Sustainable1

S&P Global EU Taxonomy Independent Assessment

Methodology

S&P Global Sustainable1 – April 2024

S&P Global

Table of Contents

Terms and Definitions

No	Terminology	Description
1	NA	The term 'NA' has multiple applications in the dataset. It is used in instances where a particular input data point is Not Available for a given company and an example of this scenario is column related to SP Topic Tags and TAC. It is also used to represent items which are Not Applicable for a given entry. For example, it is used to represent data columns related to non-eligible activities and similarly it is used in the column related to Secondary Mapped EUT Activities to represent Trucost sectors without any secondary EUT activities mapped to them.
2	No Data Available	Represents absence of data
3	Not Required	Taxonomy regulation screening criteria does not ask for the particular data point and the column is not relevant for a specific activity
4	No Coverage	The company and its activities are not covered by the database used for assessment
5	Consolidated assessment	For the activity "Manufacture of iron and steel," Taxonomy regulation has provided the stage-wise emission intensity threshold for the manufacturing process. We consolidated this to arrive at an emission intensity threshold for the whole process. The company-level data was compared against this new value, which is why the assessment says Consolidated approach.
6	Criteria Not Applicable	For the activity "Electricity generation from bioenergy," the MI Power Plants dataset was used for assessment. Power plants that were not based on bioenergy were categorized as Criteria Not Applicable and were excluded from the assessment.
7	As reported	Publicly reported data by companies on their EU Taxonomy performance
8	Non-Financial Counterparties (NFC)	Represents all undertakings that principally engage in the production of non-financial goods and services
9	Financial Market Participants (FMP)	Represents all undertakings that are financial and includes asset managers, credit institutions, investment firms and insurance companies

Introduction and Context

The EU Taxonomy

In March 2018, the European Commission adopted an action plan on sustainable finance as part of a strategy to integrate environmental, social and governance considerations into its financial policy framework and mobilize finance for sustainable growth. In May 2018, the Commission released the first legislative package under the action plan and, from 2018 to 2020, set up a Technical Expert Group on Sustainable Finance (TEG), later replaced by the Platform on Sustainable Finance, to inform its development. One of the proposals under the legislative package was the development of a unified EU classification system, the EU Taxonomy ("Taxonomy"), that would define which economic activities are environmentally sustainable. In March 2020, the TEG published its final report outlining its recommendations on the design and implementation of the Taxonomy. Since then further delegated acts have expanded the scope of the list of economic activities covered by the Taxonomy.

The Taxonomy is a tool that will help companies and investors navigate the transition to a low-carbon, resilient and resource-efficient economy. It is a classification framework that sets out the criteria for an activity to be considered environmentally sustainable, which provides a common language on sustainability performance for investors, issuers, policymakers, regulators, and companies. The Taxonomy sets performance thresholds for economic activities. These thresholds are: 1. Substantial Contribution (SC): the economic activity must make a substantial contribution to one of six key environmental objectives; 2. Do No Significant Harm (DNSH): the activity must not negatively affect the other five objectives; and 3. Minimum Social Safeguards (MSS): the activity must meet minimum safeguards to respect human rights and labor standards (Figure 1).

Figure 1: Requirements for an activity to be considered aligned with the Taxonomy

SC	DNSH	MSS
An activity must show a Substantial Contribution to one of six environmental objectives. 1. Climate change mitigation 2. Climate change adaptation 3. Sustainable use and protection of water and marine resources 4. Transition to a circular economy 5. Pollution prevention and control 6. Protection and restoration of biodiversity and ecosystems	Do No Significant Harm to any of the other objectives. The criteria for all objectives have been laid out by the Taxonomy regulation: 1. Climate change mitigation 2. Climate change adaptation 3. Sustainable use and protection of water and marine resources 4. Transition to a circular economy 5. Pollution prevention and control 6. Protection and restoration of biodiversity and ecosystems	Minimum Social Safeguards to respect basic human rights and labor standards. The European Commission has not provided specific guidelines on MSS assessment and companies have to follow the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises (OECD MNE Guidelines) and UN Guiding Principles on Business and Human Rights, including the International Labour Organization's (ILO) declaration on Fundamental Rights and Principles at Work, the eight ILO core conventions and the International Bill of Human Rights. Since 2023, in addition to the OECD and UN guidelines, reporting entities must also ensure alignment with SFDR principle adverse impact indicators for social and employee matters[1].

Source: S&P Global Sustainable1 (2024)

There are six environmental objectives of the Taxonomy (Figure 2) and until 2023 companies were required to disclose on only climate change mitigation and climate change adaptation. From 2024, the remaining four non-climate objectives too have come into force. Within the climate objectives, activities that actively mitigate climate change or have the capacity to adapt by shifting their technologies towards low-carbon solutions are categorized as Transitional within the Taxonomy, while activities that provide products and services that improve the emissions intensity of other activities are categorized as Enabling. Whenever the regulation doesn't specify the activity type against a specific activity, they are marked as 'General' for users to identify these.

Figure 2: Six environmental objectives of the Taxonomy

1. Climate change mitigation
2. Climate change adaptation
3. Sustainable and protection of water and marine resources
4. Transition to a circular economy
5. Pollution prevention and control
6. Protection and restoration of biodiversity and ecosystems

Source: S&P Global Sustainable1 (2024)

[1] Commission notice on interpretation and implementation of certain legal provisions of the EU Taxonomy Regulation and links to the Sustainable Finance Disclosure Regulation (https://finance.ec.europa.eu/publications/sustainable-finance-package-2023_en)

The Taxonomy regulations apply to large corporate entities subject to disclosure requirements under the Non-Financial Reporting Directive (NFRD), and this includes companies with more than 500 employees. It also applies to financial market participants (FMPs) who offer financial products in the European Union, and it covers asset classes such as equity funds, real estate funds and pension products. The Taxonomy is one of the most significant developments in sustainable finance and may have wide-ranging implications for financial institutions (notably pension funds, insurers, banks and asset managers) and issuers working in the EU and beyond.[2]

In response to these developments, S&P Global Sustainable1 (S1) launched the S&P Global EU Taxonomy Independent Assessment), which provides FMPs with a comprehensive assessment of a large universe of equity and fixed income issuers (20,000 corporate entities in total) against the Eligibility, SC, DNSH and MSS requirements of the Taxonomy. The assessment aims to help financial institutions with their process of disclosure by identifying companies with business activities that are either fully aligned with, or which have the potential to make a substantive contribution to objectives of the Taxonomy. S1's objective is to assist FMPs in their journey towards full disclosure, and the current dataset has been developed with this in mind. The dataset will continue to evolve in line with the evolution of the regulation itself.

The S&P Global EU Taxonomy Independent Assessment (formerly known as the EU Taxonomy Data Solution, considered as Version 2 of the dataset) is an upgrade to the Trucost EU Taxonomy Revenue Share dataset (also referred to as Version 1), which was released by S&P Global in 2020. Version 1 of this dataset included a different list of eligible sectors based on the initial list of activities communicated by the European Commission. For example, the initial list included agriculture, whereas the updated list excludes agriculture. Version 1 of the dataset only addressed revenue eligibility and did not include any SC, DNSH or MSS assessments, which are now included in this updated version.

As more and more companies started disclosing on their EUT performance, S1 launched the EUT As Reported dataset in 2023. The As Reported dataset focuses on collecting EUT performance data 'as reported' by companies and further details can be found in the methodology document[3].

[2] (Available at: https://ec.europa.eu/info/publications/sustainable-finance-teg-Taxonomy_en)

[3] EU Taxonomy As Reported dataset methodology: https://portal.s1.spglobal.com/survey/documents/SPG_S1_EUT_as_reported_methodology.pdf

METHODOLOGY OVERVIEW

The S&P Global EU Taxonomy Independent Assessment is based on the delegated act on sustainable activities defined by European Commission. The Taxonomy outlines business activities that fall into one of the 13 Nomenclature of Economic Activities (NACE)[4] macro sectors that are eligible under the Taxonomy. The business activities include those that have a direct carbon mitigation potential (for example, renewable energy), as well as those that are relatively carbon intensive but have the potential to significantly reduce their carbon emissions (for example, steel manufacturing). It also includes business activities that enable climate change adaptation and have the potential to contribute to other non-climate objectives.

The 13 NACE macro sectors covered by the Taxonomy are:

- Forestry
- Environmental protection and restoration activities
- Manufacturing
- Energy
- Water supply, sewerage, waste management and remediation
- Transport
- Information and communication technologies (ICT)
- Buildings (construction and real estate activities)
- Professional, scientific and technical activities
- Financial and insurance activities
- Education
- Human health and social work activities
- Arts, entertainment and recreation

The S&P Global EU Taxonomy Independent Assessment includes both S1's assessment of the alignment of each company's revenues with the Taxonomy requirements, either at the individual business activity or aggregated at company level, and the underlying data points utilized to inform that assessment. We take a conservative approach in only assigning the Aligned classification where sufficient data and information are available to demonstrate that an activity or company has met the SC, DNSH and MSS requirements.

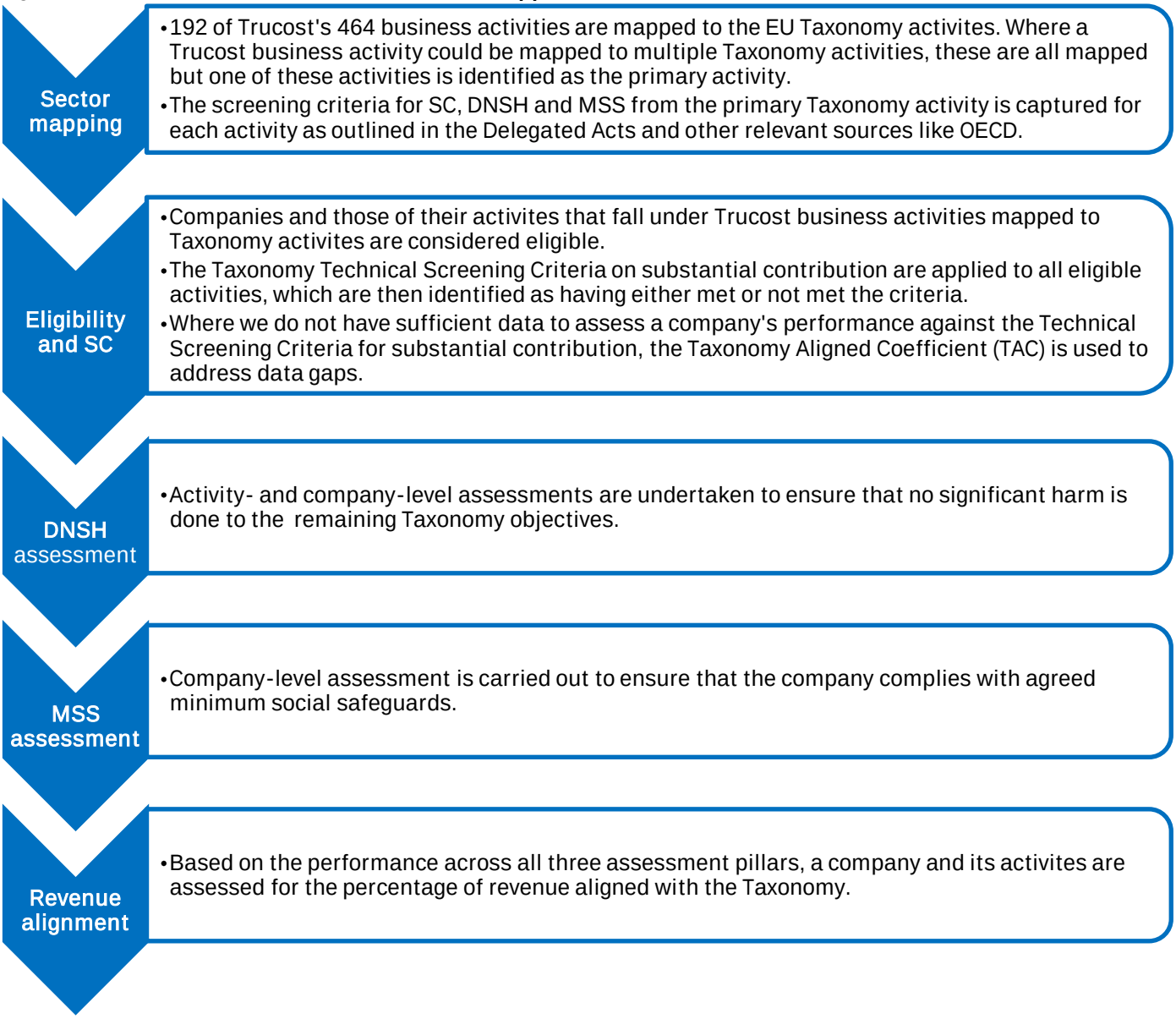
S1 identifies business activities as Transitional or Enabling, and map these to the Taxonomy objectives of climate change mitigation and climate change adaptation. For Adaptation activities, expenditure is used as the assessment metric since companies incur costs to implement measures to mitigate physical climate risk. The current dataset only has total Capex and Opex data at the company level. An activity-specific breakdown is not currently available.

The dataset covers 20,000 companies in the Trucost Core Plus Universe, of which approximately 15,000 are publicly listed companies and 5,000 are private companies issuing fixed income securities.

The following sections provide an overview of how S1 assesses Taxonomy alignment. Figure 3 provides a high-level overview of the approach, and
Figure 4 provides a summary of the data sources used within the dataset.

