0.0%	116	0.0%	3	2
Nonferrous & Ferrous Minerals	2,492	0.3%	1,049	0.3%	3	2
Other[5]	6,931	0.8%	2,427	0.7%	3	2
Chemicals	**22,356**	**2.8%**	**7,969**	**2.3%**	3	2
Consumer Retail & Health	**117,633**	**15.0%**	**43,467**	**12.6%**		
Agricultural Products	6,723	0.9%	4,215	1.2%	3	3
Beverages	8,889	1.1%	3,566	1.0%	1	3
Food Products	14,373	1.8%	6,752	2.0%	3	2
Tobacco	3,176	0.4%	717	0.2%	1	3
Health Care Equipment & Services	35,504	4.5%	8,658	2.5%	1	1
Household & Personal Products	9,167	1.2%	3,617	1.1%	2	2
Retail	20,577	2.6%	7,662	2.2%	2	1
Hotels, Restaurants & Leisure	4,951	0.6%	1,997	0.6%	1	2
Other	14,273	1.8%	6,283	1.8%	3	3
Real Estate	**65,392**	**8.3%**	**43,285**	**12.6%**		
Commercial Real Estate	46,232	5.9%	30,070	8.7%	2	3
Residential Real Estate	19,160	2.4%	13,216	3.8%	2	3
Financial Institutions[6]	**86,257**	**11.0%**	**35,006**	**10.2%**	3	2
Insurance	**26,576**	**3.4%**	**1,925**	**0.6%**		
Life insurance	4,923	0.6%	659	0.2%	1	1
Property & Casualty Insurance	13,688	1.7%	1,110	0.3%	2	3
Reinsurance	6,324	0.8%	66	0.0%	2	3
Other	1,640	0.2%	91	0.0%	2	3
Private Bank	**109,397**	**13.9%**	**75,693**	**22.0%**	2	2
Public Sector[7]	**26,887**	**3.4%**	**13,599**	**3.9%**	3	3
Tech, Media & Telecom	**82,657**	**10.5%**	**30,880**	**9.0%**		
Media & Entertainment	13,119	1.7%	4,279	1.2%	1	1
Hardware	23,547	3.0%	10,836	3.1%	2	2
Software & Services	22,264	2.8%	5,647	1.6%	1	1
Telecom	21,341	2.7%	8,616	2.5%	1	2
Other	2,386	0.3%	1,503	0.4%	2	2
Other Industries	**9,307**	**1.2%**	**4,545**	**1.3%**	1	1
Total[8]	**784,774**	**100.0%**	**344,417**	**100.0%**		

[1] Over medium to long term
[2] In addition to this exposure, Citi has energy-related exposure within other sectors (for example, mainly energy-related state-owned entities within the Public Sector). Citi total exposure to these energy-related sectors is approximately $5.8 billion, of which approximately $3.3 billion consisted of direct outstanding funded loans, as of December 31, 2020.
[3] Includes Infrastructure, Logistics Not Assigned and Logistics Suppliers.
[4] Based on Citi's Risk Industry Classification, which differs from how Citi defines thermal coal mining companies under its ESRM Policy.

[5] *Includes Coke, Diversified Metals & Mining, Industrial Minerals, Energy Minerals, Gold, Metals & Mining Not Assigned, Metals & Mining Related and Uranium.*
[6] *Includes Asset Managers and Funds, Banks, Finance Companies, Financial Markets Infrastructure and Securities Firms.*
[7] *Certain countries may see high transition and physical risks based on commodities exposure and geographic location.*
[8] *Sums may not match FY2020 10-K due to rounding from increased granularity in industry breakdowns.*

Net Zero Financed Emissions Data and Targets

We have calculated baseline emissions for our Energy and Power portfolios. As discussed above, we have calculated these figures both according to the PCAF methodology (using funds outstanding) and using total funds committed. We expect our annual emissions data to improve in the future as our clients' climate disclosure and data quality and quantity increase. We will continue to transparently report on any adjustments that refine these emissions disclosures and progress against targets.

2020 ABSOLUTE FINANCED EMISSIONS: OUTSTANDING EXPOSURE (mt CO_2e)

Scope	Power	Energy
Scope 1	4,261,747	17,308,063
Scope 2	164,059	518,594
Scope 3	N/A[10]	40,113,950[11]
Total	**4,425,806**	**57,940,607**

2020 ABSOLUTE FINANCED EMISSIONS: COMMITTED EXPOSURE (mt CO_2e)

Scope	Power	Energy
Scope 1	11,464,654	33,847,434
Scope 2	485,784	1,434,241
Scope 3	N/A[10]	108,478,743
Total	**11,950,438**	**143,760,418**

2020 SECTOR-SPECIFIC EMISSIONS INTENSITY (COMMITTED EXPOSURE) PER UNIT ACTIVITY

Power[12]		Energy	
Scope 1	**313.5** kg CO_2e/MWh	**Scope 1, 2 & 3**	**81.4** g CO_2e/MJ

[10] Omission of Scope 3 emissions for Power is explained in the "Scope 3 Calculation Methodology" in Appendix A, on page 71.
[11] Scope 3, Category 11: Use of Sold Product, for extractive and refining sectors.
[12] Only Scope 1 generation emissions were considered for the Power intensity metric as explained in the "Scope and Boundaries for Target Setting" section on the following page.

2020 PORTFOLIO EMISSIONS INTENSITY PER DOLLAR OF FINANCING

Power[13]		Energy	
Scope 1	**604** mt CO_2e/$MM Outstanding	**Scope 1, 2 & 3**	**3,240** mt CO_2e/$MM Outstanding
Scope 1	**516** mt CO_2e/$MM Committed	**Scope 1, 2 & 3**	**3,286** mt CO_2e/$MM Committed

Please refer to Appendix A for our detailed methodology, assumptions, data sources and identified opportunities for improvement of the calculations.

For our initial net zero plan, we have developed interim targets for the Energy and Power sectors for 2030.

