

Task Force for Climate-Related Financial Disclosures

TCFD Report
2020

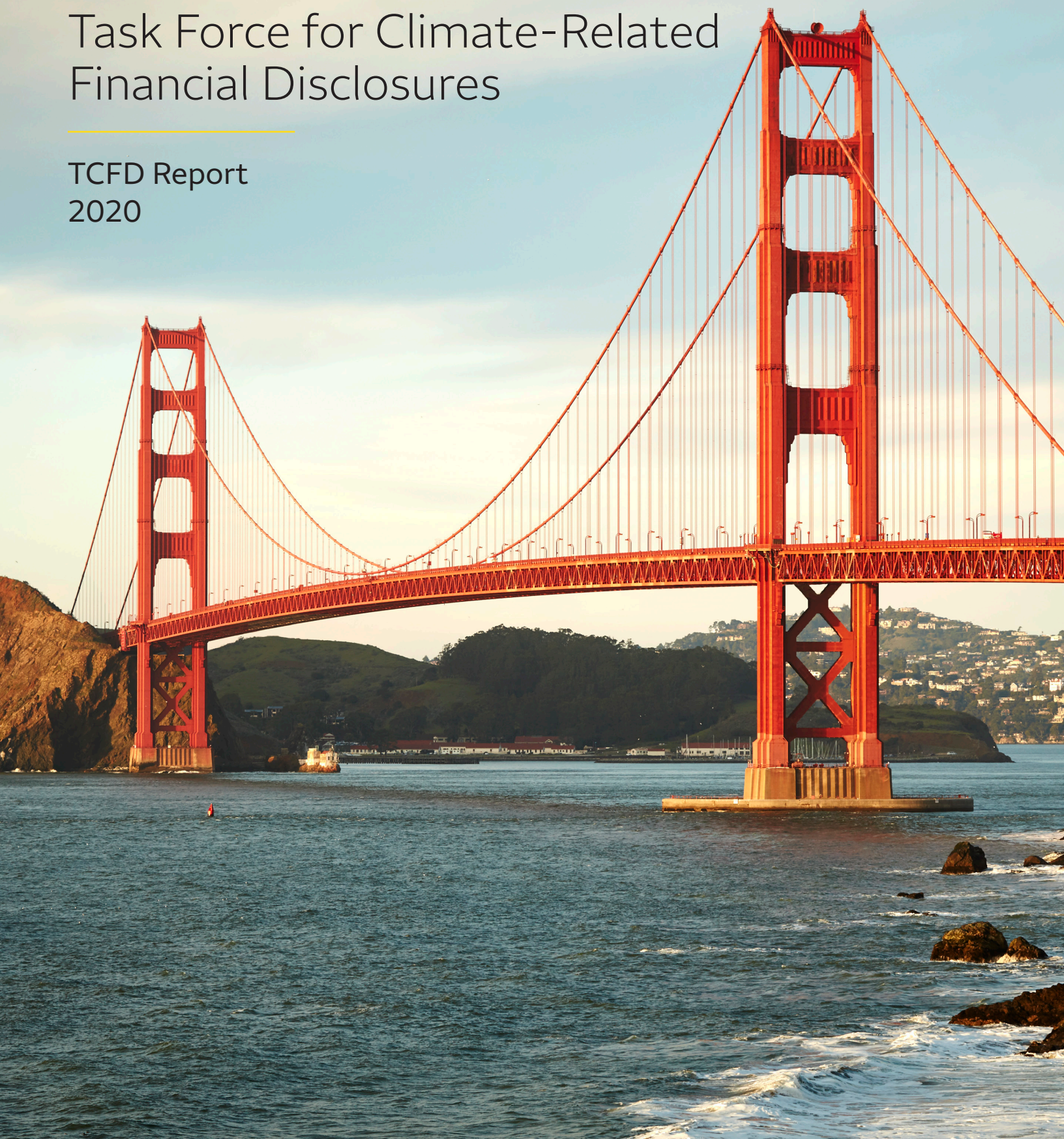


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Message from the CEO



At Wells Fargo, we recognize that climate change is one of the most urgent environmental and social issues of our time. We are committed to real solutions that align with our responsibilities to our stakeholders and to the environment. I am very pleased to take the next step in our sustainability journey with this release of our inaugural Task Force for Climate-related Financial Disclosures (TCFD) report. This report outlines Wells Fargo's strategic approach to managing the risks associated with climate change and deploying capital to accelerate a just transition to a low-carbon economy.

Climate change is projected to impact nearly every aspect of the economy and society, including agriculture, infrastructure, public health, human migration, national security, and more. These impacts pose a series of potentially interconnected risks to the financial system from employment and productivity to credit and insurance. While we cannot foresee exactly how these impacts may interact with each other over time, as we are seeing with the current COVID-19 pandemic, vulnerabilities and inequalities across society are likely to be amplified as climate change continues to manifest.

We believe that collective action is needed to transition to a low-carbon economy and minimize the impact on our most vulnerable communities. As this report indicates, we have endorsed the TCFD recommendations because we believe they will help us better manage the risks and opportunities associated with climate change, and contribute to sector-wide progress on financing a low-carbon future. Our goal is to support our customers as they also work to transform their businesses for success in a low-carbon economy, and support our communities as they work to adapt to and mitigate the impacts of climate change.

We are working across our organization to manage the impacts of climate change on our business, communities, employees, and customers. As a company, we are:

- Deploying capital to support a responsible transition to a low-carbon economy, including our \$200 billion sustainable finance commitment by 2030 and our newly announced Environmental, Social, and Governance (ESG) Solutions Group within Corporate and Investment Banking (CIB) dedicated to delivering clients the full suite of thought leadership and products Wells Fargo offers in the sustainable lending, securities, and investing universe.
- Evaluating climate-related risks at the transaction, sector, and portfolio levels with an environmental and social risk management focus.
- Managing our operational resilience and efficiency and achieving carbon neutrality for our 2019 operations through the purchase of carbon offsets.
- Addressing stakeholder expectations for more robust disclosure and reporting, including undertaking efforts to help calculate the carbon footprint of our financial portfolios.
- Collaborating with leading organizations to advance sustainability, drive innovation, and make a positive impact on the environment and in our communities.

While we have made great progress in renewable energy, clean technology, and energy efficiency, it is imperative that we collaborate across the private sector, governments, regulators, and civil society to advance public policies, sustainable finance and investing initiatives, and technology innovation to develop and deliver comprehensive climate change solutions.

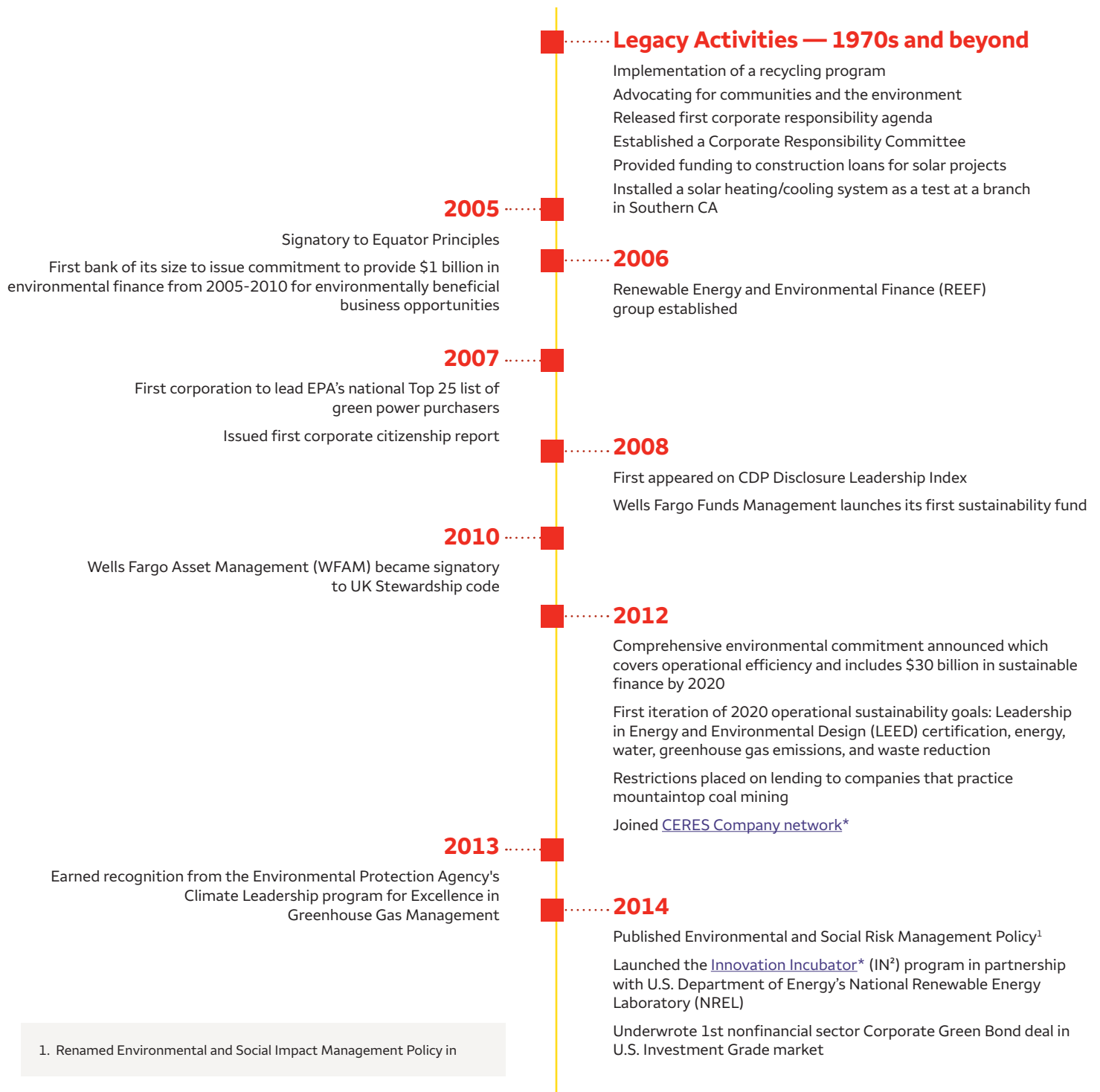
A handwritten signature in black ink, reading "Chm Scharf". The signature is fluid and cursive, with the first name "Chm" and the last name "Scharf" clearly distinguishable.

