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#9

A PRACTICAL GUIDE FOR COMPANIES

Navigating California's climate rules

📍 London | New York

✉ info@flag.co.uk

🌐 www.flag.co.uk

INTRODUCTION

California’s pioneering climate regulations are setting a new global standard for climate risk disclosure – demanding greater transparency and driving deeper insights for corporates and investors alike. These rules are designed not only to inform smarter decision-making, but also to help organisations mitigate risk, adapt to a changing climate, and accelerate meaningful emissions reductions.

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INTRODUCTION

Companies operating in the U.S., especially in California, are navigating a fast-changing regulatory landscape amid growing climate-related risks.

As the world's fourth-largest economy, California has long been a pioneer in environmental regulation. With businesses facing increasing exposure to physical- and transition-related climate risks alongside limited federal action, the California Air Resources Board (CARB) and state policymakers are taking bold steps. Their proactive stance reflects a clear truth: early action costs far less than the economic consequences of inaction, which the World Meteorological Organization estimates could reach up to \$1,266 trillion globally.

This guide distils what you need to do to comply with California's Climate Corporate Data Accountability Act (SB 253), Climate-Related Financial Risk Act (SB 261), and the Voluntary Carbon Market Disclosures Act (AB 1305).

Our global team of climate risk and reporting specialists is ready to help you strengthen your climate strategy and meet compliance requirements efficiently, cost-effectively and with confidence.

Beyond regulatory alignment, we offer support to identify climate-related impacts, risks and opportunities; conducting scenario analyses; building a robust greenhouse gas (GHG) inventory and governance framework; and preparing high-quality disclosures aligned to International Financial Reporting Standards (IFRS) S2 or the Task Force on Climate-related Financial Disclosures (TCFD) – integrated with your reporting software.

By embedding climate risk management into your core strategy, we'll help you unlock long-term business value, enhance resilience and position your organization for competitive advantage in a rapidly evolving global market, including the growing wave of International Sustainability Standards Board (ISSB)-aligned regulations worldwide.

Sincerely,



Sami Parsons

Head of Reporting and Sustainability Advisory



EXECUTIVE SUMMARY

As the world's fourth-largest economy, California is a regulatory leader, setting national and global precedents in climate transparency.

Corporate exposure is increasing, driven by physical risks such as wildfires, droughts and heatwaves, alongside transition risks from policy changes, litigation and growing investor expectations.

The landscape is moving swiftly from voluntary ESG reporting to mandatory, enforceable state-level disclosure requirements.

Key regulations

- > **SB 253 – Climate Corporate Data Accountability Act**
Requires large companies doing business in California to disclose full Scope 1, 2 and 3 GHG emissions, verified by an independent third party.
- > **SB 261 – Climate-Related Financial Risk Disclosure**
Mandates biennial reporting of climate-related financial risks and mitigation measures, aligned with TCFD/ISSB.
- > **AB 1305 – Voluntary Carbon Market Disclosures Act**
Imposes transparency rules on the use and marketing of carbon offsets and climate-related claims.

[Latest CARB Workshop on the "200s".](#)

CARB's SB261 Compliance [Checklist](#).

Business value beyond compliance

- > Transparent reporting on emissions and risks strengthens trust with shareholders and capital providers.
- > Early alignment with California rules positions companies to meet global standards (ISSB, EU Corporate Sustainability Reporting Directive (CSRD)) efficiently, creating a more future-proof reporting disclosure.
- > Managing climate risks proactively protects supply chains, reduces costs and unlocks long-term competitive advantage.

AT A GLANCE: THE CALIFORNIA CORPORATE DATA ACCOUNTABILITY ACT (SB 253)

SB 253 requires public and private companies doing business in California with over \$1 billion in annual revenue to disclose GHG emissions in line with the GHG Protocol.

The aim of this regulation is to support informed decision-making by investors, regulators and the public through greater visibility on how companies are preparing for climate impacts.

Key requirements and timings

Draft regulations, administered by the CARB, are expected by the end of 2025, with final rulemaking potentially extending into late 2026.

Requirement	Timing
Scope 1 and 2 emissions disclosure	Annually from 2026
Scope 3 emissions disclosure	From 2027, within 180 days of Scope 1 and 2
Assurance for Scope 1 and 2	Required by 2026
Enhanced assurance: > Reasonable assurance for Scope 1 and 2 > Limited assurance for Scope 3	By 2030

How to comply

Information should be reported directly to CARB, not via public reports.

Verification of data must be conducted by a registry or third-party auditor with carbon accounting expertise.

Companies that fail to comply could be subject to civil penalties from the state’s attorney general.

No penalties will be imposed in 2026 if companies demonstrate a “good faith effort” in preparing their disclosures – acknowledging the complexity of gathering robust GHG data. This should include the most recent financial year data available, so if 2024 is the most recent and best available it would meet the requirements to report by June 30, 2026.

Companies will need to pay an estimated fee of \$3,106 annually per subsidiary covered.

CARB Factsheet [here](#).

AT A GLANCE: THE CALIFORNIA CLIMATE-RELATED FINANCIAL RISK ACT (SB 261)

SB 261 requires public and private companies doing business in California with over \$500 million in annual revenue to publish a biennial climate-related financial risk report aligned to the TCFD or equivalent standard such as IFRS S2.

The aim of this regulation is to protect consumers and investors from climate-related disruptions.

Key requirements and timings

In-scope companies will be required to report biennially from 2026 based on 2025 (financial or calendar year data), followed by their second report in 2028 based on 2027 data.

Reports must follow the TCFD framework’s four key pillars. Alternatively, companies may use IFRS S2, which meets all TCFD requirements and supports global alignment for international firms.

Governance	Oversight roles of board and management
Strategy	Impact of climate risks on business model and planning
Risk management	Identification and control of physical and transition risks
Metrics and targets	Quantitative measures such as GHG emissions and mitigation progress

How to comply

Reports must be published on company websites (or disclosed publicly) and the link to the report must be submitted to CARB through their public docket opening December 2025 with reports officially due January 1st. The docket will remain open until July 2026.