Key Design Decisions

The key design decisions for developing the 2030 targets are summarized in the table below:

Design Decisions	Power	Energy
Scope and Boundaries	Scope 1 GHG emissions from power generation clients with available power generation data	Scope 1, 2 & 3 GHG emissions
Target Metric	Intensity (kg CO_2e/MWh)	Absolute (% reduction from baseline)
Scenario Selection	IEA SDS OECD	IEA NZE 2050
Committed vs. Outstanding Exposure	Committed exposure	Committed exposure

Scope and Boundaries for Target Setting

For the Power sector, Scope 1 GHG emissions from power generating clients are considered as this scope is the primary driver of the GHG emissions. Currently, clients whose generation data we have been unable to determine (~19% of exposure) have been excluded from this metric.

For the Energy sector, Scope 1, 2 and 3 GHG emissions are considered. Scope 3 (Category 11: Use of sold product) emissions are estimated for clients in Exploration & Production and Refining sector segments based on production data. In order to minimize double counting in the value chain, for Scope 3 we focused on the

[13] Per NZBA guidelines, we are only including the lending intensity metric on the emissions included in our target boundary for Power as described in the "Key Design Decisions" section on this page.

extractive and refining sectors, and did not include Scope 3 emissions for the Transportation and Storage, Retail and Marketing, and other energy sub sectors.

Target Metric

One of the key decisions in setting a climate target is selecting what type of target to use: either an absolute emissions target or an emissions intensity target. An absolute target sets a target that reduces the GHG emissions by a fixed amount, e.g., reduce 2020 baseline emissions by 29% by 2030.

An emissions intensity target sets a target of the emissions rate of a given pollutant (e.g., CO_2e) relative to a specific activity or a production process, e.g., grams of CO_2e released per megajoule (MJ) of energy produced, or kilograms of CO_2e released per megawatt-hour (MWh). An example of an emissions intensity target is to "reduce 2020 baseline emissions intensity to 115 kg CO_2e/MWh by 2030."

- For the Energy sector, absolute reduction is required to meet net zero goals and is the most transparent target selection.
- For the Power sector, an intensity target allows for an increase in power generation by diversifying investments into renewables and has been selected as a basis for the 2030 target.

Scenario Selection

Three scenarios were initially considered for the Power and Energy portfolios: IEA NZE 2050, IEA SDS OECD and NGFS Orderly-Net Zero. The IEA scenarios were selected instead of NGFS, as the NGFS scenario does not have a sector-specific CO_2 emissions pathway for oil and gas (Citi's Energy portfolio includes oil and gas companies).

- For the Energy portfolio, the NZE 2050 scenario was selected as the benchmark scenario.
- For the Power portfolio, the IEA SDS OECD scenario was selected as the benchmark scenario.

As updated scenarios are released, we will continue to re-evaluate benchmark scenarios for the 2030 targets.

Outstanding Versus Committed Exposure

Committed exposure has been selected as a basis for baseline calculations and for target setting, as it represents Citi's full commitment to lend to clients and their economic activity. Further, it aligns with Citi's internal risk limits and related management considerations. Outstanding exposure was also considered but could increase the metric volatility and would be less representative of our entire commitment to our clients.

2030 Targets

The table below summarizes the current 2030 emission targets for Citi's Energy and Power portfolios.

Sector	Scenario	2020 Baseline	2030 Targets
Energy (Scope 1, 2, 3)	IEA NZE 2050	**143.8** million mt CO_2e	**29%** reduction from 2020 baseline **102.1** million mt CO_2e
Power[14] (Scope 1)	IEA SDS OECD	**313.5** kg CO_2e/MWh	**63%** reduction in Scope 1 intensity per MWh **115** kg CO_2e/MWh[15]

The table above is based on available data as of September 2021. Further updates to improve data quality of the baseline numbers may result in changes to both the 2020 baseline numbers and the 2030 target.

Operations and Supply Chain

As a global bank with approximately 200,000 employees working in close to 7,000 facilities in 96 countries around the world, it is important to us that we reduce the environmental impact of our facilities and operations. That is why, as part of our broader net zero ambition, we have committed to achieving net zero operational emissions by 2030. We will disclose more on our net zero operations approach later in 2022.

We have been tracking, reporting and reducing emissions for nearly two decades. In 2020 we completed our third generation of operational footprint goals, having reduced our operational emissions (Scope 1 and 2) by over 50% since 2005. In 2020, we also introduced the fourth generation of operational footprint goals for 2021-2025 in the updated Sustainable Progress Strategy. These goals, which form the foundation of our net zero operations commitment, seek to reduce not just our emissions, but also our energy, water and waste impacts across our operations.

[14] Only includes power generation clients. Clients primarily in the transmission and distribution value chain were excluded.
[15] The emissions intensity from the IEA SDS OECD scenario is derived by dividing the CO_2e emissions resulting from the Power sector with the electricity generation at 2030.

2025 OPERATIONAL FOOTPRINT GOALS

(MEASURED AGAINST 2010 BASELINE)

GHG EMISSIONS

45%

reduction in location-based GHG emissions

ENERGY

40%

reduction in energy consumption and maintain 100% renewable electricity sourcing

WATER

30%

reduction in total water consumption and 25% of water consumed to come from reclaimed/ reused sources

WASTE

50%

reduction in total waste and 50% of waste diverted from landfill

SUSTAINABLE BUILDINGS

40%

of floor area to be LEED, WELL or equivilent certified, with a focus on Citi-owned buildings to operate at the highest level of sustainability

For more information on our progress towards our previous generation of footprint goals, please see page 55 of our 2020 Environmental, Social and Governance Report. A summary of our energy consumption in 2020 is provided below:

2020 ENERGY CONSUMPTION

Energy Type	GWh
Scope 1 - Energy Consumed	95
Natural Gas	65
LP Gas	1
Fuel Oil	0
Diesel	30
Scope 2 - Energy Purchased	1,209
Electricity	1,180
District Heating (Steam & Chilled Water)	29
Total Energy*	**1,304**

**Figures may not sum to total due to rounding.*

Electricity is the single largest source of emissions and energy use in our operations. In 2020 we achieved our goal of sourcing 100% of our electricity from renewable sources to power our facilities globally. In achieving this goal, 91% of our renewable electricity was sourced from within the same market boundary as our operations, which reduced our Scope 2 emissions from 505,223 mt CO_2e to 61,064 mt CO_2e. For the remaining 9% of electricity, where purchases of renewable electricity were not available in the market, we sourced an equivalent amount of renewable electricity to further support voluntary markets across each of our operating regions.