Charles W. Scharf

CEO, Wells Fargo & Company

A legacy of climate action

Wells Fargo has a long history of considering and seeking to address the implications of climate change in our operations, products, and collaborations. Our efforts generate and maintain long-term strategic value and are aligned with our commitment to transparency and focus on the needs of all of our stakeholders, including customers, employees, regulators, suppliers, communities, and shareholders.



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2015

WFAM signed UN Principles for Responsible Investment

2016

Renewed [2020 operational sustainability goals](#) and added a goal to meet 100% of our global electricity consumption with renewable energy sources²

Joined RE100

Wells Fargo Private Bank's Social Impact Investing team added a sustainable investing strategy to its other offerings which excludes exposure to fossil fuels and includes assessment of all holdings for exposure to carbon emissions

2017

Met 100% of our electricity consumption with renewable energy sources³

Corporate properties exceeded 30 million sq. ft. of LEED®-certified space

Joined Equator Principles Steering Committee

WFAM signed Japan's Stewardship Code

2018

Announced \$200 billion sustainable finance commitment through 2030

Provided \$5 million in seed funding to create [Tribal Solar Accelerator Fund](#) (with nonprofit GRID Alternatives) to support solar projects in tribal communities

Joined CDP supply chain program

Became Investor Network member at CERES

Together with peer banks, Wells Fargo collaborated with Oliver Wyman to pilot climate scenario analysis

Conducted physical climate risk analysis on more than a dozen Wells Fargo facilities

2019

Achieved carbon neutrality across our operations through the purchase of carbon offsets

Executed first Power Purchase Agreement with NRG Energy for 25MW to serve Wells Fargo energy needs in Texas

Determined we would not finance Equator Principles in-scope transactions in the Alaska Arctic region

Endorsed Task Force on Climate-related Financial Disclosures (TCFD)

Established Enterprise Climate Change Working Group

WFAM joined Climate Action 100+ global initiative

Participated in first sustainability-linked loan syndication in the U.S.

2020

Prohibited financing of coal-fired power generation projects

Made a \$600,000 grant to support the work of [Capital for Climate](#),* a climate finance investment platform for large-scale investors seeking to lead the transition to net zero carbon emissions (1.5°C outcome) by 2050

Worked with peers and the Rocky Mountain Institute to launch the Center for Climate-Aligned Finance

Won S&P Global Platts energy award

2. Renewable energy sources include on-site solar, long-term contracts that support net new sources of off-site renewable energy, and the purchase of renewable energy certificates.

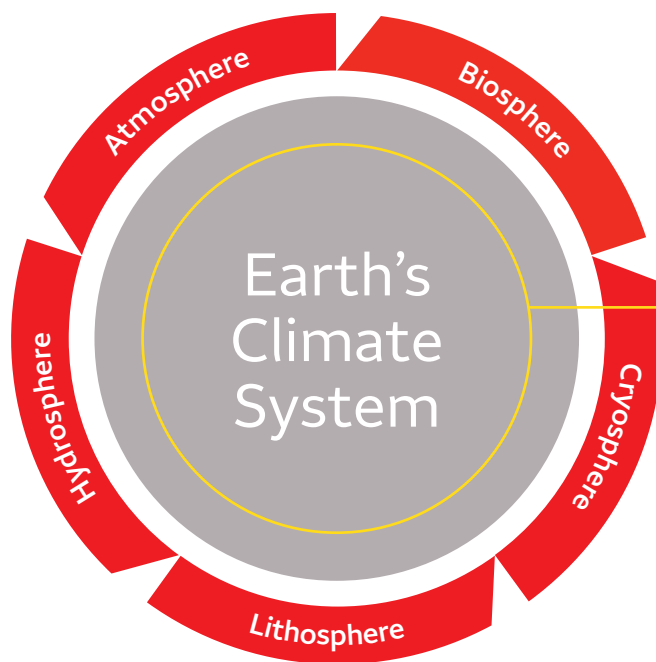
3. Renewable energy sources include on-site solar, long-term contracts that support net new sources of off-site renewable energy, and the purchase of renewable energy certificates.

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Climate fundamentals

Earth depends on balances in its natural systems to create and to sustain vibrant conditions for its inhabitants. The climate system is fundamental to every aspect of life on earth. At the core of the climate system is the carbon cycle, which transforms carbon flows, regulates how greenhouse gases (GHGs) absorb radiant energy from the sun, and ultimately warms the planet. The greenhouse effect is a natural process, however its natural balance has been altered by humans since the onset of industrialization. Scientists can now measure an anthropogenic greenhouse effect, which is an outsized accumulation of legacy and new GHG emissions related to energy and land use, industrialized production and consumption, and waste treatment, among other activities. Earth's energy budget and carbon cycle continue to destabilize our atmosphere, water, ice, vegetation, lands, and oceans. The impacts of climate change are unpredictable, inequitable, and highly dependent upon when, where, and how humans intervene.

Wells Fargo supports the principles of the Paris Agreement, including holding the increase in global average temperature to well below 2° Celsius above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5° Celsius above preindustrial levels, recognizing that this would significantly reduce the risks and impacts of climate change. Averting tipping points that are projected to occur above two degrees significantly decreases the risks and impacts of anthropogenic climate change on public health and safety, biodiversity, ecosystem services, and economic activity. Understanding the climate system through the lens of our own value chain helps inform our approach to the sources and impacts of climate change. Without a portfolio of solutions focused on mitigation, adaptation, and resilience, we risk further instability within the climate system, and the potential acceleration of hazards and disruptions.



Carbon cycle

A natural process by which the Earth maintains checks and balances in the stocks and flows of carbon throughout the climate system's various components.

Carbon sources

Any process that emits carbon dioxide (CO₂) into the atmosphere — from plant and animal decay, to deforestation, to the burning of fossil fuels.

Carbon sinks

Reservoirs that trap some of the CO₂ emitted into the atmosphere. For example, forests and other forms of land vegetation absorb CO₂ for photosynthesis. Oceans have absorbed almost a third of all human-induced emissions since the onset of the Industrial Revolution.

Governance

Wells Fargo maintains a governance structure to oversee our systematic approach to climate-related risks and opportunities. Wells Fargo leadership provides accountability, resources, and participation in our Climate Change Working Group (CCWG). Our centralized approach relies on knowledge sharing and decision-making across all levels of the organization, including operating segments, lines of business, and enterprise functions and Independent

Risk Management (IRM). Enterprise initiatives operate with the common objective of integrating climate and ESG factors into how we plan and conduct our business. Enterprise-wide integration of climate and ESG factors requires assessing short-, medium-, and long-term time horizons for value chain activities against stakeholder expectations, economic viability, and the level of ambition for our own sustainability goals.



Board oversight

Wells Fargo's [Board of Directors](#) (Board) has adopted [Corporate Governance Guidelines](#) that provide the framework for the governance of the Board and the Company. The [Corporate Responsibility Committee](#) (CRC), a standing committee of the Board, is responsible for oversight of our strategies and programs on public interest and social responsibility matters of significance to the company, including sustainability and environmental matters. The CRC meets regularly to discuss updates from management on policy development and implementation, materiality and impact assessments, and initiative reporting as part of its oversight of and our management of critical sustainability issues, including climate. The CRC also oversees public policy issues of significance to the company and our relationships with external stakeholders.

The Board's [Risk Committee](#) annually reviews and approves the company's Risk Management Framework and oversees its implementation, including the processes established by management to identify, assess, measure, monitor, and manage the company's risks. The Risk Committee takes a holistic view of all risks, including credit, market, interest rate, and liquidity risks, as well as nonfinancial risks such as operational risk, which includes compliance and model risks, and strategic and reputational risks. The Risk Committee receives reports from management that help it monitor how effectively the company is managing risk.

Management oversight

The company's senior management includes our Chief Executive Officer and members of our Operating Committee, which includes, among other executives, the CEOs of each of our businesses, Chief Risk Officer, Chief Operating Officer, General Counsel, Chief Financial Officer, Chief Auditor, and Vice Chair of Public Affairs. Senior management is responsible

for the business and management of the Company, including managing operations and implementing the Company's strategic plan.