Report will be reviewed by the [Climate-Related Risk Disclosure Advisory Group](#) to identify inadequate reports and propose additional policy changes and best practices for disclosure.

Penalties for noncompliance are up to \$50,000 per year, with enforcement by CARB.

Companies will need to pay an annual fee of \$1,403 per covered subsidiary.

Scenario analysis will not be part of the minimum requirements of the first report for those that have not yet done a scenario analysis.

AT A GLANCE: THE VOLUNTARY CARBON MARKET DISCLOSURES ACT (AB 1305)

AB 1305 requires companies that sell or purchase voluntary carbon offsets or make public climate-related claims (e.g., net zero, carbon neutral) in California to publicly disclose detailed information about those claims and offset projects.

The purpose of the legislation is to combat greenwashing and increase transparency.

Key requirements and timings

Regulations took effect on January 1, 2024, with disclosure requirements beginning on January 1, 2025.

Applicable to	Disclosure requirement
Entities making climate claims (e.g., net zero, carbon neutral, reducing emissions through offsets)	> The offset registry or program used > The project type and protocol > How the claim was calculated and verified > Whether offsets are used for past emissions, future goals or both
Entities selling voluntary carbon offsets	> The project location, type and standard > Permanence, additionality and failure contingencies > How credits are calculated and verified

How to comply

Required disclosures must be published on company websites or made publicly accessible and updated at least annually.

Requirements are especially relevant to:

- > marketing and sustainability teams making public climate claims
- > legal and compliance teams reviewing offset strategies
- > reporting teams preparing ESG disclosures, especially those aligned with GRI 305, ISSB or TCFD.

Noncompliance may result in fines of up to \$5,000 per day per violation, capped at \$500,000 annually.

AB 1305 does not apply to offsets used for legal compliance, such as those under California’s cap-and-trade program.

CALIFORNIA CLIMATE REGULATIONS: THE CURRENT STATE OF PLAY

Flag has undertaken a review of some of the largest companies in California based on market cap to identify key trends in regulatory preparedness for SB 253 and SB 261.

Key findings

- > Tech and clean energy lead all categories, and finance and health/life sciences are close behind, with manufacturing and retail companies needing to improve.
- > Even among the best, major work is required on (a) full Scope 3 inventory, (b) advanced assurance and (c) transition plan detail/roadmaps.
- > Board integration, scenario analysis and actionable financial linkages are the most persistent weaknesses.
- > The state's largest companies are better prepared for SB 253 and SB 261 than their smaller peers, especially if also subject to EU/UK requirements. However, broad alignment across all disclosure dimensions is not yet universal.

CALIFORNIA CLIMATE REGULATIONS: THE CURRENT STATE OF PLAY (CONT.)

California's top companies are responding to climate-related risks and opportunities with varying levels of governance, emissions reporting and assurance practices.

Top impacts, risks and opportunities (IROs) disclosed

- > Most report material physical and transition risks in line with TCFD (e.g., supply chain disruption, regulatory transition, energy costs, reputational risks).
- > As California is home to some of the world's leading tech companies, it is no surprise that new green products/markets are disclosed as opportunities by tech and clean energy companies.

Corporate governance structures for climate risk

- > The largest California businesses have clear climate governance in place with dedicated committees overseeing climate risk; however, integration with financial oversight and explicit board-level expertise is less consistent.

Scope 1, 2 and 3 emissions data

- > The largest companies are all reporting Scope 1 and 2 emissions data using the GHG Protocol.
- > Scope 3 data is much less consistent: Many disclose it partially or in aggregate only; boundary and category completeness as mandated by SB 253 is rare outside a handful of leaders (Apple, Google, Meta).
- > Most companies have limited assurance over Scope 1 and 2 data, while Scope 3 is typically neither assured to limited level nor reasonable assurance provided to any of the data.

CALIFORNIA CLIMATE REGULATIONS: THE CURRENT STATE OF PLAY (CONT.)

California's leading companies are making strong commitments on Scope 1 and 2 emissions but limited progress on Scope 3 goals, scenario analysis and detailed decarbonization roadmaps.

Targets

- > Most top companies have net-zero or science-based targets (Apple, Alphabet, Meta, Tesla), usually for Scope 1 and 2.
- > Far fewer set Science Based Targets initiative (SBTi)-approved goals for Scope 3; several remain silent on supply chain goals.

Climate transition plans

- > About half conduct high-level TCFD scenario analysis (1.5°C/2°C, often qualitative).
- > Integration into company-wide decision making is variable, and public reporting of assumptions/methodology remains limited.

Decarbonization roadmap

- > Most advanced companies, such as Apple and Alphabet, have concrete decarbonization strategies but comprehensive supply chain and multi-year roadmaps are rare.
- > Many roadmaps lack interim and short-term targets showing pathways for how to get to longer-term goals.

WHAT DOES STRONG CLIMATE DISCLOSURE LOOK LIKE?

To align with the structure of the TCFD framework, which has been carried through to ISSB's IFRS S1 and S2, robust climate disclosure should include these key components:



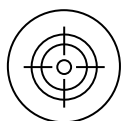
Governance

- > Clear roles for board and management in overseeing climate risks and opportunities.
- > Board and executive team have demonstrated expertise and climate related skills.
- > Links to policies on climate change and executive compensation linked to decarbonization progress.



Risk management

- > Robust processes for identifying, assessing and managing climate-related risks.
- > Climate risk integrated within enterprise risk management approach.
- > Clear controls are in place for climate risks, and these are documented in the Form 10-k/Annual Report if financially material as well as in TCFD or IFRS S2 report.



Strategy

- > Assessment of actual and potential impacts of climate issues on business, strategy and planning and where the impact falls across the value chain.
- > Clear infographic showcasing decarbonization strategy and transition plan.
- > Strategy aligns to science and 1.5° degrees of warming and covers long, medium and short-term targets and actions.
- > Quantitative scenario analysis undertaken with clear financial impacts understood.