Our past accomplishments provide a solid foundation for our net zero operations journey. However, we are continuing to advance our actions across operations and rethink how we engage with our employees and suppliers. Since our own operations consist largely of buildings, and the buildings sector is directly or indirectly responsible for 40% of global energy sector emissions, we have developed and are piloting requirements for all new buildings to be zero-carbon by 2030 in support of our net zero commitments. The guidance addresses both operational and embodied carbon emissions inclusive of energy use, energy supply, integration with utilities and material use.

While our building re-use/renovation and efficiency strategies will continue to be a part of how we design, operate and maintain buildings, focusing on the carbon in the process requires us to think differently. For example, our New York headquarters building is now partially heated, cooled and powered by a combined heat and power (CHP) plant, which is highly efficient and contributed to achieving Leadership in Energy and Environmental Design (LEED) Platinum certification. Our London headquarters is undergoing a similar multi-year renovation. A CHP plant was again considered but excluded for failing to meet our zero-carbon building guidance given that the unit is fueled by natural gas.

Zero-carbon buildings and net zero operations require us to move beyond business-as-usual efficiency initiatives based solely on utility savings and return on investment calculations. We are already beginning to consider carbon in our decision-making and are moving towards a future where the costs of carbon are fully incorporated into broader strategic initiatives requiring firm-wide support and investments. While we are prioritizing initiatives that will create real and meaningful reductions, there will be operational emissions that simply cannot be eliminated today, such as standby generators for critical and emergency infrastructure. For these residual, hard to eliminate emissions, Citi is considering a strategy consistent with the NZBA's guidance on offsets to balance remaining emissions.

Beyond the boundaries of our own operations, we have completed our first comprehensive inventory across our supply chain (Scope 3 emissions). Due to limitations in data availability and quality, the inventory is currently a screening-level inventory based on spend data and industry emissions factors from the US Environmentally Extended Input-Output Models (USEEIO). The availability of high-quality data and the potential for double counting emissions from our supply chain and financed emissions from our clients will be ongoing challenges requiring regular review and coordination. As supplier specific data becomes available and industry emissions factor estimation methodologies improve, we will recalculate our supply chain emissions. Insights from the screening inventory are beginning to highlight priority areas and identify where and which suppliers we can meaningfully engage with to create the greatest collective impact.

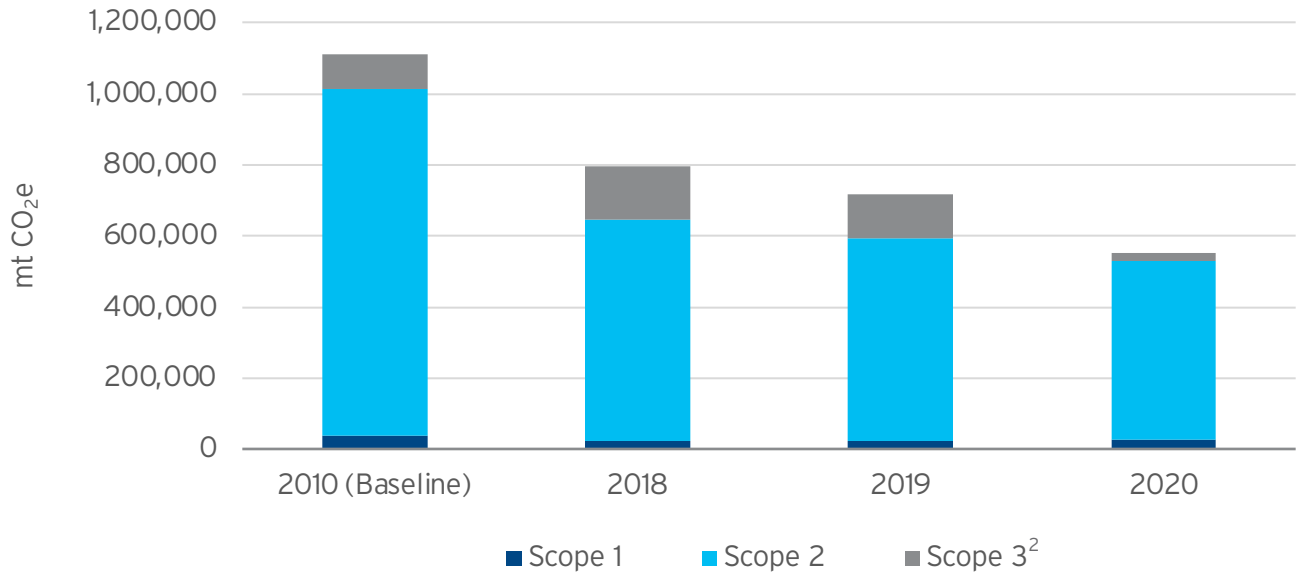
2020 OPERATIONAL, EMPLOYEE AND SUPPLY CHAIN GHG INVENTORY

Emissions Screening Inventory[1]

CO_2e Emissions Category	mt CO_2e	% of Total
Scope 1 & 2 - Operational Emissions	**530,876**	**17.1%**
Scope 1 Emissions (Gas, Fuel Oil & Diesel)	25,653	0.8%
Scope 2 Emissions (Electricity, Steam & Chilled Water)	505,223	16.2%
Scope 3 - Employee & Supply Chain Emissions[2]	**2,579,202**	**82.9%**
Category 1 – Purchased Goods and Services	1,476,078	47.5%
Category 2 – Capital Goods	731,078	23.5%
Category 3 – Fuel and Energy-Related Activities[3]	129,122	4.2%
Category 4 – Transportation and Distribution	103,257	3.3%
Category 5 – Waste	13,452	0.4%
Category 6 – Business Travel: Total	21,829	0.7%
Category 6 – Business Travel: Air	21,785	0.7%
Category 6 – Business Travel: Train	44	0.0%
Category 7 – Employee Commuting: Total	104,386	3.4%
Category 7 – Employee Commuting	32,174	1.0%
Category 7 – Work from home[4]	72,212	2.3%
Total Emissions[5]	**3,110,078**	**100%**