[4] Nomenclature of Economic Activities (NACE) is the European Statistical classification of economic activities. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Statistical_classification_of_economic_activities_in_the_European_Community_(NACE)

Figure 3: **Overview of S&P Global Sustainable1's approach**



Source: S&P Global Sustainable1 (2022)

Figure 4: Data sources used within the dataset

Section	Data point	Description	Data source	Scope
Revenue Eligibility	Sector revenue	Sector-level revenue data is used to identify revenues generated from Taxonomy eligible activities.	Trucost Sector Revenue dataset	Activity Level
Substantial Contribution	Emission intensity	Sector-level emission intensity data for selected companies present in core plus universe (e.g., tCO2e/tonnes of cement).	Trucost Paris Alignment dataset	Activity level
	Capital IQ topic tags	Company-level flags indicating involvement in key business	S&P Capital IQ	Company Level

		activities. Based on Capital IQ's business description.		
	Power plant performance	Market Intelligence dataset on power plants contains details such as capacity of the power plant, energy source used and cogeneration status. This was used for assessing the Taxonomy activity "Electricity generation from bioenergy." This dataset is also used for assessing the location of nuclear power plants for the activity Electricity generation from nuclear energy in existing installations	MI Power Plants	Activity level
	Taxonomy Aligned Coefficient	Activity-level revenue alignment score.	European Commission Joint Research Centre	Activity level
Do No Significant Harm	Controversy screening and objective specific data points	DNSH is assessed at objective level and MSS is assessed for each criterion. Media and Stakeholder Assessment (MSA) data was used to screen for incidents that would impact the reputational risk of the company and negative impacts on the environment and society.	S&P Global Corporate Sustainability Assessment	Company level
Minimum Social Safeguards	Controversy screening and indicator-specific data points			

NFRD and CSRD indicators:

In the company level output, dedicated columns on CSRD and NFRD indicators are provided. It is important to note that NFRD/CSRD indicators are Sustainable 1's independent assessment regarding whether NFRD/CSRD applies to a company or not. This is only an estimated value developed based on S1's interpretation of the European Commission regulations and could differ from the actual status of the company. Companies with significant operations in Europe, but not headquartered in an EU country, may be subject to the NFRD/CSRD requirements but will be marked as 'Non-EU headquartered' in the dataset, along with all other non-EU headquartered companies. The indicators were assessed based on thresholds related to following metrics:

1. Company headquarters location
2. Total employees
3. Net Turnover
4. Total assets

Assessing Revenue Eligibility

To assess revenue eligibility, a direct mapping is carried out between the business activities covered by the Taxonomy and 192 of the 464 business activities in the proprietary Trucost Sector Classification system.

The Trucost sector classification system and company research process

The Trucost sector classification system is based on the North American Industry Classification System (NAICS), which is similar to the European NACE system. The entire economy's activities are split into 464 business activities. S&P Global reviewed company reported revenues and emissions data from the Trucost Core Plus Universe. This step in the process ensures that only business activities that have a potential to contribute to one of the objectives are included in the dataset. Any business activities remaining after this step are not considered to be eligible. For more information about the Trucost Core Plus Universe company research process, please refer to the respective methodology document[5].

Mapping the Trucost business activities to the Taxonomy business activities

One primary Taxonomy business activity, representing the best possible match, is mapped to each eligible Trucost sector, and secondary (or other relevant) Taxonomy business activities are noted in the dataset but not used in the assessment (secondary activities). Assignment of a primary Taxonomy activity is necessary because the SC and certain DNSH criteria are different for each of the Taxonomy business activities, so a primary activity and associated technical screening criteria must be established.

Figure 5: Example Trucost business activity mapped to primary & secondary Taxonomy activities

Trucost business activity	Primary Taxonomy activity	Secondary Taxonomy activity
Landfill Gas Power Generation	Electricity generation from renewable non-fossil gaseous and liquid fuels	Landfill gas capture and utilization

Once mapped, following the Taxonomy Delegated Act the Trucost business activities are identified as Transitional or Enabling, and are categorized against the Taxonomy objectives of climate change mitigation and climate change adaptation. Transitional activities are defined by the Taxonomy as those that are either contributing to climate change mitigation based on their capacity to improve their emissions intensity, or are directly mitigating the impacts of climate change. Enabling activities are defined by the Taxonomy as those that are providing products and services that improve emissions intensity of other activities and are indirectly mitigating the effects of climate change. Whenever the regulation doesn't specify the activity type against a specific activity, we have marked them as 'General' for users to identify these.

Nuclear and gas activities were mapped to Trucost sectors following the existing mapping approach. One primary Taxonomy business activity, representing the best possible match, is mapped to each eligible Trucost sector, and secondary (or other relevant) Taxonomy business activities are noted in the dataset but not used in the

[5] Trucost environmental dataset methodology: https://portal.s1.spglobal.com/survey/documents/SPG_S1_Trucost_Environmental_Data_Methodology.pdf

assessment (secondary activities). Both nuclear energy and natural gas were categorized under climate change mitigation objective and transitional activity type. All companies generating revenue through these Trucost sectors are considered eligible. None of the companies linked to nuclear energy and natural gas were assessed as meeting the substantial contribution assessment due to lack of data. The substantial contribution technical screening criteria are largely qualitative and include datapoints not currently collected by S&P Global. As per the SC criteria 1, the project must be located in a member state that complies with the treaty establishing the European Atomic Energy Community (Euratom Treaty) and related directives. The Euratom treaty includes all member countries of the European Union and hence importance is given to the project being located in one of the member states.

The European Commission has provided the technical screening criteria for the remaining non-climate objectives and has also introduced new activities under the climate objectives. This regulatory update entered in to force by January 2024. Considering these developments, this dataset has been updated to offer eligibility assessment for new activities under climate and non-climate objectives. The new objectives integrated to dataset are:

i. Water and Marine Resources (WTR)
ii. Circular Economy (CE)
iii. Pollution Prevention and Control (PPC)
iv. Biodiversity and ecosystems (BIO)

The approach followed to assess eligibility for the new activities is similar to the existing one followed for Climate Change Mitigation (CCM) and Climate Change Adaptation (CCA). The new activities were mapped to relevant Trucost (TC) sector where available and out of 47 new activities introduced by the regulation, matching TC sectors were available for 14 of them. Following this update we were able to map 68 EUT activities to Trucost sectors, representing 45% coverage of Total EUT activities listed in delegated acts. Further details on mapping table is available in appendix. The new activities are assessed only for eligibility, and they are not assessed for alignment.

EUT regulation recommends that a given EUT activity can contribute to only one objective and this process will help avoid double counting of business aligned with EUT. For the purpose of this dataset, it was determined that a given EUT activity will be mapped only to one objective to avoid the risk of double counting. Whenever activities have the potential to contribute to multiple objectives as per delegated act, they will be mapped only to one objective. The objective to be assigned for such activity will be decided considering factors like complexity of technical screening criteria and data availability.
Below is the objective mapping followed for activities that have the potential to substantially contribute to more than one objective:

i. Whenever activities have the potential to contribute to both CCM and CCA, they were mapped to CCM.
ii. EUT activities ‘Construction of new buildings’ and ‘Renovation of existing buildings’ have the potential to contribute to both CCM and Circular Economy. These activities were mapped to CCM.
iii. EUT activity ‘Treatment of hazardous waste’ has the potential to contribute to both Circular Economy and Pollution prevention. The activity was mapped to Circular Economy.

For all new and existing activities for which alignment assessment is not conducted, the column ‘Substantial contribution criteria 1 text’ indicates the nature of assessment. The activity is flagged as ‘Eligibility assessment only. Refer to Delegated Acts’ if the assessment metric is revenue and flagged as ‘Not assessed. Refer to Delegated Acts’ if the assessment metric is expenditure. The remaining columns under substantial contribution have been marked as ‘Not Required’. These activities are marked as ‘Not Met’ in the column ‘Substantial Contribution Final Assessment’ and this terminology is used to represent the scenario that sufficient data is not available to assess substantial contribution. These activities are also marked as ‘Not Aligned’ in the column ‘Combined EU Taxonomy Alignment Assessment’ and this is used in the context of alignment assessment not being conducted for these entries. For new activities, the do no significant harm (DNSH) section is marked as ‘NA’ and this represents DNSH column not being applicable for these activities. These activities will still have values under minimum social safeguards (MSS) section since the analysis for MSS metrics is done at company level and is not activity specific.

Assessing Substantial Contribution

Once the eligible business activities and associated revenues have been identified, they must then also be shown to make a substantial contribution (SC) to one of the Taxonomy's environmental objectives. At present, SC screening criteria have been finalized only for two objectives: Climate Change Mitigation and Climate Change Adaptation. The regulations set forth a series of technical screening criteria for each eligible activity, identifying performance thresholds (which can be either quantitative or qualitative) that must be met in order for the contribution of a company's business activity to be considered substantial.

In many cases the technical screening criteria for a given activity will include multiple requirements that must be partially or fully satisfied to demonstrate SC. S1 has disaggregated these requirements and presents an assessment against each sub-criterion separately in the dataset. S1 has also identified activity-specific supplementary criteria that should be adopted in certain situations (for example, in the calculation of product carbon intensity metrics). These supplementary criteria are qualitative and relate to the specific frameworks of those situations. The complete list of activity-specific supplementary criteria can be found in Appendix 1.

S1 has sought to utilize information from the S&P Global Capital IQ database and other Trucost datasets to satisfy the requirements of SC. For example, Capital IQ Topic Tags is one of the datasets used in the context of assessing SC. The topic tags are retrieved from the Capital IQ Business Description of a company. The business description is a description of the business of a company; it is made by the S&P Capital IQ analysts and fed into the Company Intelligence dataset. The topic tags may be helpful in the instances where the Trucost business activity is not granular enough (e.g., for electric vehicles).

Paris Alignment[6] is another dataset that is used to assess SC. This dataset uses company data on carbon emissions and production to calculate a ratio of carbon emissions per unit of production. Such a ratio is calculated for companies in key carbon intensive sectors (also called Sectoral Decarbonization Approach, or SDA, sectors) such as power, steel, cement, aluminum, airlines and automobiles.

An S&P Global Market Intelligence dataset on power plants is also used, and it contains details such as the capacity of power plants, energy sources used and cogeneration status. This is used for assessing the Taxonomy activity on electricity generation from bioenergy. Similarly, data on location of the powerplant is used for the assessment of activity Electricity generation from nuclear energy in existing installations. Considering the importance given to Euratom treaty and the project being located in a member state, a sub-criterion was dedicated to assessing the location of the nuclear plant. The Market Intelligence power plant dataset was used to shortlist nuclear plants located in EU member states and identify companies associated with them. The data on revenue generated by a company from nuclear energy was available only at sector level and not at project level. Given this limitation, aggregated assessment was conducted for companies to verify whether all their associated nuclear plants were located within EU member states. Only if they meet this condition, they will qualify the sub-criteria around plant location. If the company in nuclear sector is associated with even one nuclear plant outside the member states, it will be disqualified. It is important to note that sub-criteria around plant location is only one of the many criteria required to qualify the substantial contribution assessment. Irrespective of whether a company passes the sub-criteria around plant location or not, it will not be assessed by S&P Global to meet the overall substantial contribution assessment due to lack of data on remaining criteria. In the case of natural gas too, the combined taxonomy assessment will not be 'aligned' due to lack of data relating to the substantial contribution assessment.

[6] Paris Alignment dataset methodology: https://portal.s1.spglobal.com/survey/documents/SPG_S1_Paris_Alignment_Methodology.pdf

Figure 6 provides some examples of the data that is used to evaluate the Substantial Contribution criteria in the current version of the dataset.

Figure 6: Example data sources used to assess the technical screening criteria

Taxonomy Activity	Primary Criteria	Data Source Used
3.8 Manufacture of aluminum	Manufacture of secondary aluminum is automatically deemed to be making a substantial contribution to climate change mitigation.	The Trucost Sector Revenue dataset is used to identify the activity, 331314 – Secondary smelting and alloying of aluminum, to differentiate it from other types of aluminum production.
4.1 Electricity generation using solar photovoltaic technology	Electricity generated from Solar PV is automatically deemed to be making a substantial contribution to climate change mitigation.	The Trucost Sector Revenue dataset is used to identify the breakdown of revenues from each power source, e.g., 221119A – Solar PV vs. 221119B – Wind Power.
3.9 Manufacture of iron and steel	A process that meets the emissions threshold per unit product manufactured is deemed to be making a substantial contribution to climate change mitigation.	The Trucost Paris Alignment dataset is used to provide data on the carbon intensity of individual companies engaged in iron and steel production.
3.3 Manufacture of low-carbon technologies for transport	Vehicles with zero tailpipe emissions are deemed to be making a substantial contribution to climate change mitigation.	Capital IQ (CIQ) Topic Tags are used to identify manufacturers of electric vehicles that have zero tail pipe emission.

Where relevant data is not currently available to assess the SC requirements for a given Taxonomy business activity, "No data available" will be shown and the analysis will default to the TAC that has been assigned by the regulation to that activity. These coefficients reflect an estimate of the proportion of an activity/sector that is expected to meet the SC criteria.

Figure 7: Application of the Taxonomy Alignment Coefficient

Overview

The EC Joint Research Centre has published the estimated Taxonomy aligned coefficients[7] that were used in its report on the implementation of the EU Sustainability Taxonomy.[8] These can be used by FMPs to estimate the Taxonomy alignment of their asset holdings to compute their own KPIs where they do not have sufficient information to assess the SC criteria for a specific company's business activities.