Metrics and targets

- > Transparent reporting of GHG emissions (all scopes), climate goals and progress.
- > Disclosure of GHG goal baselines and up to 3 years' worth of data where available.
- > Clear short-term targets underpinning longer-term science-based goals.
- > Limited assurance of Scope 1 and 2 data for now.
- > Clear footnoting of estimations and data methodologies aligned to the GHG protocol.

"Best practice means using consistent, decision-useful data, applying scenario analysis and integrating climate insights into business strategy and reporting cycles."

Sami Parsons, Head of Reporting and Sustainability Advisory



CORE STANDARDS: TCFD, IFRS S2 AND GHG PROTOCOL

These frameworks overlap significantly; aligning with one sets you up for compliance with others.



- > Four-pillar framework: governance, strategy, risk management, metrics and targets.
- > Focus on financial impact of climate risks and opportunities.



- > Builds on TCFD, now a global baseline for investor-focused climate disclosure.
- > Requires climate-related scenario analysis, Scope 1-3 emissions and transition planning.
- > Designed for interoperability with CSRD, Securities and Exchange Commission (SEC) and other standards.



GREENHOUSE
GAS PROTOCOL

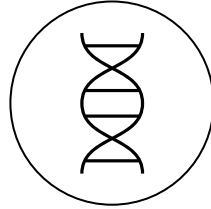
- > Sets global standard for calculating and reporting Scope 1, 2 and 3 emissions.
- > Requires data collection across the entire value chain.

- > SB 253 disclosure content will benefit from mapping to TCFD/IFRS frameworks for global consistency.
- > SB 261 must be aligned to TCFD or equivalent standards such as IFRS S2.
- > IFRS S2 is considered an advanced, globally harmonized version of TCFD; therefore, using it offers forward compatibility as more jurisdictions adopt ISSB rules.

- > GHG Protocol is tightly linked with California's SB 253, providing the methodology required for the mandated climate disclosures that must be "in accordance with" the GHG Protocol.

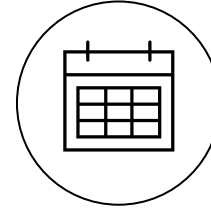
BEYOND COMPLIANCE

One robust, streamlined approach to compliance unlocks efficiency and builds global confidence.



A shared DNA

- > California, ISSB and CSRD all require holistic coverage spanning governance, strategy, risk and metrics/targets.
- > Demonstrating a readiness for California's rules simplifies global compliance.



Planning ahead

- > Map existing disclosures to TCFD/ISSB pillars.
- > Prioritize GHG emissions data quality and completeness (particularly Scope 3).
- > Use integrated governance structures of cross-functional climate committees and board oversight to streamline compliance.



Acting now to unlock business value

- > Early action avoids bottlenecks and enables system-level efficiencies.
- > Board-level leadership signals credibility to investors, customers and worldwide regulators.
- > Cross-compatibility between TCFD, IFRS S2 and the GHG Protocol reduces duplications and resource waste.

REGULATION INTEROPERABILITY

This table highlights how California requirements, TCFD, IFRS S2 and CSRD align across key disclosure pillars, enabling companies to streamline compliance and leverage a unified approach to global climate reporting.

Requirement pillar	California (SB 253/SB 261)	TCFD	ISSB (IFRS S1 & S2)	CSRD
Governance	Required (SB 261: disclose board/management roles in risk oversight)	Board and management oversight of climate risk	Same as TCFD; explicit ISSB guidance	Required under ESRS 2: Board oversight of sustainability matters, explicit governance structure and processes for sustainability-related impacts, risks and opportunities
Strategy	Required (SB 261: describe climate risks/impacts on business, strategy and financials)	Business strategy impact, resilience and targets	Expands TCFD: scenario analysis required	Business strategy integration with sustainability impacts, resilience analysis through scenario analysis, and climate transition plans
Risk management	Required (SB 261: processes to identify, assess and manage climate risk)	Processes for managing climate risk	Same as TCFD; enhanced requirements	Required under ESRS 2: Processes for identifying, assessing and managing sustainability-related impacts, risks and opportunities
Metrics and targets	GHG emissions (all scopes, per GHG Protocol for SB 253) Metrics and targets (SB 261)	Scope 1 and 2 emissions mandatory; Scope 3 encouraged	Scope 1, 2 and 3 emissions mandatory; targets and progress reporting	Scope 1, 2 and 3 emissions are mandatory. Measurable, outcome-oriented and time-bound targets required for all material sustainability impacts
Scenario analysis	Recommended (via TCFD/IFRS S2 for SB 261 compliance)	Strongly encouraged	Explicit requirement	Mandatory under ESRS E1: Climate scenario analysis required including 2°C or lower scenario, assessment of physical and transition risks
Transition planning	Not explicit, but may be needed under SB 261 disclosures	Not explicit	Explicit requirement	Explicit requirement under ESRS E1: Climate transition plans mandatory for companies with 1.5°C reduction targets
Assurance/verification	Emissions data must be independently assured (SB 253)	Not required	Encouraged/required under some jurisdictions	Mandatory limited assurance from 2025, progressing to reasonable assurance by 2028
Alignment with global standards	Encouraged; IFRS S2, TCFD, CSRD/SEC harmonization referenced	Designed as global baseline	Designed as global baseline, ISSB-led	Designed to be interoperable with TCFD, ISSB, GRI and other global frameworks

LEADING EXAMPLES

Apple’s 2025 Environmental Report outlines detailed progress against their robust decarbonization strategy and uses data visualization and an infographic to bring it to life.