The Enterprise Risk and Control Committee (ERCC) is a management-level governance committee that governs the management of all financial and nonfinancial risk types, including those associated with climate change. The ERCC receives information about risk and control events, addresses escalated risks and issues, actively oversees risk control, and provides regular updates to the Board Risk Committee regarding current and emerging risks and management's assessment of the effectiveness of the company's risk management program. Each line of business and enterprise function has a risk

Independent Risk Management (IRM) Climate Impact Risk Forum

In late 2020, we established an enterprise Climate Impact Risk Forum, led by IRM,⁴ to oversee the company's approach to managing climate-related risks and associated risk management practices in alignment with our Risk Management Framework. The Forum is a cross-functional group that includes senior leaders from IRM, Social Impact and Sustainability, the Chief Operating Office, the Legal Department and Corporate Treasury. A designated climate change leader in IRM helps coordinate climate-related risk integration efforts across IRM. For more information see pages 25 through 26.

and control committee, which are management governance committees with mandates that align with the ERCC but with their scope limited to the relevant line of business or enterprise functions. The focus of these committees is on the risks that each line of business or enterprise function

4. IRM is accountable for defining requirements and independently overseeing the identification, measurement, assessment, monitoring, aggregation, and reporting of risks.



generates and is responsible for managing, and the controls each line of business or enterprise function is expected to have in place. Oversight includes reviewing business activities with elevated levels of risk related to climate change considerations or other environmental matters. In addition to each risk and control committee, management governance committees dedicated to specific risk types and risk topics also report to the ERCC to help provide comprehensive governance of risks.

In 2018, we formed an internal ESG Disclosure Council comprised of senior leaders from the Controller's Division, the Legal Department, Finance, Corporate Risk, and Public Affairs. This Council helps us deliver on our commitment to transparency by providing senior-level accountability for ESG reporting and disclosures, as well as by considering ways to continue to enhance our ESG-related disclosures.

The company's Head of Sustainability and Corporate Responsibility is the primary member of management in the front line with accountability for enterprise initiatives related to climate and ESG, including providing direction to the Climate Change Working Group. Specialized sustainability teams within the Sustainability and Corporate Responsibility organization engage across businesses and functions

in the front line, and with IRM, to evaluate and promote new, business-relevant climate and ESG-aligned capabilities.

Climate Change Working Group (CCWG)

This enterprise-level working group plays a critical role in providing input in the operationalization of initiatives designed to enhance our governance, strategy, and risk management efforts with respect to climate change, including calculating metrics for target setting. The CCWG strategically brings together a blend of senior management and specialized experts from across the Company to help us better understand the impacts of climate change relative to our business. Based on that understanding, the CCWG engages with representatives from the front line and IRM through strategic discussions and capacity-building sessions. Examples of initiatives in which the CCWG is engaged to provide insights include financed emissions accounting, transition scenario analysis, and specialized trainings on climate change competency for select employees.

Additional front-line business activities

Front-line working groups

In some instances, our lines of business may operate their own working groups to focus on relevant client segments, sectors, or geographies with respect to climate-related risks or opportunities. Members of front-line working groups routinely engage with trade associations, nongovernmental organizations, data service providers, nonprofits, and our peers to learn how asset owners, financial intermediaries, and individual companies are managing their climate change response.

- **Clean Energy Vertical.** This group, consisting of representatives from Corporate & Investment Banking (CIB), Commercial Banking (CB), and the Renewable Energy and Environmental Finance (REEF) teams, routinely engages with the CCWG on topics including financed emissions accounting and strategic discussions about science-based target setting for particular sectors such as electric power generation, transmission, and distribution. In addition, they work with our clients to support the development of clean energy generation and technology deployment.
- **Wells Fargo Asset Management (WFAM) Climate Change Working Group.** As a signatory to the [UN Principles for Responsible Investment](#),* WFAM has designed climate analyses to support its investment teams across asset classes and sectors. WFAM has established a Climate Change Working Group specific to its institutional investment management business. This working group researches climate-related risk and opportunity by sector, and then uses this knowledge in various aspects of the investment or product design process.

This group is cross-functional, keeps current on the latest climate developments, and:

- Conducts independent research.
- Builds analytical frameworks to evaluate the impact of climate-related risks' impact on fundamentals and security value.
- Develops processes to consider climate scenarios together with forward-looking options, for integration into traditional financial analysis for investment purposes.

Members of front-line working groups routinely engage with trade associations, nongovernmental organizations, data service providers, nonprofits, and our peers to learn how asset owners, financial intermediaries, and individual companies are executing their climate change response.

Green Teams

Wells Fargo Green Teams are formal networks of environmentally conscious employees who engage in sustainability- and conservation-related projects at work and in their communities around the world. They are sponsored by certain senior leaders with accountability for sustainability performance and policy. Green Team members help improve our operational efficiency, conserve resources, and reduce environmental impacts, while engaging coworkers and raising awareness of sustainable opportunities at work and in the community. Green Teams support climate mitigation by educating colleagues on topics such as reducing and reusing materials in the office and alternative commuter opportunities. For example, certain Green Teams have established groups of bike enthusiasts to replace drive-alone commuting.

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Strategy

“As a leading financial services company, Wells Fargo has an opportunity to play a strategic role in the transition to a low-carbon economy and reducing the impacts of climate change. We seek to understand the near- and long-term climate-related risks and opportunities which can help us to build resiliency in our business and the communities in which we operate, and properly support our clients in their own climate and ESG efforts.”

– Bill Daley, Vice Chairman of Public Affairs, Wells Fargo & Company

The effects of climate change are likely to impact nearly every aspect of the economy. That’s why we pursue an integrated climate strategy that matches our understanding of the evolving financial system with the dynamic lens of the climate system. We monitor market trends, policy proposals, stakeholder dynamics, disclosure and transparency expectations, technological advancements, and more to inform our strategy. As outlined in the Paris Agreement, the long-term nature of climate change requires that we make strategic decisions to mitigate, adapt to, and maintain resilience against the adverse impacts of climate change over a range of time horizons.

We’re leveraging our expertise and market position as we collaborate with our stakeholders on a number of efforts to collectively transition to a low-carbon, climate-resilient future, including through our efforts related to the following:

- Sustainable finance
- Clean technology and innovation
- Climate-related risk and opportunity dimensions
- Operational resilience
- Transparency and disclosure
- Stewardship and social impact

Sustainable finance

Deploying capital to accelerate and scale the next generation of financial products and services requires that we integrate climate, environmental, and social factors into our lending, securities, and investing products and services. Our financial products and services reside across our four operating segments — Consumer Banking and Lending, Commercial Banking, Corporate & Investment Banking, and Wealth & Investment Management — which are defined by type of product and customer segment.

The effects of climate change are likely to impact nearly every aspect of the economy. That’s why we pursue an integrated climate strategy that matches our understanding of the evolving financial system with the dynamic lens of the climate system.

Wells Fargo has an opportunity to play a central role in providing sustainable finance capital and information to the marketplace to support a just transition to a low-carbon economy.

We acknowledge that trillions of dollars of sustainable capital flows will be required to adequately avoid, sequester, and redirect GHG emissions. Beyond that, we acknowledge that the impacts of climate change will require unprecedented investment in adaptation and resilience efforts to support the thoughtful and gradual transformation of legacy infrastructure and business models. Our approach is designed to combine new opportunities and focus areas with existing approaches by using science and financial innovation to deliver the level of ambition of the Paris Agreement across commercial, industrial, and consumer applications.

In 2018, we announced a commitment to lend or invest \$200 billion to environmentally sustainable businesses and projects by 2030, with 50% of that amount earmarked for activities that directly support the transition to a low-carbon economy, including renewables, energy efficiency technologies, green buildings, green bonds, and low-emission vehicles. The remainder will support companies and projects focused on sustainable agriculture, conservation, recycling, resource management, and other environmentally beneficial initiatives. Our [sustainable finance reporting methodology](#) provides significant detail on how Wells Fargo defines sustainable finance and how we account for progress against our commitment. In the first two years of our sustainable finance commitment, we deployed approximately \$49 billion in sustainable finance — 67% of which supported low-carbon opportunities.

In 2020, we established the Sustainable Finance Center of Excellence (SF – CoE) within our Social Impact & Sustainability function, to promote a greater focus on sustainable finance with our lines of business, leading NGO organizations, and others. This group works across the enterprise to support customer engagement on sustainable finance opportunities with subject matter expertise, competitive intelligence, and analytics. The SF – CoE

will help with driving innovation around resilient infrastructure and communities, scaling clean technology, advancing transition finance in carbon intensive sectors, and catalyzing climate-aligned financing.

In 2020, we also established the CIB ESG Solutions group to provide clients with expertise and perspectives on sustainable finance topics and better access to a suite of products that can support them in their ESG efforts. CIB ESG Solutions is client-centric and drives innovation and best practices across CIB industry coverage teams. The group collaborates with product and risk partners to deliver debt capital markets, underwriting of green, social, and sustainability bonds, equity capital markets, lending, structured products, and mergers and acquisition advisory services for clients focused on investing in their energy transition, improving their environmental sustainability, and/or advancing their social impact.

Clean technology and innovation

Wells Fargo finances companies and projects that help propel the U.S. toward a low-carbon economy. We contribute to the advancement of renewable energy and clean technologies, serving a wide variety of companies in these rapidly growing sectors. We work with businesses around the world that manufacture, market, and develop clean technologies that enable sustainability and resource efficiency.