Examples

- Manufacture of cement (NACE 23.51) has a TAC of 3%
- Rental and leasing of cars and light motor vehicles (NACE 77.11) has a TAC of 18%
- Development of building projects (NACE 41.10) has a TAC of 40%
- Transmission of electricity (NACE 35.12) has a TAC of 100%

[7] The JRC's Taxonomy-Alignment tool is available at: https://publications.jrc.ec.europa.eu/repository/bitstream/JRC118663/jrc118663-uzh_taxonomy-alignment-tool-2020.xlsx

[8] Lucia Alessi, Stefano Battiston, 'Two sides of the same coin: Green Taxonomy alignment versus transition risk in financial portfolios', International Review of Financial Analysis, Vol. 84, 2022, 102319, ISSN 1057-5219, https://doi.org/10.1016/j.irfa.2022.102319

Applications **within S&P Global's EU Taxonomy** Independent Assessment

The Trucost Sector Revenue dataset has identified that Company A, which has total revenues of $10m, generates 30% of their revenue from the development of building projects and 20% from activities related to the production of cement, while the remaining revenue is generated by activities that are not included in the Taxonomy. This means that $5m, or 50%, of the company's revenue is eligible under the Taxonomy.

Eligible revenue must then be assessed against the technical screening criteria for each activity to show that it makes a substantial contribution to one of the Taxonomy's environmental objectives. If data exists to show that the company's activities meet the technical screening criteria, then the full $5m of eligible revenue could be considered to be substantially contributing. If, however, the information is insufficient, the TAC may be applied as follows:

- A TAC of 40% is applied to the $3m revenue generated from the development of building projects, which results in $1.2m of revenue meeting the SC criteria.
- A TAC of 3% is applied to the $2m revenue generated from the production of cement, which results in $60,000 of revenue meeting the SC criteria.

This means that $1.26m of the company's revenue meets the SC criteria.

For each SC criterion, the following data fields are provided:

- Text: The text of the technical screening criteria to be assessed
- Qualitative/Quantitative: An indication of whether the criteria are qualitative or quantitative in nature
- Data Source: The name of the S&P Global data source used to evaluate the criteria
- Activity Performance Data: Company/activity specific data used to assess the technical screening criteria; for example, steel production greenhouse gas intensity (tCO2e/tonne steel)
- Activity Performance Data Units: The units for the company/activity data provided above
- Taxonomy Performance Threshold: The quantitative threshold set in the technical screening criteria
- Taxonomy Performance Threshold Units: The units for the quantitative threshold set in the technical screening criteria
- Assessment: S1's assessment of whether the criteria are met or not met based on the information above

These data fields are repeated for each SC criterion of relevance to each Taxonomy activity.

A summary assessment is also provided indicating whether or not a company/activity has met all relevant technical screening criteria (Met or Not Met). The percentage of eligible revenue meeting the SC criteria is also shown. If all SC criteria are met, 100% of activity revenue is included; however, if data is insufficient or missing, the eligible revenue multiplied by the TAC is shown.

Assessing Do No Significant Harm Criteria

Once an eligible activity has been identified as making a substantial contribution to one of the Taxonomy's environmental objectives, it must also show that it meets the DNSH requirements in relation to the other five environmental objectives.

The Taxonomy delegated act provides specific activity-level and generic appendix-level requirements, alongside more generic appendix-level requirements. Both activity- and appendix-level requirements are assessed using data collected through the S&P Global Corporate Sustainability Assessment (CSA), an annual assessment based on company reporting that captures data on a wide range of Environmental, Social and Governance (ESG) issues. Further information on the CSA methodology is available on the S&P Global CSA website[9].

The DNSH assessment is based on the CSA score and data point-level analysis, alongside the S&P Global Media and Stakeholder Analysis (MSA). The activity and appendix DNSH requirements for each environmental objective are matched to data point and question-level information disclosed by companies assessed through the CSA and used to evaluate whether an activity or company has satisfied the requirements. It is important to note that if a company is identified as being engaged in any of the controversies covered by the MSA, the company would be assessed as not meeting the DNSH threshold irrespective of its performance on the DNSH criteria.

CSA score and data point-level analysis for DNSH

The CSA methodology requires companies to respond to a series of questions on their sustainability performance. Questions are made up of multiple data points that provide granular indications of a company's performance on a specific sustainability topic. Data point-level information includes quantitative and qualitative company information within specific CSA questions. For the purposes of the S&P Global EU Taxonomy Independent Assessment, these data points have been mapped to the specific taxonomy delegated act, DNSH activity, and appendix-level requirements. In cases where several data points within a CSA question are relevant to specific requirements, the question score is used. The combination of data points and question scores form individual criteria that make up the assessment for each DNSH activity- and appendix-level requirement. Each data point or score has been assigned a threshold that analysts deem to be reflective of the requirements set out within the Taxonomy delegated act to meet the individual DNSH objectives.

Figure 8: Mapping CSA data to DNSH objectives

DNSH Objectives	CSA Data	Description
Climate Change Mitigation	No Coverage	The CSA does not currently collect relevant data for the DNSH requirements for climate change mitigation.
Climate Change Adaptation	Climate Risk Assessment – Physical Risks & Physical Climate Risk Adaptation	The CSA considers information on whether a company has completed an assessment of material physical climate risks with details on the scope and focus of the assessment as well as planned adaptation measures to mitigate physical climate risks.

[9] S&P Global CSA website: https://www.spglobal.com/esg/csa/methodology/

Sustainable Use and Protection of Water and Marine Resources	Water Quantity- and Quality-Related Risks, Water-Related Stakeholder Conflicts, Water-Saving Devices and Water Efficiency Programs for Real Estate Portfolio	The CSA considers how companies manage water related risks through implementation of specific policies, management systems and stakeholder engagement. Furthermore, it considers specific aspects around water saving devices implemented in new and existing buildings.
Transition to a Circular Economy	Product Design Criteria, Coverage of Environmental Management Policy, Approach Towards Recycling	The CSA considers how companies implement circular economy principles within product design criteria alongside policies and processes to manage waste within business operations.
Pollution Prevention and Control	Hazardous Substances Commitment	The CSA considers the commitments companies have in place to reduce hazardous substances within products and the progress made to remove them altogether.
Protection and Restoration of Biodiversity and Ecosystems	Biodiversity Commitment, Biodiversity Exposure & Assessment, No Deforestation Commitment and Forest Management Certification	The CSA considers how companies manage biodiversity related risks through implementation of company commitments, processes to consider exposure and assessments of how their operations may impact biodiversity.

A metric column is displayed for each of the individual DNSH environmental objectives and provides an indication of the Taxonomy requirement (e.g., activity or appendix level) that the company activity is required to meet to demonstrate alignment to DNSH. Below is a list of outputs for the DNSH metric column and their descriptions.

- EUT Delegated Act – Activity Requirements: The activity is required to meet only the activity requirements within the Taxonomy delegated act
- EUT Delegated Act – Appendix Requirements: The activity is required to meet only the appendix requirements within the Taxonomy delegated act
- EUT Delegated Act – Activity & Appendix Requirements: The activity is required to meet both the activity requirements and the appendix requirements

At this stage, the S&P Global EU Taxonomy Independent Assessment does not have full coverage of all of the activity requirements of the Taxonomy delegated act. Therefore, within the metric column for each DNSH objective it is indicated where there is an absence of coverage within the DNSH assessment, as detailed below.

- EUT Delegated Act – Activity Requirements (No Assessment Coverage): The activity is required to meet only the activity requirements within the Taxonomy delegated act, but the data is not currently available within the assessment. In these cases, the product returns No Data Available for the specific DNSH criteria, as detailed below.

- EUT Delegated Act – Activity (No Assessment Coverage) & Appendix Requirements: The activity is required to meet both the activity requirements and the appendix requirements. Data is not currently available for assessment of the activity, but the data for assessing appendix requirements is available. In these cases, only the assessment for the appendix is used to indicate alignment, but the lack of data reflects negatively in DNSH Confidence Level score.

An assessment is provided for each of the individual DNSH objectives (e.g., "DNSH Pollution Assessment") alongside the complete DNSH Combined Assessment, which is a summary of all of the individual objectives. Below is a list of the outputs for the individual assessments of the DNSH objectives and the DNSH Combined Assessment.

- Met: The individual DNSH objective assessment will be considered Met if all of the underlying CSA scores or data points meet the thresholds of the Taxonomy requirements. The DNSH Combined Assessment is considered Met when one or more of the individual DNSH assessments are Met and the remaining assessments are not categorized as Not Met or Partially Met.

- Partially Met: The individual DNSH objective assessment will be considered Partially Met if at least one of the underlying CSA scores or data points meets the thresholds of the Taxonomy requirements. The DNSH Combined Assessment is considered Partially Met when at least one of individual DNSH assessments is categorized as Partially Met and the remaining assessments are not categorized as Not Met.

- Not Met: The individual DNSH assessment will be considered Not Met if none of the underlying CSA scores or data points meets the thresholds that are reflective of the Taxonomy requirements. The DNSH Combined Assessment is categorized as Not Met if one or more of the individual DNSH assessments is categorized as Not Met.

- Not Required: For some activities there are no requirements to meet specific DNSH objectives. These are marked as Not Required under the individual DNSH objectives. The DNSH Combined Assessment is categorized as Not Required if all six of the individual DNSH assessments are categorized as Not Required.

- No Data Available: The individual DNSH assessment will be considered No Data Available if there has not been sufficient data collected on a company or there was not substantial coverage of the Taxonomy delegated act within the CSA methodology. In these cases, the company has participated within the CSA data collection methodology, but insufficient data was collected due to one or both of the above reasons. The DNSH Combined Assessment will be categorized as No Data Available if all six of the individual DNSH assessments are categorized as No Data Available. The No Data Available output affects the Confidence Level score, which is discussed below.

- No Coverage: The individual DNSH assessments are considered No Coverage if the company did not participate in the CSA data collection methodology. The DNSH Combined Assessment will be considered No Coverage if one or more objectives are categorized as No Coverage and the remaining objectives are Not Required.

Alongside the above individual assessment for each DNSH objective, a percentage score is also assigned (e.g., 100% for DNSH Adaptation Score). The score reflects the performance of companies against the underlying score or data point analysis within each DNSH objective. The DNSH Combined Score is an average of the individual objective scores and weighted where there is No Data Available, or the objective is Not Required as per the Taxonomy delegated act. A company activity does not necessarily need to achieve 100% on the DNSH Combined Score to be considered "Met" for the DNSH Combined Assessment, as detailed below. Also, the DNSH Combined Score is still provided when a company is "Not Met" for the DNSH Combined Assessment, which gives users an indication of their performance even if they have failed the assessment.

A DNSH Confidence Level is provided to indicate the completeness of the assessment. The Confidence Level takes into consideration two aspects that affect the quality of the data returned in the assessment. Firstly, it considers if sufficient data has been collected on a company to assess their specific performance against relevant metrics. Secondly, it considers if there is substantial coverage of the Taxonomy delegated act within the CSA methodology to allow for insight into whether a company meets the relevant activity and appendix requirements. These two aspects are combined to provide one of the following assessments:

- High: There is sufficient company data available to make an assessment, alongside substantial coverage of the Taxonomy delegated act within the CSA.
- Medium: There is a limitation in either the data collected on a company or coverage of the Taxonomy delegated act within the CSA.
- Low: There is a limited amount of data collected on a company and there is limited coverage of the Taxonomy delegated act within the CSA.

Where the CSA does not have sufficient data on a company, the Combined DNSH Assessment will be considered as Met if two or more individual DNSH objectives where sufficient data is available are Met and the remaining DNSH objectives are not categorized as either Not Met or Partially Met. The application of this rule will affect the Confidence Level of the DNSH Combined Assessment. Every activity is assessed against the Taxonomy Delegated Act requirements; however, if the MSA assessment (detailed below) identifies a relevant controversy, the DNSH Combined Assessment is automatically considered Not Met, even if the DNSH Combined Score is 100%.

Media and Stakeholder Analysis for DNSH

The MSA forms an integral part of the CSA and enables S&P Global to monitor companies' sustainability performance on an ongoing basis by assessing current controversies with potentially negative reputational or financial impacts. Throughout the year, S&P Global ESG Research monitors news coverage of assessed companies daily using news stories from the media and stakeholder groups compiled and pre-screened by RepRisk.[10] During the MSA process, a case is created if a company has been involved in a specific negative event or incident that reveals that the company's actions are inconsistent with its stated policies and goals and exposes either a failure of management or of company system and processes. When a case is created, several factors are taken into account, including the level of company responsibility, the materiality of the breach in terms of reputation, and the business or operational impact. A case is assessed to determine its impact on the company's ESG Score. Further information on the MSA process is available in the **MSA Methodology Guidebook**[11].

The MSA dataset is utilized within the S&P Global EU Taxonomy Independent Assessment to identify whether a company is engaged in a controversy related to any of the environmental objective, to consider the level of severity of that controversy (minor, medium or major), and to assess the response and action taken by the company to resolve that controversy. Where a company is identified to be engaged in a major controversy, they are assessed as failing to meet the DNSH criteria, since this represents evidence of potential significant harm to the Taxonomy environmental objectives. Where a company is identified as being engaged in a minor or medium controversy and did not release public communication or did not adopt adequate measures to minimize the negative impact and avoid future recurrence of such incidents (or insufficient partial measures), then the company would be assessed as not meeting the MSA threshold.