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Approach

Apple 2030

We’re committed to our ambitious, science-based Apple 2030 goal to reduce our collective scope 1, 2, and 3 emissions — upstream and downstream — by 75 percent before balancing the remaining emissions with high-quality carbon removals. To achieve this goal, we’re reducing emissions across our value chain and directing our efforts toward decarbonizing the largest sources of emissions. We’ve cut emissions across our value chain by more than 60 percent since 2015. During the same period, our revenue grew by more than 65 percent.

We accelerated our progress with our transition to sourcing 100 percent renewable electricity for our offices, retail stores, and data centers in 2019. And in 2020, we achieved carbon neutrality for our corporate emissions, which we’ve maintained annually.²¹

Decarbonizing our supply chain is a crucial component of our efforts. We’re driving progress by expanding our suppliers’ sourcing of renewable energy and increasing the use of recycled and renewable materials in manufacturing our products. Our initiatives emphasize achieving emissions reductions before applying high-quality, nature-based credits.

Our goal is consistent with the Intergovernmental Panel on Climate Change’s (IPCC) recommendation for global carbon neutrality.²² We’re also committed to working toward reaching a 90 percent reduction in emissions from our 2015 baseline by 2050. Achieving deep decarbonization will require a collective, global effort across industries and economies. And while reaching a 90 percent reduction in emissions is outside Apple’s or any one company’s control, we’re committed to taking actions that support this goal. To catalyze change beyond our footprint, we’re engaging with stakeholders and communities to identify opportunities to expand the use of recycled materials and renewable energy. For more details, read our Engagement and Advocacy section.

Apple 2030 roadmap

75%

Design and materials

Designing products and manufacturing processes to be less carbon intensive through thoughtful material selection, increased material efficiency, greater product energy efficiency, the use of recycled and renewable materials in our products and packaging, and enhanced material recovery

Read more on page 53

50%

Electricity

Increasing energy efficiency at our facilities and transitioning the electricity throughout our entire value chain — including manufacturing and our customers’ product use — to 100 percent clean electricity by 2030

Read more on page 23

65%

Direct GHG emissions

Reducing direct greenhouse gas emissions across our facilities and supply chain through process innovation, emissions abatement, and shifting away from fossil fuels

Read more on page 31

100%

Carbon removal

In parallel with our emissions reduction efforts, scaling up investments in carbon removal projects, including nature-based solutions that can protect and restore ecosystems worldwide

Read more on page 35

≥75%

emissions reduction

≤25%

remaining footprint

Apple's progress toward carbon neutrality

We've reduced our entire carbon footprint by more than 60 percent compared with 2015

Historical emissions

● Gross emissions

○ Emissions offset

± Emissions range from modeling uncertainty*

Projected emissions (illustrative only)

● Projected gross emissions

○ Projected emissions offset

Goal

75%

reduction in gross emissions by 2050

Goal

To be carbon neutral for our entire footprint

Million metric tons CO ₂ e per fiscal year	2015	2019	2024	2030
Gross emissions	38.4	25.1	15.3	
Carbon offsets/removal	—	—	0.7	
Net emissions	38.4	25.1	14.5	

* Error bars: We're continuously refining our methodology as well as footprints to model our carbon footprint, but inherent uncertainty remains in modeling greenhouse gas emissions, as illustrated by the error bars in this graphic. The error bars are based on assumptions, standards, metrics, and measurements believed to be reasonable at the time of preparation, but should not be considered guarantees that any error will fall within the range indicated by the graphs.

Note: Totals might not add up due to rounding.

Achieving progress that benefits business

We underpin our climate strategy with strong business principles and innovation, harnessing the power of markets to replicate our solutions at scale — aiming to create the impact necessary to meet global reduction targets. We're also working to accelerate the global transition toward decarbonization, exploring the next generation of solutions, and advocating for more effective policies. These efforts include fostering new and strengthened collaborations in public and private partnerships and investing in technological advancements. We've issued \$4.7 billion in green bonds to model how businesses can drive investments to reduce global emissions. Our most recent offering in 2019 supported 74 global projects that will mitigate or offset 33.4 million metric tons of CO₂e. To learn more about our work, read our Green Bond Impact Report.

Science and transparency guide our efforts. Our emissions reduction targets align with what current climate science shows is necessary to adhere to a 1.5° C pathway with no or limited overshoot. We calculate our footprint across our entire value chain, covering both direct and product-related emissions — from sourcing materials to end of life. We use the results of our detailed carbon accounting to adjust our Apple 2030 roadmap, which lays out our plan to become carbon neutral. And we're committed to disclosing our carbon footprint, as well as our climate strategy and progress. Transparency and disclosure are essential not only for sharing our climate strategy and progress, but also for inviting others to collaborate with us. Our annual Environmental Progress Report, as well as our response to the global disclosure nonprofit CDP, provides details on our progress. Read our latest response to the CDP Climate Change 2024 questionnaire (PDF).

And progress needs to include low-income and historically marginalized communities that often bear the brunt of climate change. We're pursuing ways to directly support these communities in our climate programs. To learn more about our work, read our feature on our Power for Impact program.

Google’s reporting on carbon removals and carbon claims is leading the way on AB 1305 with robust information on each removal project.

Managing residual emissions

We’re first focused on decarbonizing our operations and value chain to reach our net-zero emissions goal, but as the IPCC stated, “the deployment of carbon dioxide removal to counterbalance hard-to-abate residual emissions is unavoidable if net-zero emissions are to be achieved.”¹³⁷

Our approach to carbon credits

We aim to neutralize our residual emissions with high-quality carbon removal credits by 2030, and to do so in a way that maximizes our positive impact on global decarbonization. This approach represents an evolution of our strategy: starting in 2023, we’re no longer maintaining operational carbon neutrality.¹³⁸ We’re instead focusing on accelerating an array of carbon solutions and partnerships that will help us work toward our net-zero goal, and are aiming to play an important role in advancing the development and deployment of nature-based and technology-based carbon removal solutions required to mitigate climate change.

We prioritize two fundamental criteria when considering the climate impact of these efforts: scale and certainty.