[1] Figures may differ from our 2020 CDP Climate Change Questionnaire Submission due to the inclusion of additional emissions estimates.
[2] Scope 3 spend-based emissions factor mapping may be recalculated as industry emissions factor estimation methodologies improve.
[3] Includes upstream emissions of purchased fuels, electricity, steam, heating & cooling and transportation and distribution losses.
[4] During 2020 there was a significant increase in the number of employees working from home, as opposed to commuting to normal office locations. In order to more accurately reflect this for 2020, we have included the emissions estimated for home working, based on energy intensity estimates as provided in the Anthesis White Paper: Estimating Energy Consumption & GHG Emissions for Remote Workers (February 2021), available at https://www.anthesisgroup.com/whitepaper-estimating-energy-consumption-ghg-emissions-for-remote-workers.
[5] Figures may not sum to total due to rounding.

OPERATIONAL EMISSIONS TIMELINE



IN mt CO_2e:

Scope	2010 (Baseline)	2018	2019	2020
Scope 1	38,912	24,132	23,095	25,653[1]
Scope 2	973,169	620,485	568,780	505,223
Scope 3[2]	100,243	149,815	126,229	21,829
Total	**1,112,324**	**794,432**	**718,104**	**552,705**

[1] Scope 1 emissions for 2020 include additional corporate vehicle emissions estimates.
[2] Scope 3 emissions reported here consist of business travel (air and rail) only.

Similarly to how we are already taking action with our zero-carbon building guidance on our journey to net zero operations, we intend to deepen our engagement with our suppliers and are beginning to develop plans on how we can bring them along on the journey to net zero.

BTSS Discovery Phase and Supplier Engagement

Business and Travel Shared Services (BTSS) is a multifaceted organization within Citi's Enterprise Operations & Technology group that supports Citi through the global management of its archiving, managed print, mail, distribution, office supplies, marketing, corporate vehicle, ground transportation, corporate card and travel programs. Because BTSS has a high number of supplier relationships (over 1,000), it is a priority area for analyzing Scope 3 supply chain emissions.

Due to the breadth of the supplier base, the decision was made to evaluate a subset of suppliers across BTSS products. Criteria regarding spend and volume was utilized to identify the subset supplier group. We expect this will provide us with a general understanding of what we may find across the rest of our supplier base, as well as a roadmap on how to engage with the suppliers after our initial assessment.

Initial engagement involved understanding the current status of our supply base including whether suppliers have a sustainability program in place (along with third-party assured reporting), and whether they are able to quantify baseline emissions and monitor any established reduction initiatives. In instances in which a supplier had no program in place, we wanted to determine whether the supplier is actively planning to develop and implement sustainability programs.

While we are at the beginning of our analysis, simply reducing the amount of consumption of supplier goods and services is not and should not be the only solution. A balanced approach with a combination of consumption reduction, process improvement/innovation and supplier engagement will be required to drive real reduction.

As we move forward on this portion of our net zero plan, we intend to:

- Review emissions reduction proposals from suppliers;
- Begin laying out supplier carbon reduction plans with complimenting financial plans;
- Embed carbon and net zero principles in strategic goals;
- Engage with suppliers that have established programs and that include carbon reporting in production reports;
- Monitor suppliers with programs in development and engage to help them on their emissions reduction journey;
- Evaluate the addition of carbon and net zero requirements in future requests for proposals, along with scoring metrics;
- Complete the analysis for remaining suppliers; and
- Ensure that the net zero objectives are not creating an adverse impact on diverse suppliers.

Looking Forward

As the world's most global bank, managing climate-related risks and opportunities and supporting the global transition to a low-carbon economy remains a top business priority for Citi. As described elsewhere in this report, Citi has participated in a variety of climate-related programs and frameworks to evaluate climate risk and identify best practices. We continue to participate and innovate in these spaces, and we seek out opportunities to improve our understanding of climate-related risks and opportunities. We are proud of our progress to date in integrating climate risk into our business strategy. However, we recognize that our commitment to net zero emissions by 2050 will require us to build on the progress discussed in this report as we expand our strategy across our business.

In the future, we expect to continue, among other efforts:

- Improving the availability and quality of climate data used in our sector portfolio assessments by incorporating additional datasets, piloting methodological advancements and engaging with our clients to obtain more refined emissions information, as appropriate;
- Developing emissions baselines and targets for additional carbon-intensive sectors in our portfolio, such as Auto Manufacturing, Commercial Real Estate, Steel and Thermal Coal Mining, with additional sectors such as Agriculture, Aluminum, Cement, Iron and other segments of the Transportation sector to follow as methodological capabilities evolve to accommodate them;
- Reviewing our performance against our established targets and evolving decarbonization scenarios, including revising such targets if needed to align with significant methodological developments or changes in climate science;
- Advancing the cultural shift at Citi to more fully integrate climate-related risks and opportunities into our overarching business strategy; and
- Supporting greater collaboration between diverse stakeholders, regulators and clients to (i) facilitate a low-carbon transition, (ii) encourage meaningful climate regulation and (iii) improve access to quality data.

More broadly, we are cognizant of the interconnected nature of our economy and our society. Our clients and communities have been tested by the ongoing COVID-19 pandemic, economic uncertainty, and vital calls for racial equity and systemic change around the world. We seek to be both a global and a local bank, striving to drive global change, while embracing the diversity of our people and the communities that we serve. We support rapid economic decarbonization while recognizing the need to balance social, environmental justice and biodiversity concerns.

Importantly, we will continue to be transparent about our expectations and management efforts on these topics. We strive to earn and maintain the public's trust by adhering to high ethical standards and we commit to undertake our efforts in an accessible and transparent way, sharing our hard work publicly in the spirit of increased collaboration.

