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Solutions for a Cleaner Planet

BACUTI Primer

CORPORATE SUSTAINABILITY REPORTING DIRECTIVE – WHAT IS IT AND WHY IS IT IMPORTANT

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Corporate Sustainability Reporting Directive

The Corporate Sustainability Reporting Directive (CSRD) is a new piece of legislation in the European Union which requires companies to report on their greenhouse gas emissions on all levels. It was passed in early 2023 and **will begin requiring disclosure of emissions data for certain companies as soon as 2025**.

Background

In 2014, the European Commission implemented the Non-Financial Reporting Directive (NFRD), introducing one of the first major Environmental, Social, Governance (ESG) disclosure mandates. This regulation, which applied to public interest entities based in EU member states with at least 500 employees, was a key part of the EU's earlier attempts at enforcing corporate social responsibility, requiring reports to be completed on companies' environmental impact, social issues, diversity, and various other topics.

As climate change progressed and climate disclosures became more of a priority for investors and consumers alike, increasing the scope of NFRD became a necessity. On 5 January 2023, an updated and more expansive version of this legislation, the CSRD, was passed to replace the NFRD. Concrete emissions data will be the primary focus of CSRD disclosures. Notably, CSRD will require a double materiality (both financial and impact materiality) assessment,. This not only requires an evaluation of potential internal financial impacts, but also larger societal impacts, both positive and negative.

Unlike NFRD, CSRD requires that companies have their reports audited and verified by an accredited independent certifier. Additionally, CSRD has stricter reporting obligations and contains a vastly expanded scope of affected companies. While the NFRD applied to about 11,000 companies in Europe, the CSRD will eventually impose reporting mandates on **roughly 40,000 EU companies**, as well as **10,000 non-EU companies.** Of the non-EU companies, about 3,000 are based in the US, as well as 1,000 each in the UK and Canada.

Timeline and Categorization of Companies

CSRD implementation will come in phases, largely according to the size of affected companies. Requirements are equivalent for each type of company, with the sole exception of timing. Criteria for each category of company can be found below; two of the three listed criteria are necessary for a company to qualify for a certain category.

Firstly, any large company that was previously covered by the NFRD, in 2025, will need to report annually on all three scopes of emissions for the 2024 fiscal year. Other large companies that did not report under the NFRD will begin reporting in **2026** for the previous financial year. Small and medium enterprises (SMEs) are given several additional years to comply with CSRD: Opt-in reporting will be available as soon as 2027, but it won't be mandatory until **2029**.

Company Type	1st Reporting Year	1st Fiscal Year Affected
Large (NFRD Covered)	2025	2024
Large (Not NFRD Covered)	2026	2025
SMEs	2029	2028
Non-EU	2029	2028

Critically, **companies based outside the European Union may also be subject to the CSRD's rules**. Non-EU companies will begin mandatory reporting in **2029** if they have at least €150M turnover in the EU, and one of the following:

- An EU branch with >€40M turnover, OR
- An EU subsidiary that **meets the criteria of a large company.**

(any two)	Large	Medium	Small
Assets	• >€25M	• €5-25M	• €450K-5M
Net turnover	• >€50M	• €10-50M	• €900K-10M
Employees	• >250	• >50 & ≤250	• ≤50

Reporting Requirements

Methodology and Reporting Standard

CSRD requires detailed reporting on each of the three main "scopes" of emissions.

- "Scope 1 emissions" refers to direct greenhouse gas emissions generated from sources owned by a company, such as energy production, heating, and cooling.
- "Scope 2 emissions" refers to indirect greenhouse gas emissions from electricity, energy, and heating that are produced off-site and purchased by a company.
- "Scope 3 emissions" typically covers all other indirect upstream and downstream emissions. These are associated with a company across the supply chain, such as the production of raw materials used in manufacturing, the transportation of produced goods, waste disposal, and product end-of-life processes.

Unlike NFRD, CSRD will use a standardized data reporting format. The European Sustainability Reporting Standard (ESRS) will have to be used by all reporting companies, the details of which can be found here. These standards adopt Greenhouse Gas Protocol guidelines, and thus will mirror the procedures outlined by the GHG Protocol. The GHG Protocol is used widely across numerous jurisdictions and sustainability reporting regulations, and so oftentimes reporting for multiple laws can be completed nearly simultaneously.

Penalties

Individual EU member states will execute CSRD enforcement. As of 2024, integration into national laws is incomplete in many countries. However, several others have implemented laws with notable penalties for noncompliance with CSRD. Penalties typically involve monetary fines, imprisonment, and other business sanctions. Currently, prior to full implementation of CSRD requirements, enforcement provisions are weaker than they may be in the future.

In France, failure to publish a report can incur a fine of up to €18,750, as well as a ban on being included from public procurement contracts. If a third-party auditor is not appointed, criminal proceedings can lead to up to €375,000 in fines and five years of jail time. Fines in Italy for nonreporting can reach up to €150,000, while fines in Germany can be up to €10M.