- For **scale**, we consider whether the solution can become big and affordable enough to make a difference for the planet. Ideally, some of the best solutions could scale up to at least half a gigaton per year of CO₂e impact and be available affordably in the foreseeable future.

- For **certainty**, we strive to ensure that projects have the potential positive climate impact they claim to by rigorously assessing factors like additionality, leakage, permanence, and verifiability.

Technology- and nature-based removals

We’re supporting the advancement of both technology- and nature-based removals toward their highest possible level of scale and certainty, working to address key challenges that these solutions face today.

The main problem with technology-based solutions is that they currently lack scale—they’re often too expensive and typically only operate as small pilots.

To help address this problem, in 2022, we pledged \$200 million to **Frontier**, an advance market commitment that’s accelerating the development of carbon removal technologies by guaranteeing future demand. We’re excited about completing our first carbon credit offtake deals through Frontier in 2023—including deals with **Charm Industrial**, **CarbonCapture**, and **Lithos Carbon**—and about the broader contributions the Frontier collective has made for the field of carbon removals, such as publishing the [buyer’s guide to enhanced weathering](#).

We’re also a member of the **First Movers Coalition** and a champion for their [Carbon Dioxide Removal](#) sector.

Another pressing challenge is that corporations may currently be reluctant to

participate in this nascent market. As with many emerging technologies, governments and companies have a critical and complementary role to play in demonstrating promising carbon removal approaches and bringing them to a commercial scale. In March 2024, Google [pledged to match](#) the U.S. Department of Energy’s [Carbon Dioxide Removal Purchase](#) program dollar for dollar: through our own initiatives, we plan to contract for at least \$35 million of carbon removal credits over the next 12 months following the announcement. We look forward to working with our partners to identify and scale the most promising technology- and nature-based carbon removal solutions and hope that other companies will join us.

In addition to these partnerships, in 2023, Google.org provided a \$1 million grant to the Integrity Council on Voluntary Carbon Markets (ICVCM) to help them orient the market toward various high-integrity solutions with adequate certainty to merit support. This grant brings Google.org’s cumulative contributions to strengthening carbon markets to more than \$7 million as of the end of 2023—supporting organizations including The Gold Standard, Rocky Mountain Institute, the Voluntary Carbon Market Initiative, and Climate Action Data Trust.

Beyond our purchases and partnerships, Google is uniquely positioned to help drive forward advancements in research and technology in this area. For example, we introduced our [Google Carbon Removal Research Awards](#) in 2023, which provided more than \$3 million in funding to universities and academic research institutions for

scientific studies in areas of carbon removals that would benefit from additional investigation, ranging from studying the effects of ocean alkalinity enhancement on coastal ecosystems and the potential of enhanced weathering projects in forests.

Carbon removal procurement

As of the end of 2023, we signed three carbon credit offtake deals representing a total

purchase of approximately 62,500 tCO₂e of removal credits, which are contracted for delivery by 2030 (see Figure 22).

We recognize that this is just the beginning, and we look forward to accelerating our carbon removal efforts in the years to come. We’ll continue evolving our approach to counterbalancing our residual emissions.

FIGURE 22 Contracted carbon removals portfolio

Company	Charm Industrial	Lithos Carbon	CarbonCapture
Project type	Biomass carbon removal and storage (BICRS)	Enhanced rock weathering (ERW)	Direct air capture (DAC)
Credit type	Removal	Removal	Removal
Project location	United States	United States	United States
Estimated contracted credits	22,600 tCO ₂ e	31,500 tCO ₂ e	8,400 tCO ₂ e
Year deal was signed	2023	2023	2023
Expected timeframe for delivery	2024–2030	2024–2028	2025–2028
Project details	Charm Industrial collects waste biomass that’s left over from agricultural harvests or forest fire management, and heats it to a very high temperature in an oxygen-deprived environment. The resulting bio-oil is then injected into EPA-regulated wells, where it sinks and solidifies permanently.	Lithos Carbon accelerates the natural ability of rocks to absorb carbon dioxide by spreading superfine crushed basalt on farmlands and empirically measuring the resulting carbon removal.	CarbonCapture’s technology involves DAC machines that use solid sorbents to soak up atmospheric carbon dioxide and then release it via heating. The carbon dioxide stream is captured and can be paired with a permanent storage solution.
Market commitment	Frontier	Frontier	Frontier

Note: At the time of publication, the following information wasn’t available: registry, project identification number, project name, and protocol used to estimate removal benefits. We don’t obtain an independent third-party verification of company data and claims related to our contracted carbon removals.

LEADING EXAMPLES

Mars has published an [AB 1305 statement](#) that references where more detail can be found on green claims.

Compliance with California AB 1305 Disclosure Requirements

To the extent any such requirements may be applicable to Mars or any of its related entities, existing disclosures published by Mars, Inc. and its related entities comply with California's AB 1305 Disclosure Requirements.

Specifically, pages 12-15 of Mars' [2023 Sustainability in a Generation \(SiG\) Report](#) and page 6 of the [Mars Veterinary Health 2024 Environmental Sustainability Update](#) make claims related to the company's carbon reductions; provide information documenting how the claims were accomplished; and detail how interim progress towards our carbon reduction goals are being measured. We third-party verify our Scope 1 and 2 emissions, as well as selected parts of our Scope 3 emissions, with [Lloyd's Register Quality Assurance](#).

In addition, the Qualifying Explanatory Statements (QES) prepared for Royal Canin (RC) and Mars Bar detail the purchase and use of voluntary carbon offsets related to carbon neutrality claims, including the name of the entity selling the offset and the offset program ([RC QES](#) pages 22-23; [Mars Bar QES](#) page 16); the project identification numbers ([RC QES](#) pages 22-23; [Mars Bar QES](#) page 16); the offset project type ([RC QES](#) page 21; [Mars Bar QES](#) page 15); the specific protocol used to estimate emissions reductions ([RC QES](#) page 25; [Mars Bar QES](#) page 18); and whether there is independent third-party verification of company data and the related claims ([RC QES](#) page 21; [Mars Bar QES](#) page 17).