Figure 9: Summary of individual MSA assessments that contribute to the DNSH assessment

[10] RepRisk, an ESG data science firm, leverages the combination of AI and machine learning with human intelligence to systematically analyze public information in 23 languages and identify material ESG risks. With daily data updates across 100+ ESG risk factors, RepRisk provides consistent, timely, and actionable data for risk management and ESG integration across a company's operations, business relationships, and investments. www.reprisk.com.

[11] MSA Methodology Guidebook:

Media and Stakeholder Analysis (MSA) Assessment	Description
Environmental Policy	The MSA assessment considers cases of severe environmental violations caused by companies suggesting insufficient management control. Assessment is considered as an all-encompassing criterion for DNSH objectives.
Product Stewardship	The MSA assessment considers specific failures of product stewardship policy and processes. Assessment is considered towards the Transition to a Circular Economy DNSH objective.
Water Related Risks	The MSA assessment considers specific cases that are related to water quality and quantity risks. Assessment is considered towards the Sustainable Use and Protection of Water and Marine Resources DNSH objective.
Water Operations	The MSA assessment considers specific cases that are related to water operations within a company. Assessment is considered towards the Sustainable Use and Protection of Water and Marine Resources DNSH objective.
Biodiversity	The MSA assessment considers specific cases that are related to biodiversity. Assessment is considered towards the Protection and Restoration of Biodiversity and Ecosystems DNSH objective.

Assessing Minimum Social Safeguards

Adherence with MSS is evaluated at the company level using data disclosed by companies in the CSA. S1 reviewed the UN Guiding Principles on Business and Human Rights (UNGPs) and the OECD MNE Guidelines and selected the following social themes to be used for the MSS assessment:

- Human Rights
- Employment and Industrial Relations
- Corruption and Bribery & Anti-Competitive Practices
- Consumer Interest
- Tax Strategy
- Supply Chain Management

The MSS criteria for individual themes are matched to data point and question-level information disclosed by companies assessed through the CSA in order to evaluate whether an activity or company has satisfied the criteria. Where no individual CSA data points/questions are matched or minimum score threshold was applied, the assessment is based on the negative screen through the MSA assessment only. Where a company is identified as being engaged in any of the controversies outlined under the MSA for MSS, the company would be assessed as not meeting the MSA threshold irrespective of the company performance on the individual MSS criteria.

In 2023 European Commission published a notice on interpretation and implementation of certain legal provisions of the EU Taxonomy Regulation and links to the Sustainable Finance Disclosure Regulation. This document also contains additional guidelines on MSS assessment for EU Taxonomy and introduces a link between EUT and SFDR principle adverse impact indicators (PAI) for social and employee matters, respect for human rights, anti-corruption and anti-bribery matters. These metrics are already a part of SFDR dataset and users can access them directly.

CSA score and data point level analysis for MSS

Data points collected in the CSA are mapped to specific MSS Criteria and used to assess a company's performance. Where a company meets all data point level/minimum score threshold requirements, it would be considered to have met the MSS recommendations based on the OECD MNE Guidelines; where some recommendations are met but insufficient data is available on others, the company would be considered Partially Met; and where any of the recommendations are not met, the company would be assessed as Not Met for the relevant MSS Criteria.

Where the company has an MSA case, as explained above, the company fails the MSS check irrespective of the company's performance.

Figure 10: Mapping of CSA data points to MSS Criteria

MSS Criteria	CSA Data	Description
Human Rights	Human Rights Commitment Human Rights Due Diligence Process	The CSA considers whether companies have a public human rights policy in place and to what extent human rights due diligence processes exist on a company-wide level. The CSA Human Rights questions are developed in line with the UN Guiding Principles on Business & Human Rights.
Employment & Industrial Relations	Human Rights Commitment	The CSA considers specific policies covering commitments to respect to labor rights/laws.
Corruption & Bribery & Competition	Corruption & Bribery Anti-competitive Practices	The CSA considers the coverage of publicly available company-wide anti-corruption and bribery policies including bribes in any form and direct and political contributions as well as cases related to anti-trust/anti-competitive practices and fines incurred.
Consumer Interest	No data point/question level analysis. Relies solely on negative screen through MSA cases.	
Tax Strategy	Tax Strategy and Governance	The CSA considers the coverage of publicly available company-wide tax policies. The CSA Tax Strategy and Governance question is developed in line with the OECD recommendations on taxation.
Supply Chain Management	No data point/question level analysis. Relies	

	solely on negative screen through MSA cases.	

An MSS Metric column is provided for each of the individual MSS criteria that reference the OECD MNE Guidelines, which the MSS assessment is based upon. An individual assessment is provided for each of the MSS criteria (e.g., MSS Human Rights Criteria), alongside one MSS Combined Assessment which is a summary of all of the individual MSS Criteria assessments. Below is a list of outputs for the individual MSS assessments, alongside the MSS Combined Assessment.

- Met: Individual MSS criteria are considered Met if all of the underlying CSA scores or data points meet the thresholds that are reflective of the recommendations of the OECD MNE Guidelines. The Combined MSS Assessment will be considered Met if two or more of the individual MSS criteria are Met and the remaining metrics are not categorized as Not Met or Partially Met.

- Partially Met: Individual MSS criteria are considered Partially Met if at least one of the underlying CSA scores and data points meets the thresholds that are reflective of the recommendations of the OECD Guidelines. The Combined MSS Assessment will be considered Partially Met if one or more of the individual MSS criteria assessments are categorized as Partially Met and the remaining metrics are not categorized as Not Met.

- Not Met: Individual MSS criteria are considered Not Met if none of the underlying CSA scores or data points meets the thresholds that are reflective of the recommendations of the OECD MNE Guidelines. The Combined MSS Assessment will be considered Not Met if at least one of the individual MSS criteria is categorized as Not Met.

- No Data Available: Individual MSS criteria are considered No Data Available if the company participated in the CSA but the data is not sufficient to conduct an assessment against MSS criteria.

- No Coverage: The individual and combined MSS assessments will be considered No Coverage if the company did not participate in the CSA data collection process.

In addition to the individual assessment for each MSS criteria, companies are also given a score from 1–100% (e.g., 100% for MSS Human Rights Criteria). The score reflects the performance of companies against the underlying CSA score and data point analysis. The final MSS Combined Score is derived from an average of these individual criteria scores and weighted where there is No Data Available. The MSS Combined Score does not necessarily need to achieve 100% to be considered Met on the MSS Combined Assessment, as detailed below. Also, the MSS Combined Score is still provided when a company is considered Not Met for the MSS Combined Assessment, which gives users an indication of their performance even if they have failed the assessment.

An MSS Confidence Level is provided to indicate the completeness of the assessment. The Confidence Level takes into consideration two aspects that affect the quality of the data returned in the assessment. Firstly, it considers if sufficient data has been collected on a company to assess their specific performance against relevant metrics. Secondly, it considers if there is substantial coverage of the OECD MNE Guidelines within the CSA to allow an insight into if a company meets its criteria. These two aspects are combined and provide one of the following outputs:

- High: There is sufficient company data available to make an assessment, alongside substantial coverage of the OECD MNE Guidelines within the CSA.

- Medium: There is a limitation in either the data collected on a company or coverage of the OECD MNE Guidelines within the CSA.

- Low: There is a limited amount of data collected on a company and there is limited coverage of the OECD within the CSA.

Every activity is assessed against the MSS criteria, which are based on the OECD MNE Guidelines. If the MSA assessment identifies a relevant controversy (Figure 11), the MSS Combined Assessment is automatically considered Not Met, although the MSS Combined Score is still available. Where the CSA does not have sufficient data on a company for individual MSS criteria, the Combined MSS Assessment is considered Met only if two or more of the individual MSS criteria are Met and the remaining criteria are not categorized as Not Met or Partially Met.

Media and Stakeholder Analysis (MSA) for MSS

The MSA dataset is utilized to identify whether a company is engaged in a controversy related to the MSS criteria, the level of severity of that controversy (minor, medium or major), and what actions have been taken by the company to resolve that controversy. Where a company is identified as being engaged in in a major controversy, it would be assessed as failing to meet the MSS Criteria. Where a company is identified as being engaged in a minor or medium controversy and did not release public communication or did not adopt adequate measures to minimize the negative impact and avoid future recurrence of such incidents (or insufficient partial measures), then the company would be assessed as not meeting the MSA threshold.

Figure 11: Summary of individual MSA assessments that contribute to the MSS assessment

Media and Stakeholder Analysis (MSA) Assessment	Description
Human Rights	The MSA assessment considers controversies that are related to human rights violations identified in the company's own operation or supply chain. Assessment would highlight where a company has been in breach of internationally accepted human rights standards.
Labor Practices	The MSA assessment considers specific controversial cases that are related to labor practices. The assessment would consider where a company has breached basic internationally accepted labor and employment practices.
Codes of Conduct	The MSA assessment considers specific controversial cases that are related to unethical behavior that goes against a company's code of conduct or generally accepted best practices in business ethics. The Assessment is considered an umbrella assessment to consider failures in company management control for issues related to, *inter alia,* corruption, bribery, anti-competitive practices, embezzlement, violations of regulations and international sanctions, and money-laundering transactions.
Customer Relations	The MSA assessment considers specific controversial cases that are related to Customer Relations. The assessment considers whether a company has, for example, issued misleading advertising, advice or illegal excessive fees.
Health & Nutrition	The MSA assessment considers specific controversial cases that are related to consumer health and nutrition. The assessment is to consider whether company has provided products that might be detrimental to consumers' health.
Tax Strategy	The MSA assessment considers specific controversial cases that are related to tax evasion, tax fraud or illegal tax optimization. The assessment is considered towards the Tax Strategy MSS objective.

Supply Chain Management	The MSA assessment considers specific controversial cases that are related to a company's supply chain and its supply chain risk management practices. The assessment is considered towards the Supply Chain Management MSS objective.

Overall Taxonomy Alignment Assessment

S1 provides a final assessment of how companies and business activities align with the Taxonomy overall, incorporating all the assessments on eligibility, Substantial Contribution, Do No Significant Harm and Minimum Social Safeguards. We take a conservative approach in only assigning the Aligned classification where sufficient data and information are available to demonstrate that an eligible activity or company has met SC, DNSH and MSS requirements.

The below section explains how the activities are assessed depending on their eligibility and performance status:

- Not Aligned: Sector revenue is mapped to an eligible NACE activity for which the assessment criteria for one or more of the pillars (SC, DNSH, MSS) are Not Met.
- Partially Aligned: Sector revenue is mapped to an eligible NACE activity for which at least one of the three pillars are Met while others cannot be evaluated due to insufficient data.

- Aligned: Sector revenue is mapped to an eligible NACE activity for which the SC, DNSH and MSS criteria are met

The full Alignment Assessment output logic categories are as follow:

Figure 12: Logic underlying the Overall Taxonomy Alignment Assessment

SC	DNSH	MSS	Overall Taxonomy Alignment
Met	Met / Not Required	Met	Aligned
Met	Partially met	No Data Available / Partially met / Met / No Coverage	Partially aligned
Met	No Data Available / Partially met / Met / Not Required / No Coverage	Partially met	Partially aligned
Met	No Data Available / No Coverage	No Data Available / Partially met / Met / No Coverage	Partially aligned
Met	No Data Available / Partially met / Met / Not Required / No Coverage	No Data Available / No Coverage	Partially aligned
Not met	Not met / Partially met / Met / Not Required / No Coverage	Not met / Partially met / Met / No Coverage	Not aligned
Met / Not met	Not met / No Coverage	Not met / Partially met / Met / No Coverage	Not aligned
Met / Not met	Not met / Partially met / Met / Not Required	Not met	Not aligned

Monitoring and Review

All new methodologies and any material changes to existing methodologies are reviewed and approved by an independent methodology governance committee.

1313

Limitations

- Differences in outputs of the S&P Global EU Taxonomy Independent Assessment and the S&P Global EU Taxonomy As Reported datasets are expected due to their methodological differences and different use cases.

- The S&P Global EU Taxonomy Independent Assessment covers the business activities currently outlined in the Taxonomy. Over the coming years, the Taxonomy will continue to evolve as the Platform on Sustainable Finance considers approaches to additional business activities and to the other environmental objectives

- The Trucost sector classification system is based on NAICS and is currently not granular enough to capture all of the Taxonomy activities. As such, the activities have been split into primary and secondary activities. The activity that is the best match for the Trucost business activity gets marked as the primary activity and the remaining activities that are still relevant for that Trucost business activity get marked as secondary activities. All relevant Taxonomy activities are not mapped to the same Trucost business activity since it is not feasible to apply multiple screening criteria to a single company. Currently, the companies and their activities in the Trucost Core Plus Universe are assessed based on the screening criteria linked with the primary Taxonomy activity.

- The Taxonomy Alignment Coefficient (TAC) has been developed in the context of companies present in European Union. The TAC values in current dataset have been applied to companies outside EU too, for lack of data availability.

- The CSA currently does not have full coverage of all DNSH Delegated Act requirements, nor does it have complete coverage of all companies within the S&P Global EU Taxonomy Independent Assessment. In cases where the CSA does not have coverage of the DNSH and MSS requirements or companies, the assessment is marked as “No Coverage”.

- Taxonomy regulation categorizes activities into specific activity types. When activities substantially contribute to the climate change mitigation objective, the activity type categories are Enabling and Transitional. Both of these can be measured using revenue as the assessment metric. When activities substantially contribute to the Climate Change Adaptation (CCA) objective, the activity type categories are Enabling and Adapted. However, revenue can only be used as the assessment metric for CCA enabling activities, since these are activities that offer services to support the prevention or reduction of physical climate risks from which companies gain revenue. For adapted activities, expenditure is used as the assessment metric since companies incur costs to implement measures to mitigate physical climate risk. The current version of the dataset assesses companies based on their revenue alignment with the Taxonomy, however their expenditure alignment is not covered. The dataset does include some information on total Capex and Opex but these are not included in the eligibility or alignment assessments. For this reason, the dataset only covers an assessment for CCA enabling activities under the climate change adaptation objective. In addition, only the eligibility assessment is available for this category due to a lack of data availability. The coverage of activity types is summarized in Figure 14 below.