While we are proud of the significant strides we have made so far, we recognize the magnitude of the problems that remain and we commit to harnessing the full power of our businesses to help solve society's toughest challenges.

Forward-Looking Statements

The disclosures included in this report are being provided in an effort to satisfy TCFD reporting obligations, to respond to investor and other stakeholder requests, and to further enhance our collective understanding of how climate risk translates into Citi's key risk categories. As discussed above, our approaches to the disclosures included in this report differ in certain significant ways from those included in our required disclosures, including those mandated by SEC rules and regulations. For additional information, see "A Brief Note on Materiality" in the Introduction section.

Certain statements in this report are "forward-looking statements," including, but not limited to, those statements regarding our net zero targets, goals, strategy and plans. In addition, we may make forward-looking statements in other publicly available documents, and our management may make forward-looking statements orally to analysts, investors, representatives of the media and others. Generally, forward-looking statements are not based on historical facts, but instead represent our and our management's beliefs regarding future events. Such statements may be identified by words such as believe, expect, anticipate, intend, estimate, may increase, may fluctuate, target and illustrative, and similar expressions or future or conditional verbs such as will, should, word or could. However, any statement that is not a statement of historical fact, regardless of whether it uses any of the foregoing words, is a forward-looking statement.

Forward-looking statements are subject to risks, uncertainties, changes in circumstances and assumptions that are difficult to predict and are often beyond our control. These statements are not guarantees of future results, occurrences, performance or condition. Moreover, many of the assumptions, standards, metrics and measurements used in preparing this report continue to evolve and are based on assumptions believed to be reasonable at the time of preparation, but should not be considered guarantees. Given the inherent uncertainty of the estimates, assumptions and timelines contained in this report, we may not be able to anticipate whether or the degree to which we will be able to meet our plans, targets or goals in advance. Further, Citi has not, and does not intend to, independently verify third-party data. Actual results and financial condition or outcomes may differ materially from those expressed in or implied by any of these forward-looking statements due to a variety of factors, including, among others, global socio-demographic and economic trends, energy prices, technological innovations, climate-related conditions and weather events, legislative and regulatory changes, our ability to gather and verify data regarding environmental impacts, our ability to successfully implement various initiatives throughout the company under expected time frames, the compliance of various third parties with our policies and procedures and legal requirements and other unforeseen events or conditions. You should not place undue reliance on any forward-looking statement. Other factors that could cause actual results and financial condition to differ materially from those described in forward-looking statements can be found in this report, in Citi's filings with the SEC and other disclosures available on our corporate website at www.citigroup.com.

This report contains statements based on hypothetical or severely adverse scenarios and assumptions, and these statements should not necessarily be viewed as being representative of current or actual risk or forecasts of expected risk. While certain matters discussed in this report may be significant, any significance should not be read as necessarily rising to the level of materiality used for the purposes of

complying with the U.S. federal securities laws and regulations, even if we use the word "material" or "materiality" in this report.

Any forward-looking statement speaks only as of the date originally made and is based on management's then-current expectations, and we do not undertake to update any forward-looking statement to reflect the impact of circumstances or events that arise after any forward-looking statement was made.

Appendices

In this Section

Appendix A

Baseline Emissions and Sector Intensity Methodology

Scope of Analysis

Our FY2020 baseline emissions calculations include our full corporate loan portfolio for clients in the Power and Energy sectors, as well as Power generation-related financing through our Project & Infrastructure Finance (PIF) group. Capital markets activity, structured products (such as derivatives, hedging or trading) and alternative energy, tax equity-financed projects are excluded from this scope of analysis.

As we are using internal classification, there may be some obligors with Power- and Energy-related external industry codes that are not included within our calculation boundaries. These obligors will be included in the classified industry baseline as we calculate additional sectors (i.e., a subsidiary that generates power under a parent entity with a primary industry of Auto Manufacturing will be included in the emissions baseline of Auto, rather than Power).

For project finance loans, we include only electricity generation-related assets which were actively operating in the reporting year. Projects in the construction phase and those related to infrastructure, transportation and distribution of energy or energy efficiency will be included in later reporting where feasible.

The financial reporting year has been determined as January 1, 2020 to December 31, 2020. Financial values related to client loan exposure and company financials have been aligned to this year-end date as possible, or we have taken information as at the company's closest financial reporting year-end date.

Throughout this report, we offer our emissions calculations based on two components of client exposure:

- Outstanding amount: value of the loan that the borrower has drawn down as of the year-end date.
- Committed amount: outstanding amount plus undrawn committed credit which the borrower has available, less any amounts related to fronting facilities.

Loan Book Calculation Methodology

For the Power and Energy sector loans, Scope 1 and 2 emissions have been included for all clients. These emissions include:

- Reported actual company emissions as sourced through S&P Global Trucost;

- Reported actual company or site emissions from publicly available databases (such as the EPA[16] or CDP) and/or company disclosures;
- S&P Global Trucost estimations based on reported company data or their proprietary estimation model; and
- Estimated emissions based on industry average emission factors by sector from the PCAF emissions factor database.

Due to an inherent lag in public greenhouse gas accounting and reporting by clients, the majority of reported actuals and estimates will be based on 2019 operating emissions information. This follows the Partnership for Carbon Accounting Financials (PCAF) principle of best available data and is a known issue for this calculation and reporting.

In August 2020, Citi committed to measure and disclose our portfolio emissions based on the PCAF methodology. Our approach to calculating Scope 1 and 2 emissions for each commercial loan, is aligned with the PCAF calculation approach for Business Loans:

Private Companies

$$\sum_{C} \frac{Outstanding\ amount_{C}}{\text{Total equity + debt}_{C}} \times Company\ Emissions_{C}$$

Listed Companies

$$\sum_{C} \frac{Outstanding\ amount_{C}}{\text{Enterprise Value Including Cash}_{C}} \times Company\ Emissions_{C}$$

(with C = borrower or investee company)

Financial information such as company equity and debt, and Enterprise Value Including Cash (EVIC) is sourced from S&P Global Market Intelligence. Where obligor-level emissions information is not available, we have attributed emissions based on the parent company's reported financials and emissions.