For additional details on Mars' carbon reduction efforts, please visit our [Sustainability Reporting](#) hub.

LEADING EXAMPLES

Wells Fargo’s 65-page climate report provides robust risk identification and climate-risk scenario analysis, including physical and transition risks across short, medium and long term.

Risk identification

Climate-related risk can impact various risk types that Wells Fargo manages. Climate-related risk identification and assessment are embedded in the risk management processes in the Company. The table below provides a sample of climate risk drivers.

Risk type	Description	Climate risk drivers
Strategic risk	The risk to earnings capital, or liquidity arising from adverse business decisions, improper implementation of strategic initiatives, or inadequate responses to changes in the external operating environment.	Inability to adapt the business to evolving climate-related regulatory requirements or changes in client/customer preferences toward a lower-carbon economy, could significantly impact our market position.
Credit risk	The risk of loss associated with a borrower or counterparty default (failure to meet obligations in accordance with agreed-upon terms). Credit Risk exists with many of the Company's assets and exposures, such as debt security holdings, certain derivatives, and loans.	Catastrophic or frequent severe weather events affecting collateral values, substantial increase in draws on lines of credit, or higher delinquency rates. Change in climate-related policies and regulations impacting carbon-intensive clients' creditworthiness, and hence their ability to repay loans.
Operational risk	The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.	Devastating physical weather events, such as wildfires and severe floods, causing damage to the Company's properties and buildings, or affecting the Company's ability to perform business operations, or third parties' ability to deliver critical business services.
Reputation risk	The risk arising from the potential that negative stakeholder opinion or negative publicity regarding the Company's business practices, whether true or not, will adversely impact current or projected financial conditions and resilience, cause a decline in the customer base, or result in costly litigation. Key stakeholders include customers, employees, communities, shareholders, regulators, elected officials, advocacy groups, and media organizations.	Failure to meet climate-related public commitments and lack of transparency in reporting progress, or the perception of not banking certain customers/clients, may lead to loss of customers, failure of businesses, and/or reputational harm.
Market risk	The risk of possible economic loss from adverse changes in market risk factors, such as interest rates, credit spreads, foreign exchange rates, equity and commodity prices, and the risk of possible loss due to counterparty exposure.	Climate risk drivers, physical or transitional, realized or anticipated, that may result in changes to market variables (e.g., commodity and equity price, interest rates and FX rates, credit spreads, and volatility) may generate economic loss and negatively impact the Company's earnings.
Compliance risk	The risk resulting from the failure to comply with laws and regulatory guidance and the failure to appropriately address associated impact, including to customers.	Failure to make climate-related disclosures required by laws and regulations leading to potential regulatory scrutiny and penalties.

Climate-risk scenario analysis

We use climate-risk scenario analysis, including stress testing, to assess the potential impact of climate-related risk drivers on our risk profile. Scenario analysis can be used to identify and mitigate the broad range of possible outcomes related to these risks, and to model the complex linkages across climate drivers, economic and financial variables, and sectors to estimate the quantitative impact of a potential event.

Our scenario analysis exercises have largely focused on model expansion and knowledge-building, using industry-standard scenarios from the Network for Greening the Financial System (NGFS), and the Intergovernmental Panel on Climate Change (IPCC). In 2023, we enhanced our scenario analysis capabilities to include more Physical and Transition risk short- and long-term scenarios across Credit, Market, and Operational risk:

Topic	2021	2022	2023
Physical scenarios	Event based	Event based with limited macroeconomic impacts	Event based with macroeconomic impacts
	Hurricane, wildfire	Hurricane, drought, wildfire	Flood, hurricane, wind, drought, wildfire
Transition scenarios		NGFS phase 2: Net-Zero 2050	NGFS phase 3: Net Zero 2050, Current Policies, Divergent Net Zero
Time horizons	Short-term (2–3 years)	Short- (2–3 years) and long-term (15 years exploratory)	Short- (2–3 years) and long-term (10 years for transition risk)
Risk types	Credit, Market, Operational	Credit, Market, Operational	Credit, Market, Operational
Balance sheet	Static/dynamic sensitivity	Static	Static
Credit risk	Commercial (corporate and CRE)	Commercial (corporate and CRE), Home Lending	Commercial (corporate and CRE), Home Lending
Market risk	Trading portfolio	Trading portfolio, counterparty exposure	Trading portfolio, counterparty exposure
Operational risk	Wells Fargo properties	Wells Fargo properties	Wells Fargo properties and third parties

LEADING EXAMPLES

Chevron’s 88-page climate resilience report provides robust climate risk governance, including identifying which board members have relevant risk management skills in place.

board of directors

highly engaged, diverse board with relevant skills and qualifications



Michael K. Wirth, Chairman and CEO

Former Vice Chairman of the Board and Executive Vice President of Midstream & Development, Chevron

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Wanda M. Austin, Lead Director

Retired President and CEO, The Aerospace Corporation (2, 3)

○●●●●○



John B. Frank

Vice Chairman, Oaktree Capital Group, LLC (1)

○●●●○



Alice P. Gast

Retired President and Professor Emeritus of Chemical Engineering, Imperial College London (2, 4)

○●●●○



Enrique Hernandez, Jr.

Executive Chairman, Inter-Con Security Systems, Inc. (3, 4)

○●●●○



Marilyn A. Hewson

Retired Chairman, CEO and President, Lockheed Martin Corporation (1)

○●●●●○



Jon M. Huntsman Jr.