Figure 14: Coverage of Activity types

Taxonomy Objective	Activity types	Assessment metric	Status
Climate change mitigation	Enabling/Transitional/General	Revenue	Alignment Assessment

Climate change adaptation	Enabling	Revenue	Eligibility Assessment
	General	Capex or Opex	Not covered
Non-climate objectives	Enabling/General	Revenue	Eligibility Assessment

Source: S&P Global Sustainable1 (2024)

References

1. EUT Regulation or Regulation (EU) 2020/852: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852
2. EUT Delegated acts or Regulation (EU) 2021/2139: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R2139
3. Article 8 disclosure delegated acts or Regulation (EU) 2021/2178: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R2178
4. Nuclear and Gas delegated acts or Regulation (EU) 2022/1214: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32022R1214
5. Non-climate objectives delegated acts or Regulation (EU) 2023/2486: https://finance.ec.europa.eu/publications/sustainable-finance-package-2023_en
6. SFDR RTS (EU) 2022/1288 Article 17(2)(b): https://eur-lex.europa.eu/eli/reg_del/2022/1288/oj
7. EU Technical Expert Group on Sustainable Finance, (2019), Taxonomy Technical Report. Available at: https://ec.europa.eu/info/publications/sustainable-finance-teg-Taxonomy_en
8. NACE sector classification, (2020). Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Statistical_classification_of_economic_activities_in_the_European_Community_(NACE)
9. Lucia Alessi, Stefano Battiston, 'Two sides of the same coin: Green Taxonomy alignment versus transition risk in financial portfolios', International Review of Financial Analysis, Vol. 84, 2022, 102319, ISSN 1057-5219, https://doi.org/10.1016/j.irfa.2022.102319

Appendix 1: EU Taxonomy Supplementary Metrics and corresponding Primary Metrics by activity

Activity number	EUT Activity	Primary Metric & Threshold	Supplementary Metric
3.2	Manufacture of equipment for the production and use of hydrogen	The activity complies with the life-cycle GHG emissions savings requirement of 73.4% for hydrogen (resulting in life-cycle GHG emissions lower than 3 tCO2e/tH2) and 70% for hydrogen-based synthetic fuels relative to a fossil fuel comparator of 94 gCO2e/MJ in analogy to the approach set out in Article 25(2) of and Annex V to Directive (EU) 2018/2001.	Life-cycle GHG emissions savings are calculated using the methodology referred to in Article 28(5) of Directive (EU) 2018/2001 or, alternatively, using ISO 14067:2018119 or ISO 14064-1:2018120. Quantified life-cycle GHG emission savings are verified in line with Article 30 of Directive (EU) 2018/2001 where applicable, or by an independent third party. Where the CO2 that would otherwise be emitted from the manufacturing process is captured for the purpose of underground storage, the CO2 is transported and stored underground in accordance with the technical screening criteria set out in Sections 5.11 and 5.12.
3.3	Manufacture of low-carbon technologies for transport	The economic activity manufactures, repairs, maintains, retrofits, repurposes or upgrades: Vehicles with Zero Tail pipe emission. List of vehicles includes the following: trains, passenger coaches, wagons, urban, suburban and road passenger transport devices, vehicles of category L and Bimode vehicles.	Bimode vehicles that have zero direct tailpipe CO2 emission when operated on a track with necessary infrastructure, and use a conventional engine where such infrastructure is not available
3.3	Manufacture of low-carbon technologies for transport	Inland passenger water transport vessels that have zero direct (tailpipe) CO2 emissions.	Inland passenger water transport vessels that, until 31 December 2025, are hybrid and dual fuel vessels using at least 50% of their energy from zero direct (tailpipe) CO2 emission fuels or plug-in power for their normal operation.
3.3	Manufacture of low-carbon technologies for transport	Inland freight water transport vessels, not dedicated to transporting fossil fuels, that, until 31 December 2025, have direct (tailpipe) emissions of CO2 per tonne kilometer (gCO2/tkm) that are 50% lower than the average reference value for emissions of CO2 defined for heavy duty vehicles (vehicle subgroup 5-LH).	The tailpipe emissions must be calculated (or estimated in case of new vessels) using the Energy Efficiency Operational Indicator.
3.3	Manufacture of low-carbon technologies for transport	Sea and coastal freight water transport vessels, vessels for port operations and auxiliary activities, that are not dedicated to transporting fossil fuels, that: from 1 January 2026, vessels that are able to run on zero direct (tailpipe) CO2 emission fuels or on fuels from renewable sources have an attained Energy Efficiency Design Index (EEDI) value equivalent to reducing the EEDI reference line by at least 20 percentage points below the EEDI requirements applicable on 1 April 2022	(a) are able to plug-in at berth; (b) for gas-fuelled ships, demonstrate the use of state-of-the-art measures and technologies to mitigate methane slippage emissions.
3.3	Manufacture of low-carbon	Sea and coastal passenger water transport vessels, not dedicated to transporting fossil fuels, that: from 1 January 2026, vessels that are able to run on zero direct (tailpipe) CO2 emission fuels or	(a) are able to plug-in at berth; (b) for gas-fuelled ships, demonstrate the use of state-of-the-art measures and technologies to mitigate methane slippage emissions

	technologies for transport	on fuels from renewable sources have an attained Energy Efficiency Design Index (EEDI) value equivalent to reducing the EEDI reference line by at least 20 percentage points below the EEDI requirements applicable on 1 April 2022	
3.6	Manufacture of other low-carbon technologies	The economic activity manufactures technologies that are aimed at and demonstrate substantial life-cycle GHG emission savings compared to the best performing alternative technology/product/solution available on the market.	Life-cycle GHG emission savings are calculated using Commission Recommendation 2013/179/EU96 or, alternatively, ISO 14067:201897 or ISO 14064-1:201898. Quantified life-cycle GHG emission savings are verified by an independent third party.
3.10	Manufacture of hydrogen	The activity complies with the life-cycle GHG emissions savings requirement of 73.4% for hydrogen (resulting in life-cycle GHG emissions lower than 3 tCO2e/tH2) and 70% for hydrogen-based synthetic fuels relative to a fossil fuel comparator of 94 gCO2e/MJ in analogy to the approach set out in Article 25(2) of and Annex V to Directive (EU) 2018/2001.	Life-cycle GHG emissions savings are calculated using the methodology referred to in Article 28(5) of Directive (EU) 2018/2001 or, alternatively, using ISO 14067:2018119 or ISO 14064-1:2018120. Quantified life-cycle GHG emission savings are verified in line with Article 30 of Directive (EU) 2018/2001 where applicable, or by an independent third party. Where the CO2 that would otherwise be emitted from the manufacturing process is captured for the purpose of underground storage, the CO2 is transported and stored underground in accordance with the technical screening criteria set out in Sections 5.11 and 5.12,
3.13	Manufacture of chlorine	Electricity consumption for electrolysis and chlorine treatment is equal or lower than 2.45 MWh per tonne of chlorine.	Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.
3.14	Manufacture of organic basic chemicals	GHG emissions from the organic basic chemicals production processes are lower than: (a) for HVC: 0.693 tCO2e/t of HVC.	Where the organic chemicals in scope are produced wholly or partially from renewable feedstock, the life-cycle GHG emissions of the manufactured chemical, manufactured wholly or partially from renewable feedstock, are lower than the life-cycle GHG emissions of the equivalent chemical manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 2 to 5 of Directive (EU) 2018/2001. Forest biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive.
3.14	Manufacture of organic basic chemicals	GHG emissions from the organic basic chemicals production processes are lower than: (b) for aromatics: 0.0072 tCO2e/t of complex weighted throughput.	Where the organic chemicals in scope are produced wholly or partially from renewable feedstock, the life-cycle GHG emissions of the manufactured chemical, manufactured wholly or partially

			from renewable feedstock, are lower than the life-cycle GHG emissions of the equivalent chemical manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 2 to 5 of Directive (EU) 2018/2001. Forest biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive.
3.14	Manufacture of organic basic chemicals	GHG emissions from the organic basic chemicals production processes are lower than: (c) for vinyl chloride: 0.171 tCO2e/t of vinyl chloride.	Where the organic chemicals in scope are produced wholly or partially from renewable feedstock, the life-cycle GHG emissions of the manufactured chemical, manufactured wholly or partially from renewable feedstock, are lower than the life-cycle GHG emissions of the equivalent chemical manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 2 to 5 of Directive (EU) 2018/2001. Forest biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive.
3.14	Manufacture of organic basic chemicals	GHG emissions from the organic basic chemicals production processes are lower than: (d) for styrene: 0.419 tCO2e/t of styrene.	Where the organic chemicals in scope are produced wholly or partially from renewable feedstock, the life-cycle GHG emissions of the manufactured chemical, manufactured wholly or partially from renewable feedstock, are lower than the life-cycle GHG emissions of the equivalent chemical manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29,

			paragraphs 2 to 5 of Directive (EU) 2018/2001. Forest biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive.
3.14	Manufacture of organic basic chemicals	GHG emissions from the organic basic chemicals production processes are lower than: (e) for ethylene oxide/ethylene glycols: 0.314 tCO2e/t of ethylene oxide/glycol.	Where the organic chemicals in scope are produced wholly or partially from renewable feedstock, the life-cycle GHG emissions of the manufactured chemical, manufactured wholly or partially from renewable feedstock, are lower than the life-cycle GHG emissions of the equivalent chemical manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 2 to 5 of Directive (EU) 2018/2001. Forest biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive.
3.14	Manufacture of organic basic chemicals	GHG emissions from the organic basic chemicals production processes are lower than: (f) for adipic acid: 0.32 tCO2e/t of adipic acid.	Where the organic chemicals in scope are produced wholly or partially from renewable feedstock, the life-cycle GHG emissions of the manufactured chemical, manufactured wholly or partially from renewable feedstock, are lower than the life-cycle GHG emissions of the equivalent chemical manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 2 to 5 of Directive (EU) 2018/2001. Forest biomass used for the manufacture of organic basic chemicals complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive.
3.15	Manufacture of anhydrous ammonia	The activity complies with one of the following criteria: (a) ammonia is produced from hydrogen that complies with the technical screening criteria set out in Section 3.10 of this Annex (Manufacturing of hydrogen). The activity complies with the life-cycle GHG emissions savings requirement of 73.4% for hydrogen (resulting in life-cycle GHG emissions lower than 3 tCO2e/tH2)	The activity complies with one of the following criteria: (a) ammonia is produced from hydrogen that complies with the technical screening criteria set out in Section 3.10 of this Annex (Manufacturing of hydrogen). Life-cycle GHG emissions savings are calculated using the methodology referred to in Article 28(5) of Directive (EU) 2018/2001 or, alternatively, using ISO

		and 70% for hydrogen-based synthetic fuels relative to a fossil fuel comparator of 94 gCO2e/MJ in analogy to the approach set out in Article 25(2) of and Annex V to Directive (EU) 2018/2001.	14067:2018119 or ISO 14064-1:2018120. The activity complies with one of the following criteria: (a) ammonia is produced from hydrogen that complies with the technical screening criteria set out in Section 3.10 of this Annex (Manufacturing of hydrogen): Quantified life-cycle GHG emission savings are verified in line with Article 30 of Directive (EU) 2018/2001 where applicable, or by an independent third party. The activity complies with one of the following criteria: (a) ammonia is produced from hydrogen that complies with the technical screening criteria set out in Section 3.10 of this Annex (Manufacturing of hydrogen): Where the CO2 that would otherwise be emitted from the manufacturing process is captured for the purpose of underground storage, the CO2 is transported and stored underground, in accordance with the technical screening criteria set out in Sections 5.11 and 5.12.
3.17	Manufacture of plastics in primary form	The activity complies with one of the following criteria: (a) the plastic in primary form is fully manufactured by mechanical recycling of plastic waste.	Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of plastics in its primary form complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used for the manufacture of plastics in its primary form complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.
3.17	Manufacture of plastics in primary form	The activity complies with one of the following criteria: (b) where mechanical recycling is not technically feasible or economically viable, the plastic in primary form is fully manufactured by chemical recycling of plastic waste and the life-cycle GHG emissions of the manufactured plastic, excluding any calculated credits from the production of fuels, are lower than the life-cycle GHG emissions of the equivalent plastic in primary form manufactured from fossil fuel feedstock.	Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of plastics in its primary form complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used for the manufacture of plastics in its primary form complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.
3.17	Manufacture of plastics in primary form	The activity complies with one of the following criteria: (c) derived wholly or partially from renewable feedstock and its life-cycle GHG emissions are lower than the life-cycle GHG emissions of the equivalent plastics in primary form manufactured from fossil fuel feedstock.	Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Agricultural biomass used for the manufacture of plastics in its primary form complies with the criteria laid down in Article 29,

			paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used for the manufacture of plastics in its primary form complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.
3.21	Manufacturing of aircraft	The activity manufactures, repairs, maintains, overhauls, retrofits, designs, repurposes or upgrades one of the following: (b) until 31 December 2027, the aircraft, other than produced for private or commercial business aviation, meeting the margins specified below and limited by the replacement ratio to ensure that the delivery does not increase the worldwide fleet number: (i) having a certified metric value of CO2 emissions of at least 11 % less than the New Type limit of the International Civil Aviation Organisation (ICAO) standard	having a maximum take-off mass greater than 5,7 t and less than or equal to 60t and
3.21	Manufacturing of aircraft	The activity manufactures, repairs, maintains, overhauls, retrofits, designs, repurposes or upgrades one of the following: (b) until 31 December 2027, the aircraft, other than produced for private or commercial business aviation, meeting the margins specified below and limited by the replacement ratio to ensure that the delivery does not increase the worldwide fleet number: (ii) having a certified metric value of CO2 emissions of at least 2 % less than the New Type limit of the ICAO standard	having a maximum take-off mass greater than 60 t and less than or equal to 150t
3.21	Manufacturing of aircraft	The activity manufactures, repairs, maintains, overhauls, retrofits, designs, repurposes or upgrades one of the following: (b) until 31 December 2027, the aircraft, other than produced for private or commercial business aviation, meeting the margins specified below and limited by the replacement ratio to ensure that the delivery does not increase the worldwide fleet number: (iii) having a certified metric value of CO2 emissions of at least 1,5 % less than the New Type limit of the ICAO standard.	having a maximum take-off mass greater than 150 t
4.5	Electricity generation from hydropower	The activity complies with either of the following criteria: the life-cycle GHG emissions from the generation of electricity from hydropower are lower than 100 gCO2e/kWh.	The life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018, ISO 14064-1:2018 or the G-res tool. Quantified life-cycle GHG emissions are verified by an independent third party.
4.6	Electricity generation from geothermal energy	Life-cycle GHG emissions from the generation of electricity from geothermal energy are lower than 100 gCO2e/kWh.	Life-cycle GHG emission savings are calculated using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.
4.7	Electricity generation from renewable non-fossil	This activity does not include electricity generation from the exclusive use of biogas and bio-liquid fuels. Life-cycle GHG emissions from the generation of electricity using renewable gaseous and liquid fuels are lower than 100 gCO2e/kWh.	Life-cycle GHG emissions are calculated based on project-specific data, where available, using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.

	gaseous and liquid fuels		Quantified life-cycle GHG emissions are verified by an independent third party.
4.8	Electricity generation from bioenergy	1. Agricultural biomass used in the activity complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive. This point does not apply to electricity generation installations with a total rated thermal input below 2 MW and using gaseous biomass fuels. 2. The greenhouse gas emission savings from the use of biomass are at least 80% in relation to the GHG saving methodology and the relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001. This point does not apply to electricity generation installations with a total rated thermal input below 2 MW and using gaseous biomass fuels.	3. Where the installations rely on anaerobic digestion of organic material, the production of the digestate meets the criteria in Sections 5.6 and criteria 1 and 2 of Section 5.7 of this Annex, as applicable.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 1. The transmission and distribution infrastructure or equipment is in an electricity system that complies with at least one of the following criteria: (a) the system is the interconnected European system, i.e., the interconnected control areas of Member States, Norway, Switzerland and the United Kingdom, and its subordinated systems.	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are

			compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 1. The transmission and distribution infrastructure or equipment is in an electricity system that complies with at least one of the following criteria: (b) more than 67% of newly enabled generation capacity in the system is below the generation threshold value of 100 gCO2e/kWh measured on a life cycle basis in accordance with electricity generation criteria, over a rolling five-year period.	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct

			connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 1. The transmission and distribution infrastructure or equipment is in an electricity system that complies with at least one of the following criteria: (c) the average system grid emissions factor, calculated as the total annual emissions from power generation connected to the system, divided by the total annual net electricity production in that system, is below the threshold value of 100 gCO2e/kWh measured on a life cycle basis in accordance with electricity generation criteria, over a rolling five-year period.	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of

	distribution of electricity	distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (a) construction and operation of direct connection, or expansion of existing direct connection, of low-carbon electricity generation below the threshold of 100 gCO2e/kWh measured on a life cycle basis to a substation or network.	distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (b) construction and operation of electric vehicle (EV) charging stations and supporting electric infrastructure for the electrification of transport, subject to	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five

		compliance with the technical screening criteria under the transport Section of this Annex.	consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (c) installation of transmission and distribution transformers that comply with the Tier 2 (1 July 2021) requirements set out in Annex I to the Commission Regulation (EU) No 548/2014 and, for medium power transformers with highest voltage for equipment not exceeding 36 kV, with AAA0 level requirements on no-load losses set out in standard EN 50588-1.	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity

			connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (d) construction/installation and operation of equipment and infrastructure where the main objective is an increase of the generation or use of renewable electricity generation.	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with

			significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (e) installation of equipment to increase the controllability and observability of the electricity system and to enable the development and integration of renewable energy sources, including: (i) sensors and measurement tools (including meteorological sensors for forecasting renewable production).	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after

			having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network. Construction and operation of transmission systems that transport the electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (e) installation of equipment to increase the controllability and observability of the electricity system and to enable the development and integration of renewable energy sources, including: (ii) communication and control (including advanced software and control rooms, automation of substations or feeders, and voltage control capabilities to adapt to more decentralized renewable infeed).
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (f) installation of equipment such as, but not limited to future smart metering systems or those replacing smart metering systems in line with Article 19(6) of Directive (EU) 2019/944 of the European Parliament and of the Council, which meet the requirements of Article 20 of Directive (EU) 2019/944, able to carry information to users for remotely acting on consumption, including customer data hubs.	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system

			covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (g) construction/installation of equipment to allow for exchange of specifically renewable electricity between users.	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately;

			(f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.9	Transmission and distribution of electricity	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: (h) construction and operation of interconnectors between transmission systems, provided that one of the systems is compliant.	Construction and operation of transmission systems that transport electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems. The activity complies with one of the following criteria: 2. The activity is one of the following: For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonization may also be deemed to be on a trajectory to full decarbonization; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems

			may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.
4.10	Storage of electricity	The activity is the construction and operation of electricity storage, including pumped hydropower storage.	Where the activity includes chemical energy storage, the medium of storage (such as hydrogen or ammonia) complies with the criteria for manufacturing of the corresponding product specified in Sections 3.7 to 3.17 of this Annex. In case of using hydrogen as electricity storage, where hydrogen meets the technical screening criteria specified in Section 3.10 of this Annex, re-electrification of hydrogen is also considered part of the activity.
4.13	Manufacture of biogas and biofuels for use in transport and of bioliquids	1. Agricultural biomass used for the manufacture of biogas or biofuels for use in transport and for the manufacture of bioliquids complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used for the manufacture of biogas or biofuels for use in transport and for the manufacture of bioliquids complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive. Food and feed crops are not used for the manufacture of biofuels for use in transport or for the manufacture of bioliquids.	3. Where the manufacture of biogas relies on anaerobic digestion of organic material, the production of the digestate meets the criteria in Sections 5.6 and criteria 1 and 2 of Section 5.7 of this Annex, as applicable. 4. Where the CO2 that otherwise would be emitted from the manufacturing process is captured for the purpose of underground storage, the CO2 is transported and stored underground in accordance with the technical screening criteria set out in Sections 5.11 and 5.12 of this Annex.
4.15	District heating/cooling distribution	Construction, refurbishment and operation of pipelines and associated infrastructure for distribution of heating and cooling, ending at the sub-station or heat exchanger. The activity complies with one of the following criteria: (c) the activity is the following: (i) modification to lower temperature regimes;	Construction, refurbishment and operation of pipelines and associated infrastructure for distribution of heating and cooling, ending at the sub-station or heat exchanger. The activity complies with one of the following criteria: (c) the activity is the following: (ii) advanced pilot systems (control and energy management systems, Internet of Things).
4.16	Installation and operation of electric heat pumps	The installation and operation of electric heat pumps complies with both of the following criteria: (a) refrigerant threshold: Global Warming Potential does not exceed 675	The installation and operation of electric heat pumps complies with both of the following criteria: (b) energy efficiency requirements laid down in the implementing regulations under Directive 2009/125/EC are met.
4.18	Cogeneration of heat/cool and power from geothermal energy	The life-cycle GHG emissions from the combined generation of heat/cool and power from geothermal energy are lower than 100 gCO2e per 1 kWh of energy output from the combined generation.	Life-cycle GHG emissions are calculated based on project-specific data, where available, using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.
4.19	Cogeneration of heat/cool and power from renewable non-fossil	Construction and operation of combined heat/cool and power generation facilities using gaseous and liquid fuels of renewable origin. This activity does not include cogeneration of heat/cool and power from the exclusive use of biogas and bio-liquid fuels. 1. The life-cycle GHG emissions from the co-generation of heat/cool and power from renewable gaseous and liquid fuels are lower	Life-cycle GHG emissions are calculated based on project-specific data, where available, using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.

	gaseous and liquid fuels	than 100 gCO2e per 1 kWh of energy output from the co-generation.	2. Where facilities incorporate any form of abatement (including carbon capture or use of decarbonized fuels), that abatement activity complies with the relevant Sections of this Annex, where applicable. Where the CO2 that would otherwise be emitted from the cogeneration process is captured for the purpose of underground storage, the CO2 is transported and stored underground, in accordance with the technical screening criteria set out in Sections 5.11 and 5.12 of this Annex. 4. Where the activity blends renewable gaseous or liquid fuels with biogas or bioliquids, the agricultural biomass used for the production of the biogas or bioliquids complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001 while forest biomass complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.
4.20	Cogeneration of heat/cool and power from bioenergy	Construction and operation of installations used for cogeneration of heat/cool and power exclusively from biomass, biogas or bioliquids, and excluding cogeneration from blending of renewable fuels with biogas or bioliquids (see Section 4.19 of this Annex). 1. Agricultural biomass used in the activity complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive.	Where the cogeneration installations rely on anaerobic digestion of organic material, the production of the digestate meets the criteria in Sections 5.6 and criteria 1 and 2 of Section 5.7 of this Annex, as applicable. Points 1 and 2 do not apply to cogeneration installations with a total rated thermal input below 2 MW and using gaseous biomass fuels.
4.22	Production of heat/cool from geothermal energy	Construction or operation of facilities that produce heat/cool from geothermal energy. The life-cycle GHG emissions from the generation of heat/cool from geothermal energy are lower than 100 gCO2e/kWh.	Life-cycle GHG emissions are calculated based on project-specific data, where available, using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.
4.23	Production of heat/cool from renewable non-fossil gaseous and liquid fuels	Construction and operation of heat generation facilities that produce heat/cool using gaseous and liquid fuels of renewable origin. This activity does not include production of heat/cool from the exclusive use of biogas and bio-liquid fuels. 1. The life-cycle GHG emissions from the generation of heat/cool using renewable gaseous and liquid fuels are lower than 100 gCO2e/kWh.	Life-cycle GHG emissions are calculated based on project-specific data, where available, using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. 2. Where facilities incorporate any form of abatement (including carbon capture or use of decarbonized fuels), that abatement activity complies with the relevant Sections of this Annex, where applicable. Where the CO2 that would otherwise be emitted from the electricity generation process is captured for the purpose of underground storage, the CO2 is transported and stored underground, in accordance with the technical screening criteria set out in Sections 5.11 and 5.12 of this Annex. 4. Where the activity blends renewable gaseous or liquid fuels

			with biogas or bioliquids, the agricultural biomass used for the production of the biogas or bioliquids complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001 while forest biomass complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.
4.24	Production of heat/cool from bioenergy	1. Construction and operation of facilities that produce heat/cool exclusively from biomass, biogas or bioliquids, excluding production of heat/cool from blending of renewable fuels with biogas or bioliquids. Agricultural biomass used in the activity for the production of heat and cool complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive. 2. The greenhouse gas emission savings from the use of biomass are at least 80% in relation to the GHG emission saving methodology and relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001.	3. Where the installations rely on anaerobic digestion of organic material, the production of the digestate meets the criteria in Sections 5.6 and criteria 1 and 2 of Section 5.7 of this Annex, as applicable. Points 1 and 2 do not apply to heat generation installations with a total rated thermal input below 2 MW and using gaseous biomass fuels.
5.3	Construction, extension and operation of wastewater collection and treatment	Construction, extension and operation of centralized wastewater systems, including collection (sewer network) and treatment. 1. The net energy consumption of the wastewater treatment plant is equal to or lower than: (a) 35 kWh per population equivalent (p.e.) per annum for treatment plant capacity below 10,000 p.e.	2. For the construction and extension of a wastewater treatment plant or a wastewater treatment plant with a collection system, which are substituting more GHG-intensive treatment systems (such as septic tanks, anaerobic lagoons), an assessment of the direct GHG emissions is performed. The results are disclosed to investors and clients on demand.
5.3	Construction, extension and operation of wastewater collection and treatment	Construction, extension and operation of centralized wastewater systems, including collection (sewer network) and treatment. 1. The net energy consumption of the wastewater treatment plant is equal to or lower than: (b) 25 kWh per population equivalent (p.e.) per annum for treatment plant capacity between 10,000 and 100,000 p.e.	2. For the construction and extension of a wastewater treatment plant or a wastewater treatment plant with a collection system, which are substituting more GHG-intensive treatment systems (such as septic tanks, anaerobic lagoons), an assessment of the direct GHG emissions is performed. The results are disclosed to investors and clients on demand.
5.3	Construction, extension and operation of waste water collection and treatment	Construction, extension and operation of centralized wastewater systems, including collection (sewer network) and treatment. 1. The net energy consumption of the waste-water treatment plant is equal to or lower than: (c) 20 kWh per population equivalent (p.e.) per annum for treatment plant capacity above 100,000 p.e.	2. For the construction and extension of a wastewater treatment plant or a wastewater treatment plant with a collection system, which are substituting more GHG-intensive treatment systems (such as septic tanks, anaerobic lagoons), an assessment of the direct GHG emissions is performed. The results are disclosed to investors and clients on demand.
5.4	Renewal of wastewater collection and treatment	1. The renewal of a collection system that improves energy efficiency by decreasing the average energy consumption by 20% compared to own baseline performance averaged over three years, demonstrated on an annual basis. That decrease of energy consumption can be accounted for at the level of the project (i.e., the collection system renewal) or across the downstream wastewater agglomeration (i.e., including the downstream collection system, treatment plant or discharge of wastewater).	3. For the purposes of points 1 and 2, the net energy consumption of the system is calculated in kWh per population equivalent per annum of the wastewater collected or effluent treated, taking into account measures taken to decrease energy consumption related to source control (reduction of storm water or pollutant load inputs) and, as appropriate, energy generation within the system (such as hydraulic, solar, thermal and wind energy). For the purposes of points 1 and 2, the operator demonstrates that there are no material changes relating to external conditions,