Where financial information is available, but the client does not disclose emissions, we are able use a revenue emissions factor to estimate client emissions and attribute emissions as stated above. Where financial information is not available for clients, we have applied an industry average emissions intensity factor (as available through the PCAF emissions factor database) based on the company's primary North American Industry Classification System (NAICS) code, to the available financial information for the client.

Where financial information is available, but emissions data is not available

$$\sum_{C} \frac{Outstanding\ amount_{C}}{\begin{array}{c}EVIC\ (public\ company)\ or \\ Debt\ and\ Equity\ (private\ company)\end{array}} \times Revenue_{C} \times \frac{GHG\ emissions_{S}}{\text{Revenue}_{S}}$$

[16] United States Environmental Protection Agency: https://ghgdata.epa.gov/ (Facility Level Information on Greenhouse Gases Tool (FLIGHT) tool).

Where no financial information is available

$$\sum_{C} Outstanding\ amount_{C} \times \frac{GHG\ emissions_{S}}{Assets_{S}}$$

(with s = sector)

As described in the report, we have calculated financed emissions based on the PCAF formulas as described above but have also calculated a baseline using committed exposure, in lieu of "Outstanding Amount" for the purposes of determining our interim target baseline.

Project Finance Calculation Methodology

For Project Finance deals, Scope 1 emissions are calculated for the FY2020 reporting year, as these represent the most material source of emissions for electricity generation assets. Full-year 2020 generation data is sourced through project annual operating reports as provided to Citi relationship teams to monitor the status of invested projects. For natural gas and coal-fired generation, Scope 1 emissions are estimated based on International Energy Agency (IEA) emissions intensity factors for combustion of stationary fossil fuels.[17]

For renewable energy generation, we considered the life cycle emissions of solar and wind projects per megawatt hour (MWh) generated, as estimated by the National Renewable Energy Laboratory (NREL). A share of these lifecycle emissions include operational emissions, accounting for approximately 26% of solar and 9% of wind estimations, in addition to the generation-related emissions. For hydropower plants, the full estimated lifecycle emissions per MWh generated, as estimated by the Intergovernmental Panel on Climate Change (IPCC), have been applied.

Our approach to calculating Scope 1 emissions for each Project Finance generation loan, is aligned with the PCAF calculation approach for Project Finance:

$$Financed\ emissions = \sum_{P} \frac{Outstanding\ amount_{P}}{\text{Total equity + debt}_{P}} \times Project\ Emissions_{P}$$

(with p = project)

Emissions are estimated based on the MWh of electricity produced by the project — for renewables generation, avoided emissions are not deducted from the calculated emissions.

Scope 3 Calculation Methodology

For Energy sector loans, Scope 3 emissions have been included for clients in the extractive (natural gas and crude oil) sectors, refining sector and other sectors with production information available. FY2019 net entitlement production data for clients in these sectors is from Wood Mackenzie data and the EPA Greenhouse Gas Reporting Program[18] (GHGRP). FY2019 downstream Scope 3 emissions were either

[17] *Emission Factors for Greenhouse Gas Inventories*, EPA (Apr. 1, 2021), available at: https://www.epa.gov/sites/default/files/2021-04/documents/emission-factors_apr2021.pdf.
[18] *Greenhouse Gas Reporting Program (GHGRP)*, EPA, available at: https://www.epa.gov/ghgreporting.

obtained through S&P Global Trucost, or were calculated using emission factors for the combustion/use of sold products (GHG Protocol, Category 11), as these reflect the most material sources of emissions for companies in these sectors.

EPA emissions intensity factors for combustion of stationary fuels are utilized for liquid crude products and natural gas products. For refined fuels, liquid products are separated into the following components per Barrel of Oil Equivalent (BOE)[19]: Gasoline (45%), Heating Oil (25%), Jet Fuel/Kerosene (9%) and Residual Fuel (2%). Remaining volumes towards petrochemical products, hydrocarbon gas liquids and other uses are not included. EPA emissions intensity factors for combustion of transport fuels are utilized to estimate emissions.

Finally, for companies in the extractives and refining sub-sectors where no FY2019 production data is available, we applied an internal extrapolation factor based on the average Scope 3 emissions and financial attribution factor, for each of these three sub-sectors within our portfolio.

It is possible that crude and natural gas product Scope 3: Use of Sold Product emissions, which are accounted for at the extractive stage, may be double counted at the refining stage. The double counting is minimized for integrated companies where we accounted for their products based on their primary activity in the value chain. Given the complex commodities trading environment that exists, it is currently not possible to discount the allocation of Scope 3: Use of Sold Product emissions across the production and refining value chain in order to eliminate double counting.

In addition, Scope 3 emissions related to the Use of Sold Products for the distribution of natural gas were not calculated for entities within our Power loan book, as we consider that the Scope 3 emissions related to the combustion of these hydrocarbons have been sufficiently captured under our Energy loan book for clients operating within the natural gas extraction sector.

Sector Intensity Calculation Methodology

Sectoral emissions intensity metrics were calculated for our investments in both the Power and Energy sectors. The Power portfolio intensity metric is inclusive of our commercial and project finance loans. Emissions intensity is defined as kilograms of CO_2e emitted for each MWh produced (kg CO_2e/MWh) for each company or project:

$$\textit{Company or Project Emissions Intensity of Generation} = \frac{\textit{Company or Project } CO_2e \textit{ emissions (kg)}}{\text{Generation (MWh)}}$$

FY2019 electricity generation information was sourced through S&P Global Trucost, and operating information provided directly from Citi client relationship managers and public company disclosures.

Portfolio-level intensity was calculated as the sum of parent-company emissions intensities, weighted by the parent level committed exposure as a percentage of total portfolio-level committed exposure.

$$\textit{Portfolio Intensity} = \sum \textit{Loan weight in the Power portfolio (\%)} \times \textit{Emissions Intensity of Generation}$$

[19] Matt Muenster, *What's in a Crude Oil Barrel? A Breakdown of Crude Oil Refined Products*, BREAKTHROUGHFUEL (Jan. 10, 2020), available at: https://www.breakthroughfuel.com/blog/crude-oil-barrel.