Former Governor of Utah; U.S. Ambassador to Russia, China and Singapore (3, 4)

○●●●○



Charles W. Moorman

Senior Advisor to Amtrak, Retired Chairman and CEO, Norfolk Southern Corporation (2, 3)

○●●●○



Dambisa F. Moyo

Co-Principal, Versaca Investments (1)

○●●●○



Debra Reed-Klages

Retired Chairman, CEO and President, Sempra Energy (1)

○●●●●○



D. James Umpleby III

Former President and CEO, Caterpillar Inc. (2, 4)

○●○●●○



Cynthia J. Warner

Former President and CEO, Renewable Energy Group, Inc. (4)

○●○●●○

Skills, Experiences and Expertise: ○ CEO/Senior Executive/Leader of Significant Operations ● Science/Technology/Engineering/Research/Academia
● Government/Regulatory/Legal/Public Policy ○ Finance/Financial Disclosure/Financial Accounting ● Global Business/International Affairs
○ Environmental ○ Leading Business Transformation

Committees of the Board: (1) Audit: Debra Reed-Klages, Chair (2) Board Nominating and Governance: Wanda M. Austin, Chair (3) Management Compensation: Charles W. Moorman, Chair (4) Public Policy and Sustainability: Enrique Hernandez, Jr., Chair

Exhibit 1. Chevron's governance structure relevant to potential climate change-related risk and energy transition opportunity oversight

Investors

board of directors*

Board-level committees composed of non-employee directors

- audit committee (AC)**
Assists the Board in overseeing accounting and financial reporting processes, including:
 - Internal controls over financial reporting
 - Relationship with independent auditor
 - Implementation and effectiveness of compliance programs
 - Financial risk management
 - Cybersecurity risks as they relate to financial risk exposures
 - Sustainability and climate change risks as they relate to financial risk exposures
 - Operational Excellence audit and assurance
- board nominating and governance committee (BNGC)**
Assists the Board in overseeing governance practices and processes, including:
 - Board succession planning
 - Board skills, experiences and qualifications
 - Stockholder engagement program (in conjunction with PPSC)
 - Board, Committee and Director evaluation process
- management compensation committee (MCC)**
Assists the Board in overseeing compensation programs and practices, including:
 - Executive retention and diversity strategies and supporting processes
 - Compensation program design and goals
 - Alignment of compensation with stockholders' interests, including those related to sustainability and climate change risks and opportunities
- public policy and sustainability committee (PPSC)**
Assists the Board in overseeing policy issues and potential risks in areas such as:
 - Environmental matters, including those related to sustainability and climate change
 - Legislative and regulatory initiatives
 - Community relations
 - Political contributions and lobbying
 - Chevron's global reputation
 - Stockholder engagement program (in conjunction with BNGC)

Committees of executive officers operating under direction of the Board

executive committee* (EC)

- enterprise leadership team* (ELT)**
Manages the composition, resource allocation and strategic direction of Chevron's portfolio in the following areas:
 - Operational Excellence
 - Performance improvement
 - Energy transition
 - Enterprise Risk Management process
 - Market and price forecasts
Receives briefings on these topics from internal subject matter experts and consults with outside experts to discuss energy transition and climate change issues.
- global issues committee (GIC)**
Oversees management of sustainability issues and practices, including:
 - Energy transition
 - Lobbying and trade association activity
 - ESG reporting
 - Revenue and tax transparency
 - Human capital management
 - Human rights
Receives regular updates on these issues from internal subject matter experts in advance of quarterly meetings.

*Chaired by Chairman of the Board
*Chaired by Chief Executive Officer

Additionally, events may be handled via ad hoc, cross-functional Crisis Management and Issue Management teams, which report regularly to members of the ELT, and if appropriate, provide updates to the Board.

Alaska Airlines has published an IFRS S2 Index as part of its Corporate Impact Report, one of the first to do so.

International Financial Reporting Standard S2 Climate-Related Disclosures Index

Information presented in this Index references the International Sustainability Standards Board's (ISSB) IFRS S2 Climate-related Disclosures. Relevant information included below covers fiscal year 2024 (January 1, 2024 through December 31, 2024) unless otherwise indicated in specific disclosures.

IFRS S2 DISCLOSURE		RESPONSE
Governance		
IFRS S2 6(a)	The governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities, including the information about:	
	(i) How responsibilities for climate-related risks and opportunities are reflected in the terms of reference, mandates, role descriptions and other related policies applicable to that body(s) or individual(s).	2024 Corporate Impact Report, Governance, Environmental Sustainability and Corporate Impact Oversight, pg. 51
	(ii) How the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to climate-related risks and opportunities.	Governance, Nominating and Corporate Responsibility Committee Charter
	(iii) How and how often the body(s) or individual(s) is informed about climate-related risks and opportunities.	Information on incentives provided for the management of climate-related risks and opportunities is not publicly disclosed.
	(iv) How the body(s) or individual(s) takes into account climate-related risks and opportunities when overseeing the entity's strategy, its decisions on major transactions and its risk management processes and related policies, including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities.	
IFRS S2 6(b)	(v) How the body(s) or individual(s) oversees the setting of targets related to climate-related risks and opportunities, and monitors progress towards those targets, including whether and how related performance metrics are included in remuneration policies.	
	Management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities, including information about:	
	(i) Whether the role is delegated to a specific management level position or management-level committee and how oversight is exercised over that position or committee.	2024 Corporate Impact Report, Governance, Environmental Sustainability and Corporate Impact Oversight, pg. 51
	(ii) Whether management uses controls and procedures to support the oversight of climate-related risks and opportunities and, if so, how these controls and procedures are integrated with other internal functions.	