Wells Fargo clean technology and renewable energy products include:

- ***Tax-equity investments and lease financing.*** The Renewable Energy & Environmental Finance (REEF) team's approach to project finance is relationship based. We work with leading, high



quality, trusted developers, and collaborate with them on multiple projects. Between January 1, 2006 and December 31, 2019, Wells Fargo tax equity projects represented 10.3% of all U.S. solar and wind generation capacity.⁵

- **Corporate and investment banking (CIB) products and services.** CIB offers debt and equity capital markets, advisory services, treasury management, term loans, revolvers, project financing (construction/term), and derivative products to renewable energy and clean technology companies.
- **Asset-based lending.** Wells Fargo Capital Finance provides asset-based, revolving lines of credit, and term loans in support of high-growth emerging

businesses in the renewable energy and other clean technology sectors looking to expand into the U.S.

Our clients include businesses that specialize in:

- Energy generation, including solar, wind, and biomass
- Energy storage
- Energy efficiency
- Water technologies
- Agricultural technologies
- Electric and low-emission vehicles
- Smart grid applications

5. This data is tracked by Wells Fargo's Renewable Energy and Environmental Finance (REEF) team and is compared to data published by the Solar Energy Industries Association and the American Wind Energy Association.



In addition to unlocking capital, we believe we have an important role to play in advancing sustainable finance innovation and opportunities. We are expanding our engagement with research and nonprofit organizations at the forefront of climate finance. For example, the [Wells Fargo Innovation Incubator \(IN²\)*](#) — a \$50 million collaboration with the National Renewable Energy Laboratory — is designed to build a strong and influential brand in clean technology and sustainable agriculture. This collaboration focuses on engagement with universities and other incubator programs to accelerate the commercialization of clean technologies and sustainable agriculture. The IN² program has directly supported 46 early stage startups that, as of fall 2020, have raised more than \$400 million in follow-on funding. Further, Wells Fargo Foundation philanthropic funds that support IN² have also supported hundreds of additional startups through our network of 60+ incubators and accelerators across the country.

Climate-related risks and opportunities

Given the physical impacts and transition aspects that will manifest as a result of climate change, climate-related risk and opportunity management are core elements of our climate change strategy.




Understanding these dimensions supports our strategic planning efforts to mitigate the effects of inaction, late action, or poor execution of adaptive and protective measures to respond to climate change.

In line with the TCFD guidance, we categorize climate-related risks and opportunities into transition and physical dimensions. Understanding these dimensions supports our strategic planning efforts to mitigate the effects of inaction, late action, or poor execution of adaptive and protective measures to respond to climate change. See the [“Risk Management”](#) section of this report for further detail about our approach to climate-related risk management.

Transition dimensions are variables that influence, result from, or are amplified by the transition to a low-carbon or net-zero future economy. We categorize them into three TCFD-aligned types — policy and legal, market and reputation, and technology. Transition dimensions offer insights into the costs and benefits of climate mitigation and adaptation that can be modeled against 1.5° and 2° Celsius reference scenarios. We are exploring science-based targets to understand the economic viability and feasibility of large scale transitions defined by policy, market, and technological dimensions.

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Transition dimensions of climate change

Dimension type	Impact and dependency channels	Focus areas
Policy and Legal 	Policy-based shifts: Demand- and supply-side changes as measured through policy intervention factors that impact or depend upon policymakers, regulators, and lawmakers	<ul style="list-style-type: none"> Climate, energy, and industrial policies (e.g., carbon compliance markets, emissions, and efficiency regulations) Climate-related disclosures and regulatory expectations Climate-related litigation and legal mandates for management of assets and liabilities
Market and Reputation 	Market-based shifts: Demand- and supply-side changes as measured through structural and behavioral factors that impact or depend upon consumers, intermediaries, and producers	<ul style="list-style-type: none"> ESG performance mandates for lending, investing, and securities Green market potential (e.g., green, climate- and ESG-aligned products and services) Screening and engagement strategies by investors Voluntary carbon offsets, carbon transparency, and Circular Economy trends
Technology 	Technology-based shift: Demand- and supply-side changes as measured through operational factors that impact or depend upon consumers, intermediaries, and producers	<ul style="list-style-type: none"> Blockchain/remote sensor applications for value chain due diligence and product innovation Clean technology, renewable energy, industrial hydrogen and CCS (carbon capture and storage) Weatherization/disaster resilience

Physical dimensions are variables that result from, and are amplified by, the physics of climate change. We categorize them into two types — acute (sudden) and chronic (gradual). Physical dimensions can be monitored through catastrophe modeling, geospatial mapping, climatology and meteorology, and natural resource management. Physical dimensions offer insights into the costs and benefits of climate

adaptation and resilience through a focus on fixed assets or infrastructure management. We seek to establish and monitor metrics and targets for these uncertainties with respect to how the human-built environment adapts to extreme weather events, prolonged resource scarcities, and longer-term climate hazards such as sea level rise.

Physical dimensions of climate change

Dimension type	Impact and dependency channels	Financial focus areas	Nonfinancial focus areas
Acute 	<ul style="list-style-type: none"> Air and water quality Extreme winds/temperatures Tropical cyclones Wildfires Zoonotic diseases 	<ul style="list-style-type: none"> Assets and liability revaluation Direct/indirect emissions costs Opex/capex for mitigation, adaptation, and resilience Revenue disruption Retained losses from non-insurability 	<ul style="list-style-type: none"> Early retirement of useful assets Forced retrofitting due to resilience and adaptation needs Human health and physical safety Operational efficiency and disruptions Resource scarcity
Chronic 	<ul style="list-style-type: none"> Air and water quality Extreme hydrology and climate variability Land use (forestry, agriculture practices) Monsoons Natural resource stress Rising mean/volatile temperatures Rising sea levels 		

Climate finance applications




Climate-related dimensions guide the development of our climate finance capabilities. Below, we define the fields of climate finance and overlay them with climate dimension types to provide real-world examples of how we believe financing will need to evolve with markets, policies, technology, and greater understanding of the acute and chronic hazards associated with climate change. We know transition finance needs to include a focus on the following elements:

- **Climate change mitigation.** Reducing climate change by limiting sources of GHG emissions. A net impact can be achieved by shifting primary sources of energy to renewables such as wind, hydro, solar, biomass, or geothermal, or by innovating new ways to enhance carbon sinks.



Mitigation may also include nature based solutions such as installing or restoring green infrastructure, carbon capture and storage, and negative emission technologies (NETs).

- **Climate change adaptation.** Adapting behaviors and structures to focus on solutions to the impacts and dependencies of climate change, and protecting ourselves from its most harmful and inevitable effects. This includes shifting production, consumption, and intermediate processes to support balance to the carbon cycle and natural resource management.
- **Climate change resilience.** Developing ways to enable human-built structures to withstand both acute and chronic hazards, including extreme weather events and prolonged resource scarcities.

Examples of transition dimensions in climate finance

Dimension type	Climate change mitigation: Prevent or neutralize GHG emissions	Climate change adaptation: Change behaviors or structures due to climate factors
Policy 	Support development of more robust carbon markets (e.g., emissions trading, carbon tax coverage)	Companies and sectors set GHG emission reduction targets (e.g., net zero commitments)
Market 	Increase in consumer or investor demand for low-carbon products and services such as renewable energy and storage	Increase in supply of reused consumer goods such as upcycled plastics
Technology 	Support innovation in commercial building technologies that capture carbon	Support development of remote sensors for monitoring, reporting, and verification (MRV) of emissions

Examples of physical dimensions in climate finance

Dimension type	Climate change adaptation: Improve built environment defenses	Climate change resilience: Withstand built environment shocks
Acute 	Green infrastructure deployment such as using bioswales to conduct stormwater runoff while removing pollution	Climate-resilient construction materials and innovative cooling/heating techniques to decarbonize dwellings and weatherize against extreme temperature variability
Chronic 	Resource efficiency programs that sustain renewability of natural resources such as regenerative soils	Large-scale investment in flooding defense systems against sea level rise

Operational resilience

As an enterprise, we understand that we must focus on the energy and resource efficiency of our physical assets such as land, buildings, vehicles, and equipment to mitigate climate change, and adapt to and withstand shocks from transition and physical impacts.

We continuously work to improve efficiencies in our operations that help us minimize our environmental impact, reduce costs, enhance our employee experience, and set a positive example for the business community. Wells Fargo's [2020 operational sustainability commitments](#) were aimed at increasing the operational efficiency of our assets.⁶

The progress we have made against our 2020 renewable energy goal is particularly noteworthy. In 2017, we achieved our goal of meeting 100% of Wells Fargo's global electricity needs with renewable energy,⁷ primarily through the purchase of certified renewable energy certificates (RECs). These purchases were an important first step in our renewable energy strategy. The second step

has been to leverage our purchasing strength to encourage development of new sources of green power. We do this through long-term agreements that support the addition of net new renewable energy capacity to the grid.

In addition to meeting 100% of our global electricity requirements with renewable sources, Wells Fargo achieved carbon neutrality for our 2019 operations (Scopes 1 and 2 GHG emissions). This milestone is a significant step in support of the collective transition to a low-carbon economy.

To assess the resiliency of our physical assets, we commissioned a third party to help us identify the physical risks of climate change to a number of our most critical properties, including data centers, operations centers, and facilities with high concentrations of employees, including those overseas. The results of this study help us further integrate a climate lens into our practices, including considerations such as where we locate new corporate properties and how we approach their construction, operations, maintenance, and decommissioning.

6. 2020 year-end data not available as of the publishing of this report.

7. Renewable energy sources include on-site solar, long-term contracts that support net new sources of offsite renewable energy, and the purchase of renewable energy certificates.