For Energy, emissions intensity is defined as grams of CO_2e emitted for each MJ produced (g CO_2e/MJ):

$$\textit{Company Emissions Intensity of Production} = \frac{\textit{Company } CO_2e \textit{ emissions (g)}}{\text{Company oil and gas production (MJ)}}$$

Company oil and gas production is primarily sourced through Wood Mackenzie data and from the EPA Greenhouse Gas Reporting Program (GHGRP).

Similar to Power, the Energy portfolio-level intensity was calculated as the sum of parent-company emissions intensities, weighted by the parent-level committed exposure as a percentage of total portfolio-level committed exposure.

$$\textit{Portfolio Intensity} = \sum \textit{Loan weight in the Energy portfolio (\%)} \times \textit{Emissions Intensity of Production}$$

Data Quality and Improvement Opportunities

Citi follows the PCAF guidance for estimating a data quality score based on the source of emissions and financial data. Data scores range from 1 to 5, with 1 being the highest score for disclosed and verified emissions. In the table below we present our estimated weighted data quality scores by sector, asset class and emission scopes (as relevant).

WEIGHTED DATA QUALITY SCORES BY DRAWN LOAN AMOUNT

	Weighted Average PCAF Data Score	Portfolio Coverage			
		Reported Actuals	Calculated	Estimated	Total Coverage*
Power Loans – Scope 1 & 2	3.0	30%	25%	45%	100%
Power Project Finance – Scope 1	3.0	0%	100%	0%	100%
Energy – Scope 1 & 2	3.1	31%	16%	52%	100%
Energy – Scope 3	3.7	0.1%	19%	81%	100%

** Figures may not sum to total due to rounding.*

In FY2020, just 30% (30% in Power and 31% in Energy), by drawn exposure of our clients reported actual emissions data for Scope 1 and 2, and 0.1% for Scope 3. Of this 30%, only 11% represented verified (i.e., audited) data, as determined from information provided by CDP. As financier and investor interest in (and reliance on) the accurate reporting of GHG emissions of our clients continues to grow, Citi will continue to actively engage and encourage our clients to measure, report and verify their company GHG emissions.

As we continue to enhance and improve our own reporting, we hope to explore improvements across the following areas:

- Improve our understanding of the energy products produced by our clients to more accurately calculate Scope 3 (use of sold product) combustion emissions (i.e., understanding bioenergy production volumes versus current generalized product assumptions);
- Calculation of project emissions for energy-related project finance lending, to enable inclusion in our Energy sector portfolio intensity metrics; and
- Inclusion of construction-related emissions for project finance lending, based on life cycle analysis of similar types of projects.

More broadly, we continue to monitor the development of additional industry-accepted calculation methodologies for alternate types of financial products and will consider inclusion of capital markets activity (and other products) in future year emissions calculations.

Appendix B

PACTA Results

In July 2021, the 2° Investing Initiative (2DII) released updated asset-level and scenario data. This update includes the Aviation sector and covers more climate scenarios, including the International Energy Agency's (IEA) World Energy Outlook's Sustainable Development (SDS) and Stated Policy Scenarios (STEPS), the Net Zero Emissions by 2050 (NZE 2050) and Institute for a Sustainable Future's Net Zero scenarios (ISF NZ 2020). The Paris Agreement Capital Transition Assessment (PACTA) disclosure in this report measures Citi's credit exposure as of year-end 2020 compared to various climate scenarios.

We experienced challenges in matching the companies in our loan portfolio data to the PACTA asset-level dataset, which resulted in delays and impacted the usefulness of results for some sectors. We discuss in this appendix the PACTA analysis across the three sectors that had the highest match rate between Citi clients and the PACTA asset-level dataset. These sectors were Automotive Manufacturing (97% match rate), Coal Mining (95% match rate) and Cement (92% match rate).

Climate Scenarios

The PACTA Methodology links a bank's financial exposure to the physical assets of its clients. Then, units of output and carbon intensity from the assets financed by a bank can be compared to different climate change scenarios. This exercise informs the current climate pathway that a bank's loan exposure and clients are on. A summary of the updated scenarios from 2DII is provided below.

- **Stated Policies Scenario (STEPS)** – COVID-19 is gradually brought under control in 2021 and the global economy returns to pre-crisis levels the same year. This scenario reflects all of today's announced policy intentions and targets, insofar as they are backed up by detailed measures for their realization. The scenario covers Fossil Fuel and Power sectors.
- **Sustainable Development Scenario (SDS)** – a surge in clean energy policies and investment puts the energy system on track to achieve sustainable energy objectives in full, including the Paris Agreement, energy access and air quality goals. The assumptions on public health and the economy are the same as in the STEPS. The scenario covers Fossil Fuel and Power sectors.
- **Net Zero Emissions by 2050 Scenario (NZE 2050)** – extends the SDS to target net zero emissions. The scenario responds to the increasing number of countries and companies that have made commitments to reach net zero emissions earlier, combined with the aim of limiting global temperatures to 1.5°C by the end of the century (with a 50% probability). Includes the need to end

new fossil fuel exploitation from 2021 onwards. The scenario covers Fossil Fuel, Power and Automotive Light-Duty Vehicle sectors.

- **Institute for Sustainable Futures Sectoral Pathways to Net Zero Emissions (ISF NZ 2020)** – created upon request of the Net Zero Asset Owners Alliance. The scenario aims to limit global temperatures to 1.5°C by the end of the century (with a 65% probability). Includes a decline in fossil fuel use of more than half by 2030. The scenario covers Fossil Fuel, Power, Cement and Steel sectors.