BEYOND CALIFORNIA

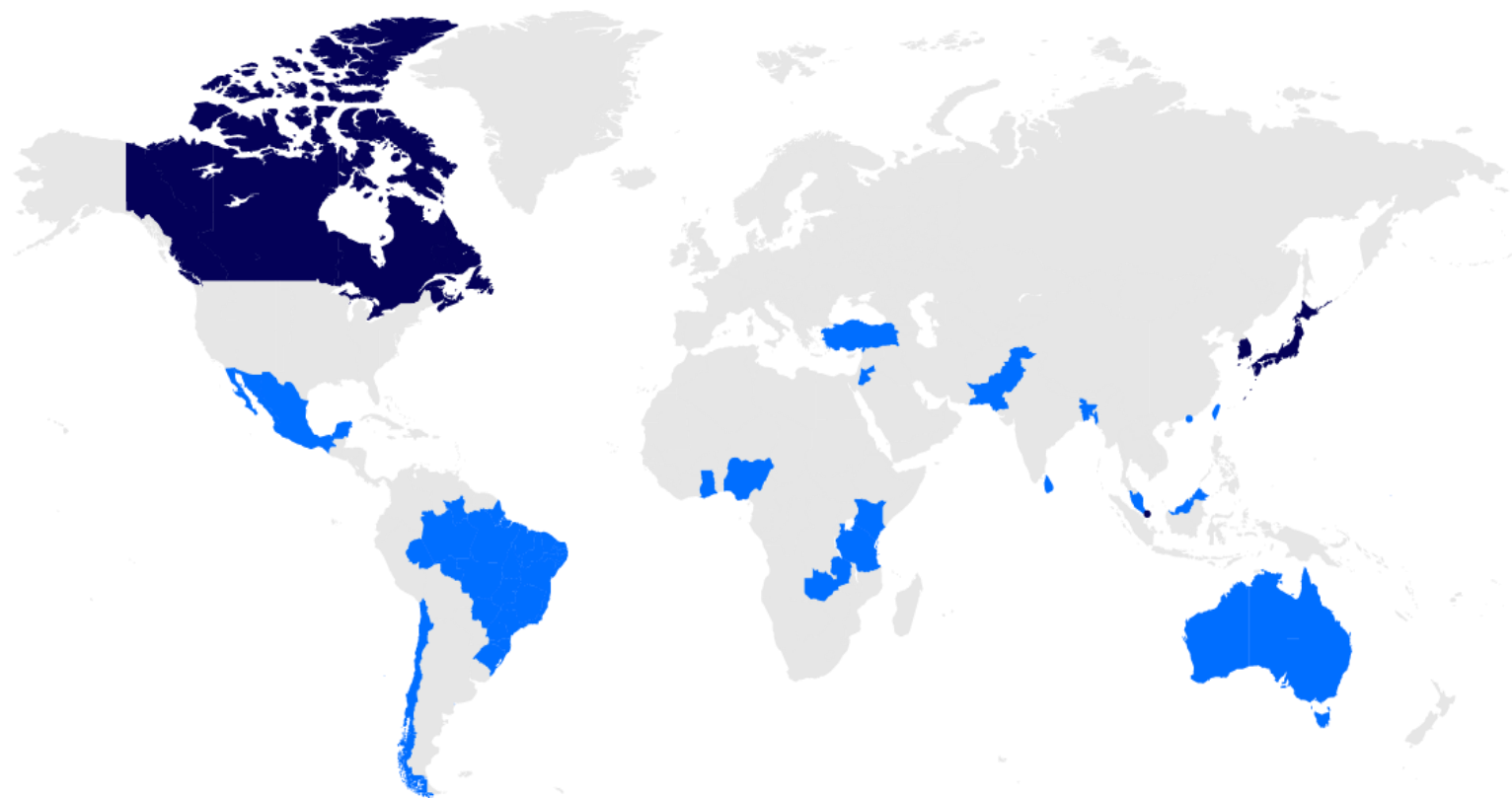
For companies operating across multiple jurisdictions, Flag recommends adopting a global strategy by aligning with the ISSB IFRS S2 standards instead of relying solely on TCFD.

This approach better positions organizations for compliance with the growing number of ISSB-focused regulations worldwide.

As of June 2025, 36 jurisdictions are at various stages in this process, with 17 having finalized mandatory or partly mandatory requirements.

Full adoption (target set):

- | | |
|-----------------|------------------|
| > Australia | > Nigeria |
| > Bangladesh | > Pakistan |
| > Brazil | > Sri Lanka |
| > Chile | > Taiwan |
| > Ghana | > Chinese Taipei |
| > Hong Kong SAR | > Tanzania |
| > Jordan | > Turkey |
| > Kenya | > Zambia |
| > Malaysia | |
| > Mexico | |



 Countries that have fully adopted IFRS S2

 **Canada, Japan, Singapore, and South Korea** are in advanced consultation stages for adopting the standards.

HOW TO PREPARE FOR CALIFORNIA'S CLIMATE REGULATION

Complying with California shouldn't be treated as a tick box exercise. Instead, it's about:

Ensuring your risk and climate teams are connected.

Enhancing your approach to physical and transition risks and protecting business value.

Upskilling your board to be able to balance short-term and longer-term risks.

Using financial modeling to build a bridge between sustainability and finance teams.

Meeting your fiduciary responsibility to investors and ensuring your business is resilient.

Building trust with the California regulator and your key stakeholders that you have a plan to address climate risk and impact.

Utilizing an internal carbon price to drive business decision-making and capturing revenue from being part of a lower-carbon economy.

Enhancing efficiency and reducing costs.

For multinational companies, preparing for California should not be viewed in isolation. Take a global approach to prepare for all ISSB regulations.

Our team of experts can help you not only tick the boxes but also use this opportunity to build a more resilient business.

NEED A HAND?

California's climate rules are a major step forward on climate risk, mitigation and transparency.

Understanding the requirements, how they connect with global frameworks and planning early will help you create value and build resilience beyond compliance.

Our expert team can help you interpret the requirements and integrate them into your strategy. Contact us for tailored support on info@flag.co.uk.

flag

We're a global sustainability agency, providing strategy, communications and reporting support to the world's leading brands.

London

31-35 Kirby Street, London
EC1N 8TE, UK
+44 (0)20 4526 5959

New York

Industrious Bryant Park,
1411 Broadway, New York,
NY 10018, USA

✉ info@flag.co.uk

 [LinkedIn/flag_3](#)

 www.flag.co.uk