Transparency and disclosure

Through our transparency and disclosure efforts, we share and explore the climate-related risks and opportunities across our enterprise. The value TCFD provides is a consistent framework through which to align our climate disclosures related to risk management, governance, strategy, and metrics and targets. Using one of the TCFD's recommended metrics — total carbon emissions — we have begun the process of understanding data availability and prevailing methodologies and their limitations to estimate Scope 1, 2, and 3 upstream emissions associated with a selection of our financing portfolios. This will enable us to better evaluate where and how to engage certain clients in conversations about transition pathways.

Wells Fargo's financed emissions concentrations

Wells Fargo calculates and discloses our direct Scope 1 and indirect Scope 2, or operational emissions, as well as several relevant categories of Scope 3 emissions (see [Metrics and Targets section](#)). We recognize that the direct and indirect emissions of our customers — referred to as financed emissions — represent a far larger source of emissions than those from our own operations. Financed emissions fall within our Scope 3, downstream Category 15 emissions per the [GHG Protocol](#).⁸ Unlike a single client who has a narrower range within which to assess their value chain using the GHG Protocol, we, like our peers, must consider thousands of clients across millions of data points representing sources of carbon, nitrogen, methane, and other GHG emissions. The availability and quality of data necessary to be able to report and estimate these emissions is a common challenge for diversified financial institutions. We continue to explore various ways in which we could reduce GHG emissions associated with our activities, including our financing activities.

The table on page 19 is one possible representation of our Scope 3, financed emissions as of

Partnership for Carbon Accounting Financials (PCAF)

Stakeholders have been seeking information about how we are identifying, assessing, and managing our Scope 3, Category 15 financed emissions. In 2018, we began the complex work of measuring financed emissions associated with our credit portfolios, including evaluating PCAF and other accounting methodologies for Scope 3, Category 15 financed emissions. With this TCFD report, we make our first disclosure which we consider to be generally consistent, with the spirit of [PCAF's](#)^{*} mission. We wrote about our experience of conducting due diligence on one part of the PCAF methodology⁸ in the pilot version launch of the [Financial Sector Science-based Targets Guidance](#)^{*} by the Science-based Targets initiative (SBTi), another organization whose tools we are actively assessing.

While we recognize utility in PCAF's mission to create a single standard for financial institutions to calculate, report, and disclose financed emissions, we are continuing our work to mature our own internal carbon accounting program, including through our ongoing evaluation of methodologies such as PCAF and SBTi, and focused on evaluating data that is informative and integral to serve our efforts to address climate related risks and opportunities. We intend to continue to collaborate with our clients and industry partners to improve data quality and access for the broader financial sector.

December 31, 2019, based on estimates of GHG emissions by North American Industry Classification System (NAICS) sector, which do not reflect either historical improvements or anticipated reductions in emissions based on future planned investments. With only a fraction of our clients reporting their GHG emissions, we expect that this model will change over time as the quantity and quality of emissions data improve. Specific to the utility sector, current emission levels are heavily driven by the 20% of domestic electricity that still comes from coal power generation. That level is down from 50% in 2000 as the sector has invested heavily in natural gas and renewable (solar and wind) generation capacity, which in turn has driven a decrease in U.S. GHG emissions

8. Case Study: Wells Fargo - Testing PCAF Methodology, p. 42

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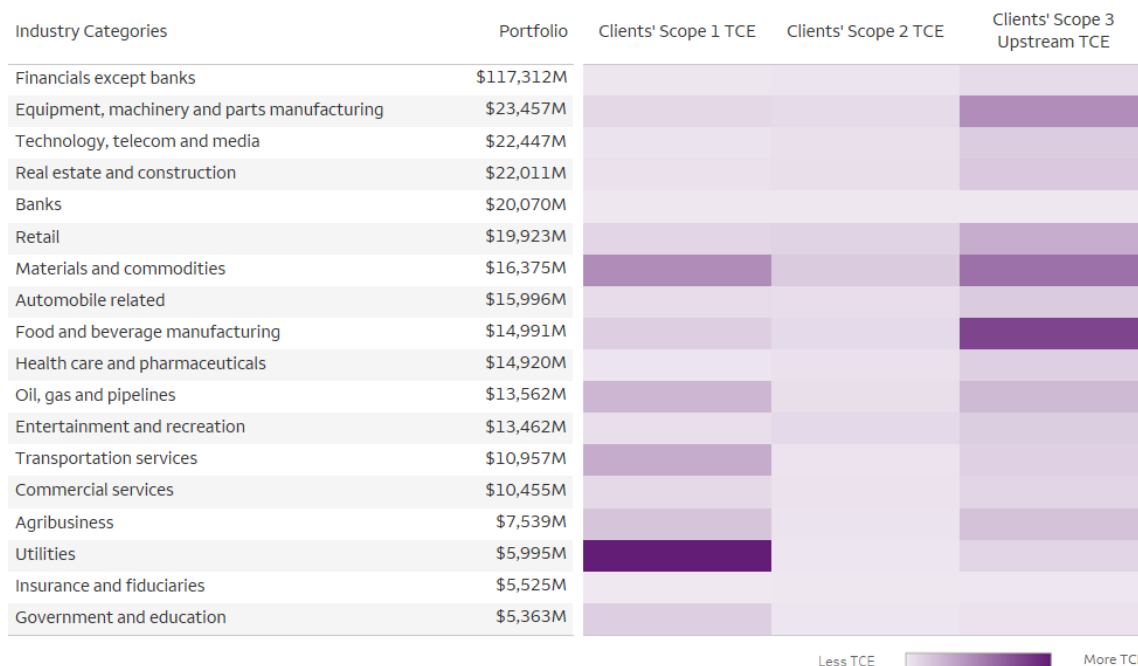
over the last two decades. Going forward, we expect domestic coal-fired generation to be phased out completely, largely replaced with renewables as utilities invest hundreds of billions of dollars in capital to transition their operating assets. In conjunction with that shift, we anticipate the emissions profile of the sector to decrease substantially. Wells Fargo is playing a leadership role in facilitating that transition for our clients.

We share this model output as a means to demonstrate our efforts to test the data, make estimates, and iterate our process to better understand our financed emissions through the amount of financing we provide to clients in various industries. This model output represents a snapshot

in time and is not meant to serve as a final or even preliminary prioritization of the sectors to which we will provide financing going forward as part of our climate strategy. In time, we plan to narrow the data and explore our emissions at more granular levels that are aligned to our strategy in order to make progress with measuring and managing financed emissions. Ultimately, we aim to cultivate repeatable, consistent metrics for financed emissions that inform the complex undertaking of setting a science-based GHG reduction target. Our early view of financed emissions concentrations allows us to consider carbon and financial performance in the same view, which provides level and trend analysis required for reducing GHG emissions.

Wells Fargo financed emissions concentrations (as of 12/31/2019)

Commercial and industrial loans and lease financing by industry* and total carbon emissions (TCE)**



Data sources: Internal Credit Database, S&P Global Market Intelligence (*SPGMI). M=millions

*Industry categories are based on the North American Industry Classification System (NAICS) and include non-U.S. loans. For additional information, see Table 18 (Commercial and Industrial Loans and Lease Financing by Industry) in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2019 (2019 Annual Report). The industry categories were updated in 2019 to align with industry groupings that our regulators use to monitor industry concentration risks.

**Per TCFD Guidance, total carbon emissions (TCE) are the absolute greenhouse gas emissions associated with a portfolio, expressed in tons of CO₂ equivalent. These emissions represent a one-year lookback period

and reflect estimates for direct (Scope 1), indirect (Scope 2), and indirect upstream (Scope 3) emissions per GHG Protocol.

Note: Wells Fargo's Scope 3, Category 15 financed emissions included our client's Scope 1, Scope 2 and Scope 3 Upstream emissions in this analysis. These emissions represent a measure of climate-related transition risk to which the financing portfolios presented are potentially exposed.

All financial balances match the 10-K with the exception of "Other" category, which was purposefully removed from the carbon accounting model.

Methodology

Carbon accounting requires two sources of data — internal and external. The internal data used was based on the commercial, industrial, and lease financing balances presented in our 2019 Annual Report, which totaled approximately \$360.4 billion in outstanding credit exposure. This dataset was already grouped into NAICS sector codes aligned to industry categories defined by the Office of the Comptroller of the Currency (OCC). We extrapolated emission factors using S&P Global Market Intelligence (SPGMI) datasets.

Once the emission factors were derived and scaled to dollar value factors, we multiplied them by our financial balances to determine estimated total carbon emissions or absolute GHGs associated with each industry category. Those final values are displayed and indexed in shades of purple representing concentrations of our clients' Scope 1, Scope 2, and Scope 3 Upstream emissions, which are aligned to the GHG Protocol. This methodology is aligned with the TCFD's recommended metric of total carbon emissions. It also was informed by our evaluation of various carbon accounting methodologies, including PCAF.

Stewardship and social impact

Collaborating with leading civil society groups, business and policy associations, peers, and other thought leaders helps us drive innovation and accelerate market-based solutions to the climate crisis. Stewardship and social impact across sectors and stakeholders are critical to meeting the level of ambition and progress it will take to achieve the Paris Agreement goals. To this end, we're working with communities, academia, industry, investors, customers, nongovernmental organizations,

nonprofits, and suppliers to understand how we can all work together to accelerate the transition to a low-carbon economy while adapting to a warming planet.