Coal Mining

The PACTA analysis of the coal mining sector includes the five-year projections of the annual coal production in metric tons under the following scenarios:

- **Corporate Economy** – PACTA's data set of disclosed plans projects the global corporate economy will increase coal production (including metallurgical and thermal coal) by 19% by 2025.
- **Stated Policies Scenario (STEPS)** – Contrary to the PACTA data, the STEPS scenario projects global coal production will fall 8% by 2025.
- **Sustainable Development Scenario (SDS)** – Global coal production must fall 22% by 2025.
- **Net Zero Emissions by 2050 (NZE 2050)** – Global coal production must fall 27% by 2025.
- **ISF Sectoral Pathways to Net Zero Emissions (ISF NZ 2020)** – Global coal production must fall 29% by 2025.

Citi committed in 2015 to decrease our credit exposure to coal mining companies, and we updated that commitment in 2020 to set a 2025 target for 50% reduction in credit exposure to thermal coal mining companies. In 2021, we are accelerating that commitment and expect to be far below 50% by 2025. For this reason, the PACTA analysis on Citi's Coal portfolio does not provide useful analysis given we are exiting thermal coal mining relationships.

While the PACTA dataset does not distinguish between thermal and metallurgical coal, most scenarios will require thermal coal production to decline faster than metallurgical coal production.

Cement

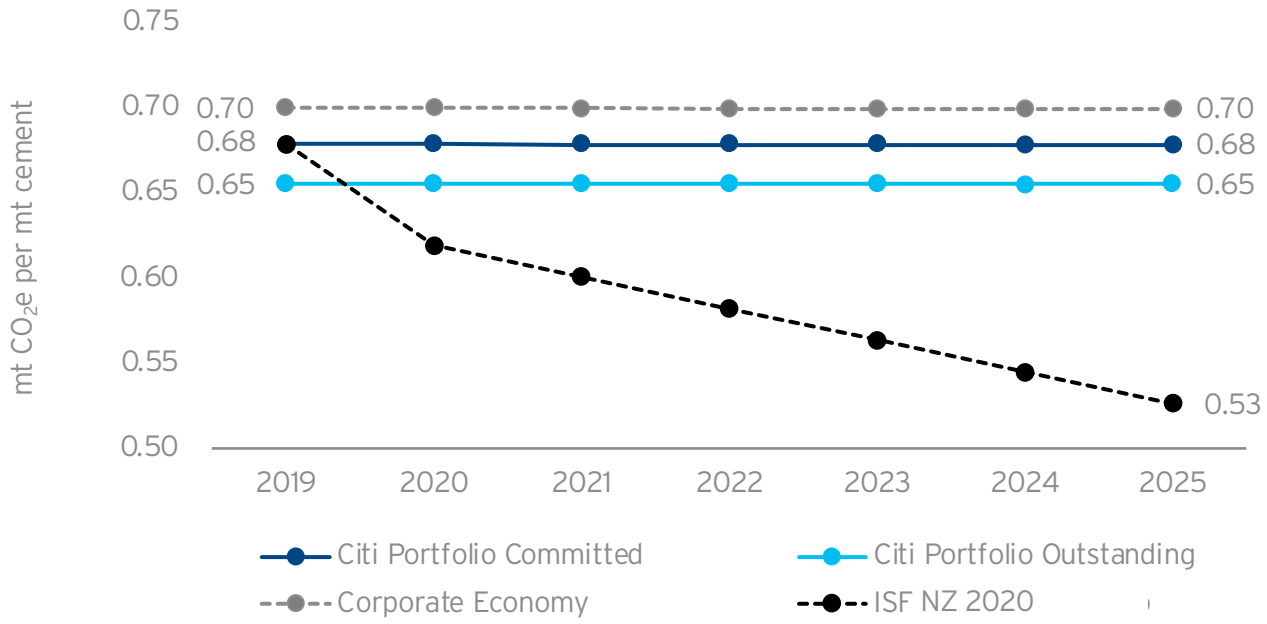
The PACTA analysis of the cement sector measures company-level emissions intensity of cement production (metric tons of CO_2 per metric ton cement) and then provides the bank's aggregate portfolio emissions intensity for the sector. The emissions intensity of Citi's cement producer lending portfolio is weighted by the committed and outstanding loan exposure to each company. The PACTA analysis includes projections of the emissions intensity of cement production from 2020 to 2025 for three buckets:

- Companies in Citi's lending portfolio;
- All cement companies in the global corporate economy based on disclosed plans; and
- The ISF's Net Zero decarbonization trajectory for the cement sector.

ISF Net Zero Scenario

This scenario's decarbonization trajectory includes an emissions intensity of 0.62 mt CO_2e/mt cement in 2020, which falls to 0.53 mt CO_2e/mt cement by 2025. Aligning to this net zero scenario requires a decrease in emissions intensity of ~22% in the next 5 years and a reduction of emissions intensity of 56% by 2040.

CEMENT EMISSIONS INTENSITY



Citi's cement clients' aggregate emissions intensity is slightly more efficient than the global cement sector (Corporate Economy). However, due to a lack of clear publicly disclosed capital expenditure commitments by cement producers (to develop lower carbon technologies or shift production to existing technologies with lower intensities), there is little change currently predicted in the emissions intensity of the global cement sector (Corporate Economy) and Citi's client base over the next five years, according to PACTA data. Given the importance of cement to the global economy for construction, housing and infrastructure, this presents a global challenge.

Automotive Manufacturing

The PACTA analysis of the Light-Duty Vehicle Auto Manufacturing sector measures the technology mix of production of individual companies and Citi's aggregate portfolio and then projects the change in that mix from 2020-2025 based on disclosed plans and IEA's NZE 2050 scenario. The technology mix of Citi's Auto Manufacturing portfolio is weighted by the committed and outstanding loan exposure to each company. The share of vehicles produced is split across internal combustion engine vehicles (ICEs), electric vehicles (EVs), hybrids and fuel cell technologies.

Demonstrated in the graph below, the auto manufacturing companies in Citi's loan portfolio have a production share of electric vehicles that is slightly below the global corporate economy. However, for both the corporate economy and Citi's portfolio, auto manufacturers must rapidly increase production of EVs and hybrid vehicles while phasing out traditional ICE vehicles to align with the IEA's Net Zero scenario.

ELECTRIC VEHICLE TECHNOLOGY SHARE