Additionally, CSRD data will be made publicly available, thus failure to comply can present the risk of significant reputational damage for a corporation.

Double Materiality and ESG

In contrast to many other sustainability reporting regulations, CSRD's double materiality requires companies to report on both financial and impact materiality, as well as covering a wide array of ESG topics.

CSRD --->			
NFRD ---->			
Financial	Environmental	Social	Governance
√ Environmental protection	√ Climate Change	√ Workforce	√ Risk management
√ Social responsibility	√ Pollution	√ Workers in the value chain	√ Business Conduct
√ Human rights	√ Water resources	√ Affected communities	
√ Anti-corruption & bribery	√ Biodiversity	√ Consumers	
√ Diversity	√ Resource Use		

Double materiality requires not only disclosure of expected climate-related risk to the financial workings of the company (**financial materiality**), but also disclosure of the expected effect applied to the environment and the surrounding community because of company actions (**impact materiality**).

In 2019, the EU stated plans to reduce net carbon emissions by 55% before 2030, and to achieve carbon neutrality by 2050. CSRD's double materiality now requires that companies illustrate their plans for contributing to these goals as a part of their annual reporting.

Auditing

Companies will be required to acquire an assurance engagement. By 1 October 2026, reporting must be completed at a **limited assurance level** (i.e., rigorous enough to **find** no inaccuracies in reporting). Starting 1 October 2029, this requirement will be heightened to **reasonable assurance** (i.e., rigorous enough to **prove** no inaccuracies in reporting). According to EFRAG, limited assurance auditing is expected to cost businesses up to 0.025% of their annual revenue.

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CSRD vs CBAM

In late 2023, the European Commission approved and published a new law, the Carbon Border Adjustment Mechanism (CBAM). This imposes a similar requirement of reporting greenhouse gas emissions; however, the scope of each regulation is very distinct. Both laws were passed to contribute to the EU's ongoing tasks of reducing net emissions by 55% by 2030 and becoming carbon neutral by 2050.

	CSRD	CBAM
Focus	Companies	Imports
Scope	49,000 companies	239,000 transactions
Purview	Scope 1,2 and 3	Scope 1,2 and 3
Other Reporting	Full ESG Panel	-
Tax Implications	None	Carbon Border Tax
Granularity	Company	Product

CSRD applies to a general subset of countries based in the EU and elsewhere according to basic criteria of revenue, assets, and employee count. In contrast, CBAM is primarily a carbon border tax, where instead of simply mandating reporting of all company emissions, it requires reporting of emissions that are associated with imports in specified sectors (steel, aluminum, cement, electricity, fertilizers, hydrogen). A proportional tax on these emissions will be applied beginning in 2026. CSRD imposes no such tax. Instead, it requires full ESG disclosures, while CBAM is exclusively aligned with emissions.

Summary and Implications

The Corporate Sustainability Reporting Directive imposes a major sustainability reporting task on companies in Europe. Companies must be adequately prepared to disclose their climate data and greenhouse gas emissions, however the calculation and reporting of product-level, scope 3 emissions pose a significant challenge that must be swiftly addressed.

Many companies affected by CSRD, and other emissions reporting regulations import an extensive number of products to evaluate, and the specificity of scope 3 emissions requires a highly complex assessment of associated emissions of each individual product. This complexity means that manual sustainability consulting is likely not sufficient moving forward. The rapid implementation of the CSRD and the imminence of its stringent requirements means many companies are ill-prepared to accurately evaluate and report on their scope 3 emissions. **The most viable solution for this problem in the future will be utilizing software to conduct a product-level analysis and calculation of greenhouse gas emissions**, thereby enabling efficient sharing of data, and complying with scope 3 reporting regulations. Software which can automate the processes of calculating emissions and reporting them in such a way which is compliant with global reporting regulations will be critical moving forward.

Appendix

About BACUTI

BACUTI offers a SaaS platform to calculate and report Product Emissions Footprint (PEF) including Scope 1, 2 and 3 accurately and cost effectively, share data securely across the entire supply chain and build realistic plans and forecasts. Certification workflow is integrated in the platform.

With BACUTI, customers get accurate emissions (Scope 1, 2 & 3) to meet their regulatory requirements (e.g., CBAM). Early adopters of CBAM compliance will have a competitive advantage serving EU customers. PEF estimation processes become cheaper & collaboration with customers improves. Furthermore, customers can grow revenue through value added services around sustainability. Overall, customers should see enhanced brand value due to better sustainability posture.

BACUTI offers a ML-based estimation tool to calculate product level emissions cost effectively and at scale, a secure enterprise platform to share fine-grained emissions data with selected partners without exposing IP, and a SaaS platform that automates reporting, certification, planning and forecasting makes BACUTI unique.

About the Author(s)

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