Rocky Mountain Institute Center for Climate-Aligned Finance

The financial sector's role in the global sustainability agenda is a critical component that can help drive climate-aligned solutions with a growing focus on implementing the principles of the Paris Agreement in real economy sectors. In July 2020, the [Rocky Mountain Institute](#) (RMI) — a leading global clean energy nonprofit — joined with Wells Fargo, Goldman Sachs, Bank of America, and JPMorgan Chase to launch the Center for Climate-Aligned Finance. The Center will be independently administered by RMI and will collaborate with the financial sector to help develop integrated solutions and decision-making frameworks in partnership with industry clients in carbon-intensive sectors. This work will support decarbonization, as well as develop relevant metrics, tools, and other means to track progress toward net-zero lending and investing activities.

Coalition for Climate Resilient Investment

Wells Fargo joined this private-sector initiative in 2020 to help advance practical solutions that technically integrate climate-related physical risks into investment decisions for real asset infrastructure. We provide direct input as a producer into the initiative's Asset Design and Structuring working group, which builds a framework for integrating climate-related risk data into cash flow modeling practices. Other members include asset owners, asset managers, insurance companies, rating agencies, and engineering firms — providing a systemic view of climate risk transfer and transformation between financial and nonfinancial channels. We recently

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joined as a producer for the initiative's Financial Innovation working group, which uses insights from other working groups to formulate greenfield product strategies.

Bank 2030

We were one of six global banks that took part in the [Bank 2030*](#) project, which focused on accelerating the financing of the low-carbon economy and developing a vision for what a climate-progressive bank should look like by 2030. The University of Cambridge Institute for Sustainability Leadership conducted a benchmarking analysis of how leading banks are approaching plausible climate-related shifts in the economy leading up to 2030. Based on that study, the Institute authored a report examining the most likely cross-sector technology and policy trends driven by adoption of the Paris Agreement and the UN Sustainable Development Goals.

Resilient Communities Initiative

In 2017, Wells Fargo and the National Fish and Wildlife Foundation launched the Resilient Communities Program — a four-year initiative

supported through a \$12 million contribution from Wells Fargo that will be used to address the mounting threats of floods, droughts, rising sea levels, and longer hurricane and wildfire seasons. By investing in green infrastructure and providing conservation and resilience training for community leaders, the funded projects aim to enhance the environmental protections that local ecosystems naturally provide. The grants will be leveraged with other private and public funds with an expected total investment of \$24 million. Through this partnership and community resiliency projects, we anticipate the following outcomes (partial list):

- 180,000 acres of land restored and/or improved with land management
- 12,000 acres of land protected under conservation easements
- 13,000 acres of wetlands restored
- 71,000 trees planted
- 3 million gallons of storm water prevented annually
- 137,000 community members engaged in community resiliency efforts



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Powering change in communities

With help from Wells Fargo, GRID Alternatives has grown into a national leader in making renewable energy technology and job training accessible to underserved communities. In 2018, GRID and [Wells Fargo launched the Tribal Solar Accelerator Fund](#) to catalyze the growth of solar energy and expand solar job opportunities in Tribal communities across the U.S. The Spokane Tribe's Children of the Sun Solar Initiative was the first project selected for TSAF funding. This 650-kilowatt solar initiative, spearheaded by the Spokane Indian Housing Authority, was born in response to the 2016 Cayuse Mountain Fire that burned 18,000 acres on the Spokane reservation and cut power to the tribe's main administrative buildings and water supply. For the Spokane Tribe, solar represents not just a way to save money and create new economic opportunity but a chance to strengthen community resilience and take steps toward self-sufficiency.

[See Wells Fargo Stories for more examples of our environmental impact.](#)



Supporting climate resiliency among Native American and Alaska Natives

Climate-aligned outcomes are particularly important for those communities and populations that are most impacted by climate change but least equipped to confront it. Native Americans and Alaska Natives are particularly vulnerable due to a variety of cultural, economic, policy, geography, and historical factors. See below for examples.

Expanding water access in climate-threatened communities

Founded in 1995, [Red Feather Development Group*](#) is a 501(c)(3) nonprofit organization that partners with Tribal Nations to develop and implement sustainable solutions to housing needs within their communities. Red Feather serves the Hopi and Navajo Nations and works closely with government officials, community members, housing professionals, and volunteers within each community to manage its programming. The Wells Fargo Foundation has supported Red Feather since 2008, and most recently has supported Red Feather's Native Home Resource Network — a case management program that helps families address critical housing needs such as installing heating systems, fixing leaky roofs, reinforcing insulation, providing stable power, and more.

The Hopi and Navajo Nations live in a part of the country exposed to extreme hydrological stresses. For centuries, Navajo and Hopi families have had to collect their own water. The health impacts of water insecurity are especially being felt during the outbreak of COVID-19. The Navajo and Hopi Nations have observed one of the highest per-capita infection rates in the country along with significant loss of life. One of the best preventive measures for stopping the spread of COVID-19 and staying healthy is thorough handwashing, yet without dependable access to water this becomes particularly challenging. In response, Wells Fargo Community Giving awarded Red Feather an emergency grant to help in the deployment of high-capacity handwashing stations for Navajo and Hopi families without access to running water in their homes.

Risk management

“We have ongoing efforts underway to drive change by strengthening risk management and compliance throughout our company. Managing risk effectively is a fundamental part of what we do, and closely monitoring risks related to climate change is critical for our business.”

– Mandy Norton, Chief Risk Officer, Wells Fargo & Company

At Wells Fargo, every employee has a role in managing risk. Our Risk Management Framework describes how the company manages and governs its risk, including senior management’s responsibility to set the tone at the top by supporting a strong risk management culture. The Board holds senior management accountable for establishing and maintaining the right culture and effectively managing risk. Wells Fargo views climate change as a global challenge that presents significant impacts for businesses and communities around the world, and we are committed to ensuring climate-related risks and opportunities are appropriately identified and managed within our business.

Wells Fargo’s [Environmental and Social Risk Management \(ESRM\) Framework](#) provides information and transparency on the company’s

approach to managing environmental and social risks, including those related to climate change. Our ESRM Framework is aligned to the company’s Risk Management Framework, which sets forth the core principles on how the company seeks to manage and govern its risk. The risks the company takes include financial, such as credit, interest rate, market, liquidity and funding risks, and nonfinancial, such as operational, including company and model risks, strategic, and reputation risks. Environmental and social issues, including climate change, can manifest across risk types. We continue to refine our approach to integrating climate-related risks into our risk management programs and assessing how the TCFD categories of transition and physical risk may manifest across the risk types due to climate change dimensions.



Examples of potential climate-related impacts by risk type

Risk type	Physical	Transition
Credit	Credit quality deterioration due to physical damage to obligor collateral	Credit quality deterioration due to declining economic condition of obligors in carbon-intensive industries
Market	Negative impact to underlying physical assets	Market dysfunction or unusual levels of price volatility
Operational	Increased incidence or severity of natural disasters impacting bank branches, offices, or infrastructure	Impact of regulatory or legislative changes on company or vendor operations
Strategic	Business plans do not sufficiently account for impact of environmental change	Business plans do not sufficiently account for impact of client industry change or of direct regulatory/legislative change
Reputational	Stakeholder opinion change based on management of natural disasters impacting bank branches, offices, or infrastructure	Stakeholder opinion change based on the bank's climate-related commitments or lack thereof, or based on management of climate-sensitive client portfolio

Identifying, assessing, and managing climate-related risks

The Environmental and Social Risk Management (ESRM) team, which is part of our Public Affairs organization, maintains the ESRM Framework and other policies related to environmental and social issues, including enhanced due diligence for certain industries that are considered to be higher risk. ESRM evaluates a variety of criteria including the client's intended use of the financing proceeds, the industry and geographical locations of the client's operations, and the client's ability to manage current and potential future environmental and social impacts. This assessment enhances the Bank's understanding of the client's ability to manage potential future environmental impacts to their

business operations and factors that could impact the client's future credit profile.

Additional due diligence occurs at the point of lending or securities origination to help ensure that we integrate environmental and climate considerations directly into credit transactions with clients in climate-sensitive sectors. Once ESRM due diligence is complete — and we perform any additional due diligence that may be required — we assign an overall Environmental and Social Risk Rating (ESRR) of “low,” “moderate,” “high” or “critical” to each client or transaction under review. Clients with an overall ESRR of “critical” are escalated for credit decision, and clients with an overall “high” ESRR may be escalated. Approximately 5%-10% of companies reviewed by ESRM receive “high” or “critical” ESRR and are part of the corporate watch list.

Front-line business units are involved in developing the ESRM policies and practices to address managing risks for in-scope⁹ sectors. Our front line conducts a carbon price sensitivity analysis that is included in the primary underwriting memo at least annually for all borrowers that produce, generate, transmit, and distribute fossil-fuel-sourced power. In many cases, this includes specific considerations for the financial risks associated with carbon intensity in light of emerging policies, regulations, and/or observable market-based sentiments.

We adopted the Equator Principles (EP) in 2005 and joined its Steering Committee in 2017. This allowed us to directly contribute to the development of [EP4](#),* through which Wells Fargo and 110 other financial institutions committed to complying with climate-related risk and disclosure requirements aligned to the TCFD framework and related to in-scope transactions.