			including modifications to discharge authorization(s) or changes in load to the agglomeration that would lead to a reduction of energy consumption, independent of efficiency measures taken.
5.4	Renewal of waste water collection and treatment	2. The renewal of a wastewater treatment plant that improves energy efficiency by decreasing the average energy consumption of the system by at least 20% compared to own baseline performance averaged over three years, demonstrated on an annual basis.	3. For the purposes of points 1 and 2, the net energy consumption of the system is calculated in kWh per population equivalent per annum of the wastewater collected or effluent treated, taking into account measures taken to decrease energy consumption related to source control (reduction of storm water or pollutant load inputs) and, as appropriate, energy generation within the system (such as hydraulic, solar, thermal and wind energy). 4. For the purposes of points 1 and 2, the operator demonstrates that there are no material changes relating to external conditions, including modifications to discharge authorization(s) or changes in load to the agglomeration that would lead to a reduction of energy consumption, independent of efficiency measures taken.
5.6	Anaerobic digestion of sewage sludge	Construction and operation of facilities for the treatment of sewage sludge by anaerobic digestion with the resulting production and utilization of biogas or chemicals. 1. A monitoring and contingency plan is in place in order to minimize methane leakage at the facility.	Construction and operation of facilities for the treatment of sewage sludge by anaerobic digestion with the resulting production and utilization of biogas or chemicals. 2. The produced biogas is used directly for the generation of electricity or heat, or upgraded to bio-methane for injection in the natural gas grid, or used as vehicle fuel or as feedstock in chemical industry.
5.7	Anaerobic digestion of bio-waste	1. Construction and operation of dedicated facilities for the treatment of separately collected bio-waste through anaerobic digestion with the resulting production and utilization of biogas and digestate and/or chemicals. 1. A monitoring and contingency plan is in place in order to minimize methane leakage at the facility. In the dedicated bio-waste treatment plants, the share of food and feed crops* used as input feedstock, measured in weight, as an annual average, is less than or equal to 10% of the input feedstock. (*As defined in Article 2, point (40), of Directive (EU) 2018/2001.)	2. The produced biogas is used directly for the generation of electricity or heat, or upgraded to bio-methane for injection in the natural gas grid, or used as vehicle fuel or as feedstock in chemical industry. 3. The bio-waste that is used for anaerobic digestion is source segregated and collected separately. 4. The produced digestate is used as fertilizer or soil improver, either directly or after composting or any other treatment.
5.8	Composting of bio-waste	Construction and operation of dedicated facilities for the treatment of separately collected bio-waste through composting (aerobic digestion) with the resulting production and utilization of compost. 1. The bio-waste that is composted is source-segregated and collected separately.	Construction and operation of dedicated facilities for the treatment of separately collected bio-waste through composting (aerobic digestion) with the resulting production and utilization of compost. 2. The compost produced is used as fertilizer or soil improver and meets the requirements for fertilizing materials set out in Component Material Category 3 in Annex II to Regulation (EU) 2019/1009 or national rules on fertilizers or soil improvers for agricultural use.
5.10	Landfill gas capture and utilization	Installation and operation of infrastructure for landfill gas capture and utilization in permanently closed landfills or landfill cells using new or supplementary dedicated technical facilities and	Installation and operation of infrastructure for landfill gas capture and utilization in permanently closed landfills or landfill cells using new or supplementary dedicated technical facilities and equipment installed during or post landfill or landfill cell closure.

		equipment installed during or post landfill or landfill cell closure. 1. The landfill has not been opened after 8 July 2020.	2. The landfill or landfill cell where the gas capture system is newly installed, extended, or retrofitted is permanently closed and is not taking in further biodegradable waste (As set out in Article 5(3) of Directive 1999/31/EC.) Installation and operation of infrastructure for landfill gas capture and utilization in permanently closed landfills or landfill cells using new or supplementary dedicated technical facilities and equipment installed during or post landfill or landfill cell closure. 3. The produced landfill gas is used for the generation of electricity or heat as biogas*, or upgraded to bio-methane for injection in the natural gas grid, or used as vehicle fuel or as feedstock in chemical industry. (*'Biogas' is defined in Article 2, point 28, of Directive (EU) 2018/2001.) Installation and operation of infrastructure for landfill gas capture and utilization in permanently closed landfills or landfill cells using new or supplementary dedicated technical facilities and equipment installed during or post landfill or landfill cell closure. 4. Methane emissions from the landfill and leakages from the landfill gas collection and utilization facilities are subject to control and monitoring procedures set out in Annex III to Council Directive 1999/31/EC.
5.11	Transport of CO2	Transport of captured CO2 via all modes. Construction and operation of CO2 pipelines and retrofit of gas networks where the main purpose is the integration of captured CO2. 1. The CO2 transported from the installation where it is captured to the injection point does not lead to CO2 leakages above 0.5% of the mass of CO2 transported.	Transport of captured CO2 via all modes. Construction and operation of CO2 pipelines and retrofit of gas networks where the main purpose is the integration of captured CO2. 2. The CO2 is delivered to a permanent CO2 storage site that meets the criteria for underground geological storage of CO2 set out in Section 5.12 of this Annex, or to other transport modalities, which lead to permanent CO2 storage site that meet those criteria. Transport of captured CO2 via all modes. Construction and operation of CO2 pipelines and retrofit of gas networks where the main purpose is the integration of captured CO2. 3. Appropriate leak detection systems are applied and a monitoring plan is in place, with the report verified by an independent third party. Transport of captured CO2 via all modes. Construction and operation of CO2 pipelines and retrofit of gas networks where the main purpose is the integration of captured CO2. 4. The activity may include the installation of assets that increase the flexibility and improve the management of an existing network.
5.12	Underground permanent geological storage of CO2	Permanent storage of captured CO2 in appropriate underground geological formations. 1. Characterization and assessment of the potential storage complex and surrounding area, or exploration within the meaning of Article 3, point (8), of Directive 2009/31/EC of the European Parliament and of the Council is carried out in	Permanent storage of captured CO2 in appropriate underground geological formations. 2. For operation of underground geological CO2 storage sites, including closure and post-closure obligations: (a) appropriate leakage detection systems are implemented to prevent release during operation. Permanent storage of captured CO2 in appropriate underground

		order to establish whether the geological formation is suitable for use as a CO2 storage site.	geological formations. 2. For operation of underground geological CO2 storage sites, including closure and post-closure obligations: (b) a monitoring plan of the injection facilities, the storage complex, and, where appropriate, the surrounding environment is in place, with the regular reports checked by the competent national authority. Permanent storage of captured CO2 in appropriate underground geological formations. 3. For the exploration and operation of storage sites within the Union, the activity complies with Directive 2009/31/EC. For the exploration and operation of storage sites in third countries, the activity complies with ISO 27914:2017 for geological storage of CO2.
6.2	Freight rail transport	Purchase, financing, leasing, rental and operation of freight transport on mainline rail networks as well as short line freight railroads. 1. The activity complies with one or both of the following criteria: (a) the trains and wagons have zero direct tailpipe CO2 emission.	Purchase, financing, leasing, rental and operation of freight transport on mainline rail networks as well as short line freight railroads. 2. The trains and wagons are not dedicated to the transport of fossil fuels.
6.2	Freight rail transport	Purchase, financing, leasing, rental and operation of freight transport on mainline rail networks as well as short line freight railroads. 1. The activity complies with one or both of the following criteria: (b) the trains and wagons have zero direct tailpipe CO2 emission when operated on a track with necessary infrastructure, and use a conventional engine where such infrastructure is not available (bimodal).	Purchase, financing, leasing, rental and operation of freight transport on mainline rail networks as well as short line freight railroads. 2. The trains and wagons are not dedicated to the transport of fossil fuels.
6.4	Operation of personal mobility devices, cycle logistics	Selling, purchasing, financing, leasing, renting and operation of personal mobility or transport devices where the propulsion comes from the physical activity of the user, from a zero-emissions motor, or a mix of zero-emissions motor and physical activity. This includes the provision of freight transport services by (cargo) bicycles. 1. The propulsion of personal mobility devices comes from the physical activity of the user, from a zero-emissions motor, or a mix of zero-emissions motor and physical activity.	2. The personal mobility devices are allowed to be operated on the same public infrastructure as bikes or pedestrians.
6.6	Freight transport services by road	Purchase, financing, leasing, rental and operation of vehicles designated as category N1, N2 or N3 falling under the scope of EURO VI, step E or its successor, for freight transport services by road. The activity complies with one of the following criteria: (a) vehicles of category N1 have zero direct (tailpipe) CO2 emissions.	Purchase, financing, leasing, rental and operation of vehicles designated as category N1, N2 or N3 falling under the scope of EURO VI, step E or its successor, for freight transport services by road. 2. Vehicles are not dedicated to the transport of fossil fuels.
6.6	Freight transport services by road	Purchase, financing, leasing, rental and operation of vehicles designated as category N1, N2 or N3 falling under the scope of EURO VI, step E or its successor, for freight transport services by road. 1. The activity complies with one of the following criteria: (b) vehicles of category N2 and N3 with a technically permissible maximum laden mass not exceeding 7.5 tonnes are "zero-	Purchase, financing, leasing, rental and operation of vehicles designated as category N1, N2 or N3 falling under the scope of EURO VI, step E or its successor, for freight transport services by road. 2. Vehicles are not dedicated to the transport of fossil fuels.

		emission heavy-duty vehicles" as defined in Article 3, point 11, of Regulation (EU) 2019/1242.	
6.6	Freight transport services by road	Purchase, financing, leasing, rental and operation of vehicles designated as category N1, N2 or N3 falling under the scope of EURO VI, step E or its successor, for freight transport services by road. 1. The activity complies with one of the following criteria: (c) vehicles of category N2 and N3 with a technically permissible maximum laden mass exceeding 7.5 tonnes are one of the following: (i) "zero-emission heavy-duty vehicles" as defined in Article 3, point (11), of Regulation (EU) 2019/1242.	Purchase, financing, leasing, rental and operation of vehicles designated as category N1, N2 or N3 falling under the scope of EURO VI, step E or its successor, for freight transport services by road. 2. Vehicles are not dedicated to the transport of fossil fuels.
6.6	Freight transport services by road	Purchase, financing, leasing, rental and operation of vehicles designated as category N1, N2 or N3 falling under the scope of EURO VI, step E or its successor, for freight transport services by road. 1. The activity complies with one of the following criteria: (c) vehicles of category N2 and N3 with a technically permissible maximum laden mass exceeding 7.5 tonnes are one of the following: (ii) where technologically and economically not feasible to comply with the criterion in point (i), "low-emission heavy-duty vehicles" as defined in Article 3, point (12), of that Regulation.	Purchase, financing, leasing, rental and operation of vehicles designated as category N1, N2 or N3 falling under the scope of EURO VI, step E or its successor, for freight transport services by road. 2. Vehicles are not dedicated to the transport of fossil fuels.
6.8	Inland freight water transport	Purchase, financing, leasing, rental and operation of freight vessels on inland waters, involving vessels that are not suitable for sea transport. 1. The activity complies with one or both of the following criteria: (a) the vessels have zero direct (tailpipe) CO2 emission.	Purchase, financing, leasing, rental and operation of freight vessels on inland waters, involving vessels that are not suitable for sea transport. 2. Vessels are not dedicated to the transport of fossil fuels.
6.8	Inland freight water transport	Purchase, financing, leasing, rental and operation of freight vessels on inland waters, involving vessels that are not suitable for sea transport. 1. The activity complies with one or both of the following criteria: (b) where technologically and economically not feasible to comply with the criterion in point (a) until December 31, 2025, the vessels have direct (tailpipe) emissions of CO2 per tonne kilometer (gCO2/tkm), calculated (or estimated in case of new vessels) using the Energy Efficiency Operational Indicator 245, 50% lower than the average reference value for emissions of CO2 defined for heavy duty vehicles (vehicle subgroup 5- LH) in accordance with Article 11 of Regulation 2019/1242.	Purchase, financing, leasing, rental and operation of freight vessels on inland waters, involving vessels that are not suitable for sea transport. 2. Vessels are not dedicated to the transport of fossil fuels.
6.9	Retrofitting of inland water passenger and freight transport	Retrofit and upgrade of vessels for transport of freight or passengers on inland waters, involving vessels that are not suitable for sea transport. 1. Until December 31, 2025, the retrofitting activity reduces fuel consumption of the vessel by at least 10% expressed in liter of fuel per tonne kilometer, as demonstrated by a comparative calculation for the representative navigation areas (including representative load profiles) in which the vessel is to operate or by means of the results of model tests or simulations.	Retrofit and upgrade of vessels for transport of freight or passengers on inland waters, involving vessels that are not suitable for sea transport. 2. Vessels retrofitted or upgraded are not dedicated to transport of fossil fuels.