Risk appetite

Management defines and the Board approves the company's risk appetite, which is the amount of risk the company is comfortable taking given its current level of resources. Risk appetite defines which risks are acceptable and at what level and guides business and risk leaders. Risk appetite boundaries are set within the company's risk capacity. The company's risk appetite is articulated in a statement of risk appetite, which is approved at least annually by the Board. The company continuously monitors its risk appetite, and the Board reviews periodic risk appetite reports and analysis. In adherence to our company-wide ESRM Policy,¹⁰ Wells Fargo currently does not directly or indirectly provide new financing or is in the process of exiting existing relationships or reducing our exposure as contracts expire for certain prohibited activities. Examples include:

- Coal industry, including companies deriving profits from mountaintop removal coal operations, or any project associated with the expansion of an existing or development of a new coal mine or new coal-fired power plant.
- Equator Principles in-scope transactions in the Alaska Arctic Region.

Integration into overall risk management

The company has three lines of defense to manage risk: the front line, Independent Risk Management, and Internal Audit. Each line of defense has distinct risk management responsibilities, and every employee has a role to play in managing risk at the company.

- **Front line** – The front line, which comprises line of business and certain enterprise function activities, is the first line of defense. In the course of its business activities, the front line identifies, measures, and assesses, controls, monitors, and reports on risk generated by or associated with its business activities and balances risk and reward in decision-making while operating within the company's risk appetite.
- **Independent Risk Management (IRM)** – IRM is the second line of defense. It establishes and maintains the company's risk management program and provides oversight, including challenge to and independent assessment of, the front line's executions of its risk management responsibilities.
- **Internal Audit** – Internal Audit is the third line of defense. It acts as an independent assurance function and validates that the risk management program is adequately designed and functioning effectively.

9. Through September 2020, in scope sectors included: oil and gas, coal and metal mining, arms and armaments, consumer finance, and Equator Principles transactions.

10. Name changed to Environmental and Social Impact Management Policy in 2020

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Management of climate-related risks requires clearly defined roles and responsibilities and we are laying the groundwork to establish effective structures to support this focus and to drive outcomes. While environmental and social risks, including climate-related risks, can impact various risk types, the consideration of these risks is an important component of our reputation risk oversight and management processes. We expect climate change factors to increasingly impact other risk types and for climate change considerations to be further integrated into our processes for assessing various risks as our understanding of climate change impacts continues to grow and evolve over time.

- **Climate Impact Risk Forum** – We have established an enterprise Climate Risk Impact Forum to oversee the Company’s approach to managing climate-related risks and associated risk management practices in alignment with our Risk Management Framework. The Forum is a cross-functional group that includes senior leaders from

IRM, Social Impact and Sustainability, the Chief Operating Office, The Legal Department, and Corporate Treasury.

We established the Forum in late 2020 and it will begin meeting quarterly in 2021. In late 2020, a Climate Change Leader was appointed in IRM to help coordinate climate risk integration efforts across IRM and chair the Climate Impact Risk Forum; this role reports to the Chief Strategic Enterprise Risk Officer.

We expect climate change factors to increasingly impact other risk types and for climate change considerations to be further integrated into our processes for assessing various risks as our understanding of climate change impacts continues to grow and evolve over time.

We have also established a Climate Impact Risk Working Group that supports the Forum's mandate and includes representation from the various risk type areas, business-aligned Chief Risk Officer functions, enterprise risk programs, Environmental and Social Risk Management, Corporate Treasury, and the Chief Operating Office function and will begin meeting biweekly in 2021. This Working Group is responsible for developing approaches for further integrating climate-related risk considerations into our risk management programs and practices, assessing risk exposures, keeping informed of emerging climate research and periodically reporting to, and seeking input from, the Climate Impact Risk Forum.

- **Risk identification and assessment** – Risk identification is the process of identifying current and emerging risks. Risk assessment refers to the determination of the quantitative or qualitative level of specific risks and the impact these risks have on the Company. Risks include those expected under normal operating conditions, as well as risks that may manifest under stressed environments. Climate-related risks are identified within the company's Enterprise Risk Inventory through the established Enterprise Risk Identification and Assessment (ERIA) process.
- **Risk monitoring and reporting** – The company recognizes the range of inherent and potential climate-related risks associated with its current exposures to sensitive industries, with impacts across the various risk types including credit, strategic, and reputation risk. In addition to monitoring our exposures to sensitive industries, we continue to enhance our risk monitoring and reporting frameworks to include an expanded suite of metrics, key risk indicators, and qualitative assessment criteria designed to monitor and report on the company's climate-related risks.

We are committed to fostering an effective risk and control environment to manage risks, including those related to climate change. As we review and modify our risk management processes in the normal course of business, we expect to further incorporate climate considerations into our risk management programs.

The impacts of climate-related risks on the financial sector are increasingly an area of focus for governments and regulators globally. We are actively monitoring for potential future governmental policy actions that seek to address climate change. We engage with policymakers to understand the policy landscape and potential developments that may impact our business or clients in the future. This informs our approach to managing climate-related risk and our efforts to further integrate climate-related risk considerations into our risk management programs.

We are committed to fostering an effective risk and control environment to manage risks, including those related to climate change. As we review and modify our risk management processes in the normal course of business, we expect to further incorporate climate considerations into our risk management programs, including enterprise risk programs, portfolio management, and risk reporting. We aim to continue to improve our ability to identify and assess climate-related risks over time and expect to continue to refine our approach as we strengthen our understanding of how climate change impacts our business activities, processes, and risks.

Climate scenario analysis

Climate scenario analysis tools and models frame our forward-looking exploration of climate-related risks and opportunities. The tools and models use financial and nonfinancial data to produce outputs that we connect to financial and risk use cases. These use cases are guided by our evolving understanding of the transition and physical dimensions of climate change that are relevant to our products and services. For example, a forward-looking scenario might describe a plausible future state in which the Earth's climate system adversely changes over time. Such a scenario would frame our analysis of the transition pathways that result in the plausible future state and helps us determine how best to optimize our financing activities to meet particular targets, which can be business- or science-based.

The Social Impact and Sustainability team conducts data and technology exploration, model development, data analysis, and use case alignment. The insights and inferences we can gain from exploring scenarios on investing, lending, and securities portfolios inform our front line and IRM on how current and future financial portfolios might perform across mitigation, adaptation, and resilience vectors. This approach aligns real economy monitoring to internal planning cycles.

Top-down models

We leverage top-down models to give us insights into climate, energy, and socioeconomic systems providing plausible scenarios of operating environments overlaying our products and services. For example, we collaborate with Pacific Northwest National Laboratory (PNNL) to use their open-source Global Change Analysis Model (GCAM). The GCAM enables users to run external scenarios from the Intergovernmental Panel on Climate Change (IPCC), the International Energy Agency (IEA), and the International Institute for Applied Systems Analysis (IIASA).

GCAM gives us a consistent representation of developments in the economy, energy, agriculture,

land use, water, atmosphere, and climate. It covers 32 geopolitical regions, which include 384 land regions, and 235 water basins. It also provides an integrated global climate model that addresses residential and commercial building, power, transport (freight and passenger), and energy sectors. It uses input assumptions about population and labor productivity, technology performance and availability, depletable and renewable material resources, energy resources, land and other natural characteristics, and climate policies. It then provides conditional forecasts of the future prices and quantities for the energy, agriculture, land, and water markets, as well as international trade.

We are conducting due diligence on the Science Based Targets initiative (SBTi) models which use external scenarios as inputs and project how emissions might change over time. Using GHG accounting data, we are able to explore SBTi models in our internal analytical environment, where we also explore the GCAM, and we will be able to apply additional due diligence to other relevant climate scenario tools from our thought leadership networks.

Bottom-up models

We leverage bottom-up models as tools that give us insights into specific portfolios, companies, and assets that are exposed to changes in the climate. For example, in 2018 we partnered with management consulting firm Oliver Wyman and our U.S. peers to pilot a climate scenario analysis tool to measure the impact of various business risk scenarios on the credit quality of oil and gas companies exposed to transition-related risks. Business-based scenarios included sharp shifts by consumers toward electric vehicles as well as the gradual phase-in of carbon taxes that bear impacts on our clients' operating margins. The reference portfolio for the scenario tool, whose ultimate outputs were scenario-adjusted credit ratings, relied on datasets for publicly traded energy companies.

Metrics and targets

“Prioritizing streamlined data collection and high level accuracy and analysis allows us to set strong goals and drive accountability. We are focused on where the data shows opportunities and where we can make an impact.”

– Nate Hurst, Head of Social Impact and Sustainability, Wells Fargo & Company

The TCFD recommendations include various metrics such as total carbon emissions, weighted average carbon intensity, and carbon footprint. At Wells Fargo, we are exploring these metrics through study of the transition and physical dimensions of climate change on our business and operations.

Scope 1 emissions	Direct Emissions from Wells Fargo-owned or operated assets	Scope 2 emissions	Indirect Emissions from purchased energy sourced by hydrocarbons	Scope 3 emissions	Upstream Emissions from our supply chain	Category 1 Purchased goods and services Reported in ESG goals and performance data
						Category 2 Capital goods Reported in ESG goals and performance data
Scope 1 emissions	Direct Emissions from Wells Fargo-owned or operated assets	Scope 2 emissions	Indirect Emissions from purchased energy sourced by hydrocarbons	Scope 3 emissions	Upstream Emissions from our supply chain	Category 3 Fuel and energy-related activities Reported in ESG goals and performance data
						Category 4 Upstream transportation and distribution Not relevant
Scope 1 emissions	Direct Emissions from Wells Fargo-owned or operated assets	Scope 2 emissions	Indirect Emissions from purchased energy sourced by hydrocarbons	Scope 3 emissions	Upstream Emissions from our supply chain	Category 5 Waste generated in operations Reported in ESG goals and performance data
						Category 6 Employee business travel (air travel only) Reported in ESG goals and performance data
Scope 1 emissions	Direct Emissions from Wells Fargo-owned or operated assets	Scope 2 emissions	Indirect Emissions from purchased energy sourced by hydrocarbons	Scope 3 emissions	Upstream Emissions from our supply chain	Category 7 Employee commuting Reported in ESG goals and performance data
						Category 8 Upstream leased assets Not relevant
Scope 1 emissions	Direct Emissions from Wells Fargo-owned or operated assets	Scope 2 emissions	Indirect Emissions from purchased energy sourced by hydrocarbons	Scope 3 emissions	Downstream Other emissions including those associated with our products (e.g., financed emissions)	Category 9 Downstream transportation and distribution Not relevant
						Category 10 Processing of sold products Not relevant
Scope 1 emissions	Direct Emissions from Wells Fargo-owned or operated assets	Scope 2 emissions	Indirect Emissions from purchased energy sourced by hydrocarbons	Scope 3 emissions	Downstream Other emissions including those associated with our products (e.g., financed emissions)	Category 11 Use of sold products Not relevant
						Category 12 End of life treatment of sold products Not relevant
Scope 1 emissions	Direct Emissions from Wells Fargo-owned or operated assets	Scope 2 emissions	Indirect Emissions from purchased energy sourced by hydrocarbons	Scope 3 emissions	Downstream Other emissions including those associated with our products (e.g., financed emissions)	Category 13 Downstream leased assets Not relevant
						Category 14 Franchises Not relevant
Scope 1 emissions	Direct Emissions from Wells Fargo-owned or operated assets	Scope 2 emissions	Indirect Emissions from purchased energy sourced by hydrocarbons	Scope 3 emissions	Downstream Other emissions including those associated with our products (e.g., financed emissions)	Category 15 Investments Relevant, not currently reported

Please see our [ESG Goals & Performance Data 2020](#) and our [2020 CDP Response](#) to access our comprehensive data set for nonfinanced emissions. We currently report Scope 3 categories that are relevant and for which Wells Fargo has calculated emissions (see table above). We are currently working on carbon accounting to quantify the remaining relevant upstream and downstream emissions, including a prioritized selection of our Scope 3, Category 15 financed emissions. Wells Fargo’s GHG emissions for Scope 1, 2, and 3 upstream data are [independently verified](#).*

Select operational and financial sustainability goals	
Goal	2019 Results
Provide \$200 billion in financing to sustainable businesses and projects by 2030, including clean/renewable energy, green buildings, and green bonds	Provided ~\$26 billion to sustainable businesses and projects, bringing our cumulative total to ~\$49 billion (since 2018) of our \$200 billion commitment
Reduce energy consumption 40%	Reduced consumption 38% (from 2008 baseline)
Purchase renewable electricity to meet 100% of our global operations needs by the close of 2017	Met 100% of our global electricity needs with renewable energy sources (since 2017) ¹¹
Reduce greenhouse gas emissions 45%	Achieved a 52% reduction (from 2008 baseline). Purchased carbon offsets to achieve carbon neutrality for our 2019 operations.
Achieve LEED® certification for 35% of buildings (by leased and owned square footage)	30% LEED-certified square footage (2019)
Reduce water consumption 65%	61% reduction (from 2008 baseline)
Reduce total waste stream 50%	46% reduction (from 2010 baseline)

11. Renewable energy sources include on-site solar, long-term contracts that support net new sources of offsite renewable energy, and the purchase of renewable energy certificates (RECs).

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Outlook

Wells Fargo has made substantial progress toward understanding the implications of climate change for our business, customers, and communities. We anticipate making further progress in the following areas over the next two years:

Financed emissions

We are evaluating both internal and external climate-related measurement methodologies to determine meaningful and enduring approaches to calculate our financed emissions. Many gaps exist in our ability to calculate the financed emissions of our portfolio due to the lack of comprehensive, integral data. We support efforts to improve the monitoring, reporting, and verification of GHG emissions through data-driven innovations such as machine learning and artificial intelligence, remote sensors and satellites, and advanced geospatial image processing. These innovations will eventually allow for greater carbon transparency in everyday economic activities. In addition to technological solutions, Wells Fargo is exploring industry-led methodologies for measuring and disclosing financed emissions. One specific methodology under consideration is [PCAF](#)^{*} which aims to create a single standard for financial institutions to calculate, report, and disclose financed emissions. We intend to make a final decision on whether joining PCAF is the appropriate path for our business and stakeholders in 2021.

Disclosure and frameworks

We expect our ESG or nonfinancial disclosures to continue to evolve as disciplines mature and as we aim to meet stakeholder expectations for robust disclosure. Utilizing frameworks to standardize climate-related disclosure supports the accountability aspect of long-term, effective climate action. We are guided by mandatory and voluntary disclosure frameworks as we engage in a meaningful dialogue that provides our stakeholders with consistent, standardized information.

Risk management

We are committed to fostering an effective risk and control environment to manage risks to our business. We expect that the management of climate-related risks will be of increasing importance in the future as part of an effective risk and control environment for our business. We plan to continue to integrate climate change considerations into our risk management processes as we strengthen our understanding of how climate change impacts our business activities, processes, and risks.

We are evaluating both internal and external climate-related measurement methodologies to determine meaningful and enduring approaches to calculate our financed emissions.

Goal setting

As we are developing this report, we are still determining progress against our 2020 corporate responsibility goals. We are in the process of establishing a new set of robust long-term ESG goals, including those related to climate change and reducing GHGs. Learnings from our work to quantify our Scope 3 financed emissions will help inform our ongoing efforts to set a science-based target and develop specific commitments, including with respect to financed emissions, consistent with the Paris Agreement, including its goal of holding the increase in global average temperature to well below 2° Celsius above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5° Celsius above preindustrial levels recognizing that this would significantly reduce the risks and impacts of climate change. These commitments may include, among other things, our current efforts to collectively transition to a low-carbon, climate resilient future, as discussed in the [Strategy](#) section.

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Customer preferences and engagement

In response to rapidly changing customer preferences, we consider the climate when developing new products and services across our lending and investing businesses. We will continue to support and engage with our clients and communities on their transition pathways, evolving practices, and strategies for addressing potential climate impacts to their businesses.

Scenario analysis

Our participation in climate scenario analysis pilots demonstrated to us that it is possible to evaluate future financial impacts associated with transition dimensions of climate change. We will continue to engage with external parties in developing scenario tools that are relevant for internal decision-making practices such as budget, strategic, risk, and financial planning.

Environmental and social justice

Environmental and social justice and sustainability are interdependent. Across America, we can see the disproportionate impact of environmental and health hazards on communities of color and low-income communities. During 2021, one of Wells Fargo's priorities is to factor environmental considerations into our commitment to racial and social equity.

About this report

About Wells Fargo

Wells Fargo & Company (NYSE: WFC) is a leading financial services company that has approximately \$1.9 trillion in assets and proudly serves one in three U.S. households and more than 10% of all middle market companies in the U.S. We provide a diversified set of banking, investment and mortgage products and services, as well as consumer and commercial finance, through our four reportable operating segments: Consumer Banking and Lending, Commercial Banking, Corporate and Investment Banking, and Wealth and Investment Management. Wells Fargo ranked No. 30 on Fortune's 2020 rankings of America's largest corporations. In the communities we serve, the company focuses its social impact on building a sustainable, inclusive future for all by supporting housing affordability, small business growth, financial health and a low-carbon economy.

About the TCFD

The [TCFD Framework](#)* supports the development of voluntary climate-related financial disclosures that convey a range of practices with respect to climate-related risks and opportunities. Integrating the nonfinancial dimensions of climate change into traditional finance and risk management toolsets is challenging, but we believe it is critical to meet those challenges so we can provide better insights to decision-makers looking to efficiently allocate capital, protect assets, and support sustainable development. Wells Fargo's inaugural TCFD Report aims to capture the comprehensive, company-wide approach we are taking in response to the urgent, uncertain, and systemic crisis of human-induced climate change.

Forward-looking statements

This Report contains forward-looking statements. Forward-looking statements can be identified by words such as "anticipates," "intends," "plans,"

"seeks," "believes," "estimates," "expects," "target," "projects," "outlook," "forecast," "will," "may," "could," "should," "can" and similar references to future periods. Forward-looking statements are not based on historical facts, but instead represent our current expectations and assumptions regarding our business, the economy, and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks, and changes in circumstances that are difficult to predict. You are urged to not unduly rely on forward-looking statements, as actual results could differ materially from expectations. Forward-looking statements speak only as of the date made, and we do not undertake to update them to reflect changes or events that occur after that date. For more information about factors that could cause actual results to differ materially from expectations, please refer to our reports filed with the Securities and Exchange Commission (SEC), including the discussion under "Forward-looking Statements" and "Risk Factors" in our 2019 Annual Report on Form 10-K, and in our 2020 Quarterly Reports on Form 10-Q, each as filed with the SEC and available on its website at www.sec.gov.*

Securities and Exchange Commission filings

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to these reports are available free of charge on our website as soon as practical after they are electronically filed with, or furnished to, the SEC. These reports and amendments also are available free of charge on the SEC's website at www.sec.gov.*

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