6.10	Sea and coastal freight water transport, vessels for port operations and auxiliary activities	Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not. 1. The activity complies with one or more of the following criteria: (a) the vessels have zero direct (tailpipe) CO2 emissions.	Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not. 2. Vessels are not dedicated to the transport of fossil fuels.
6.10	Sea and coastal freight water transport, vessels for port operations and auxiliary activities	Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not. 1. The activity complies with one or more of the following criteria: (b) until December 31, 2025, hybrid and dual fuel vessels derive at least 25% of their energy from zero direct (tailpipe) CO2 emission fuels or plug-in power for their normal operation at sea and in ports.	Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not. 2. Vessels are not dedicated to the transport of fossil fuels.
6.10	Sea and coastal freight water transport, vessels for port operations and auxiliary activities	Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not. 1. The activity complies with one or more of the following criteria: (c) where technologically and economically not feasible to comply with the criterion in point (a) until December 31, 2025, and only where it can be proved that the vessels are used exclusively for operating coastal and short sea services designed to enable modal shift of freight currently transported by land to sea, and the vessels have direct (tailpipe) CO2 emissions, calculated using the International Maritime Organization (IMO) Energy Efficiency Design Index (EEDI), 50% lower than the average reference CO2 emissions value defined for heavy duty vehicles (vehicle sub group 5-LH) in accordance with Article 11 of Regulation 2019/1242.	Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not. 2. Vessels are not dedicated to the transport of fossil fuels.
6.10	Sea and coastal freight water transport, vessels for port operations and auxiliary activities	Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not. 1. The activity complies with one or more of the following criteria: (d) where technologically and economically not feasible to comply with the criterion in point (a) until December 31, 2025, the vessels have an attained Energy Efficiency Design Index (EEDI) value 10% below the EEDI requirements applicable on 1 April 2022 if the vessels are able to run on zero direct (tailpipe) CO2 emission fuels or on fuels from renewable sources.	Purchase, financing, chartering (with or without crew) and operation of vessels designed and equipped for transport of freight or for the combined transport of freight and passengers on sea or coastal waters, whether scheduled or not. 2. Vessels are not dedicated to the transport of fossil fuels.
6.12	Retrofitting of sea and	Retrofit and upgrade of vessels designed and equipped for the transport of freight or passengers on sea or coastal waters, and of	Retrofit and upgrade of vessels designed and equipped for the transport of freight or passengers on sea or coastal waters, and of

	coastal freight and passenger water transport	vessels required for port operations and auxiliary activities, such as tugboats, mooring vessels, pilot vessels, salvage vessels and ice-breakers. 1. Until December 31, 2025, the retrofitting activity reduces fuel consumption of the vessel by at least 10% expressed in grams of fuel per deadweight tons per nautical mile, as demonstrated by computational fluid dynamics (CFD), tank tests or similar engineering calculations.	vessels required for port operations and auxiliary activities, such as tugboats, mooring vessels, pilot vessels, salvage vessels and ice-breakers. 2. Vessels are not dedicated to the transport of fossil fuels.
6.14	Infrastructure for rail transport	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 1. The activity complies with one of the following criteria: (a) the infrastructure (as defined in Annex II.2 to Directive (EU) 2016/797 of the European Parliament and of the Council) is either: (i) electrified trackside infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signaling, and trackside control-command and signaling subsystems as defined in Annex II.2 to Directive (EU)2016/797.	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.14	Infrastructure for rail transport	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 1. The activity complies with one of the following criteria: (a) the infrastructure (as defined in Annex II.2 to Directive (EU) 2016/797 of the European Parliament and of the Council) is either: (ii) new and existing trackside infrastructure and associated subsystems where there is a plan for electrification as regards line tracks, and, to the extent necessary for electric train operations, as regards sidings, or where the infrastructure will be fit for use by zero tailpipe CO2 emission trains within 10 years from the beginning of the activity: infrastructure, energy, on-board control-command and signaling, and trackside control-command and signaling subsystems as defined in Annex II.2 to Directive (EU)2016/797.	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.14	Infrastructure for rail transport	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 1. The activity complies with one of the following criteria: (a) the infrastructure (as defined in Annex II.2 to Directive (EU) 2016/797 of the European Parliament and of the Council) is either: (iii) until 2030, existing trackside infrastructure and associated subsystems that are not part of the TEN-T network and its indicative extensions to third countries, nor any nationally, supranationally or internationally defined network of major rail lines: infrastructure, energy, on-board control-command and	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.

		signaling, and trackside control-command and signaling subsystems as defined in Annex II.2 to Directive (EU) 2016/797.	
6.14	Infrastructure for rail transport	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 1. The activity complies with one of the following criteria: (b) the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods.	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.14	Infrastructure for rail transport	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 1. The activity complies with one of the following criteria: (c) infrastructure and installations are dedicated to the transfer of passengers from rail to rail or from other modes to rail.	Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.15	Infrastructure enabling low-carbon road transport and public transport	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of zero-emissions road transport, as well as infrastructure dedicated to transshipment, and infrastructure required for operating urban transport. 1. The activity complies with one or more of the following criteria: (a) the infrastructure is dedicated to the operation of vehicles with zero tailpipe CO2 emissions: electric charging points, electricity grid connection upgrades, hydrogen fueling stations or electric road systems (ERS).	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of zero-emissions road transport, as well as infrastructure dedicated to transshipment, and infrastructure required for operating urban transport. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.15	Infrastructure enabling low-carbon road transport and public transport	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of zero-emissions road transport, as well as infrastructure dedicated to transshipment, and infrastructure required for operating urban transport. 1. The activity complies with one or more of the following criteria: (b) the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods.	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of zero-emissions road transport, as well as infrastructure dedicated to transshipment, and infrastructure required for operating urban transport. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.15	Infrastructure enabling low-carbon road transport and public transport	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of zero-emissions road transport, as well as infrastructure dedicated to transshipment, and infrastructure required for operating urban transport. 1. The activity complies with one or more of the following criteria: (c) the infrastructure and installations are dedicated to urban and suburban public passenger transport, including associated signaling systems for metro, tram and rail systems.	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of zero-emissions road transport, as well as infrastructure dedicated to transshipment, and infrastructure required for operating urban transport. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.

6.16	Infrastructure enabling low-carbon water transport	Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO2 operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment. 1. The activity complies with one or more of the following criteria: (a) the infrastructure is dedicated to the operation of vessels with zero direct (tailpipe) CO2 emissions: electricity charging, hydrogen-based refueling.	Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO2 operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.16	Infrastructure enabling low-carbon water transport	Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO2 operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment. 1. The activity complies with one or more of the following criteria: (b) the infrastructure is dedicated to the provision of shore-side electrical power to vessels at berth.	Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO2 operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.16	Infrastructure enabling low-carbon water transport	Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO2 operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment. 1. The activity complies with one or more of the following criteria: (c) the infrastructure is dedicated to the performance of the port's own operations with zero direct (tailpipe) CO2 emissions	Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO2 operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.16	Infrastructure enabling low-carbon water transport	Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO2 operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment. 1. The activity complies with one or more of the following criteria: (d) the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods.	Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO2 operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.17	Low-carbon airport infrastructure	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of aircraft or the airport's own operations, as well as for provision of fixed electrical ground power and preconditioned air to stationary aircraft. 1. The activity complies with one or more of the following criteria: (a) the infrastructure is dedicated to the operation of aircraft with zero tailpipe CO2 emissions: electricity charging and hydrogen refueling.	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of aircraft or the airport's own operations, as well as for provision of fixed electrical ground power and preconditioned air to stationary aircraft. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.17	Low-carbon airport infrastructure	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of aircraft or the airport's own operations, as well as for provision of fixed electrical ground power and preconditioned air to stationary aircraft. 1. The activity complies with one or more of the following criteria: (b) the infrastructure is dedicated to the provision of fixed electrical ground power and preconditioned air to stationary aircrafts.	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of aircraft or the airport's own operations, as well as for provision of fixed electrical ground power and preconditioned air to stationary aircraft. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.

6.17	Low-carbon airport infrastructure	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of aircraft or the airport's own operations, as well as for provision of fixed electrical ground power and preconditioned air to stationary aircraft. 1. The activity complies with one or more of the following criteria: (c) the infrastructure is dedicated to the zero direct emissions performance of the airport's own operations: electric charging points, electricity grid connection upgrades, hydrogen refueling stations.	Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of aircraft or the airport's own operations, as well as for provision of fixed electrical ground power and preconditioned air to stationary aircraft. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.
6.18	Leasing of aircraft	Renting and leasing of aircraft and aircraft parts and equipment. The activity consists of renting or leasing of one of the following: (c) the aircraft delivered after the date of the entry into application of this Regulation complying with the technical screening criteria and with the commitment that another non-compliant aircraft in the fleet is permanently withdrawn from use or fleet	with the commitment that another non-compliant aircraft in the fleet is either: (i) permanently withdrawn from use within 6 months of delivery of the compliant aircraft, in which case, the replacement ratio does not apply; or (ii) permanently withdrawn from the fleet within six months of delivery of the compliant aircraft in which case the share of Taxonomy compliance of eligible aircraft is limited by the replacement ratio
6.19	Passenger and freight air transport	Purchase, financing and operation of aircraft including transport of passengers and goods. The activity is performed using one of the following: (c) until 31 December 2029, the aircraft acquired after the date of entry into application of this Regulation, and complying with the technical screening criteria. With the commitment that another non-compliant aircraft in the fleet is either permanently withdrawn from use or fleet	with the commitment that another non-compliant aircraft in the fleet is either: (i) permanently withdrawn from use within 6 months of delivery of the compliant aircraft in which case, the replacement ratio does not apply; or (ii) permanently withdrawn from the fleet within 6 months of delivery of the compliant aircraft in which case, the share of Taxonomy compliance of eligible aircraft is limited by the replacement ratio
6.19	Passenger and freight air transport	Purchase, financing and operation of aircraft including transport of passengers and goods. The activity is performed using one of the following: (d) from 1 January 2030, the aircraft meeting technical screening criteria specified in points (b) or (c) above and operated with a minimum share of sustainable aviation fuels (SAF), corresponding to 15 % in 2030	minimum share of sustainable aviation fuels (SAF) increased by 2 percentage points annually after 2030
6.19	Passenger and freight air transport	Purchase, financing and operation of aircraft including transport of passengers and goods. The activity is performed using one of the following: (e) the aircraft operated with a minimum share of sustainable aviation fuels (SAF), corresponding to 5 % SAF in 2022	percentage of SAF increasing by 2 percentage points annually after 2022
7.1	Construction of new buildings	Development of building projects for residential and non-residential buildings by bringing together financial, technical and physical means to realize the building projects for later sale as well as the construction of complete residential or non-residential buildings, on own account for sale or on a fee or contract basis. Constructions of new buildings for which: 1. The Primary Energy Demand (PED), defining the energy performance of the building resulting from the construction, is at least 10% lower than the threshold set for the nearly zero-energy building (NZEB) requirements in national measures implementing	Development of building projects for residential and non-residential buildings by bringing together financial, technical and physical means to realize the building projects for later sale as well as the construction of complete residential or non-residential buildings, on own account for sale or on a fee or contract basis. Constructions of new buildings for which: 2. For buildings larger than 5000 m2, upon completion, the building resulting from the construction undergoes testing for air-tightness and thermal integrity, and any deviation in the levels of performance set at the design stage or defects in the building

		Directive 2010/31/EU of the European Parliament and of the Council. The energy performance is certified using an as built Energy Performance Certificate (EPC).	envelope are disclosed to investors and clients. Where robust and traceable quality control processes are in place during the construction process, this is acceptable as an alternative to thermal integrity testing. Development of building projects for residential and non-residential buildings by bringing together financial, technical and physical means to realize the building projects for later sale as well as the construction of complete residential or non-residential buildings, on own account for sale or on a fee or contract basis. Constructions of new buildings for which: 3. For buildings larger than 5000 m2, the life-cycle Global Warming Potential (GWP) of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand.
7.7	Acquisition and ownership of buildings	Buying real estate and exercising ownership of that real estate. 1. For buildings built before December 31, 2020, the building has at least an Energy Performance Certificate (EPC) class A.	Buying real estate and exercising ownership of that real estate. 3. Where the building is a large non-residential building (with an effective rated output for heating systems, systems for combined space heating and ventilation, air-conditioning systems or systems for combined air-conditioning and ventilation of over 290 kW) it is efficiently operated through energy performance monitoring and assessment.
7.7	Acquisition and ownership of buildings	Buying real estate and exercising ownership of that real estate. As an alternative, the building is within the top 15% of the national or regional building stock expressed as operational Primary Energy Demand (PED) and demonstrated by adequate evidence, which at least compares the performance of the relevant asset to the performance of the national or regional stock built before December 31, 2020, and at least distinguishes between residential and non-residential buildings.	Buying real estate and exercising ownership of that real estate. 3. Where the building is a large non-residential building (with an effective rated output for heating systems, systems for combined space heating and ventilation, air-conditioning systems or systems for combined air-conditioning and ventilation of over 290 kW) it is efficiently operated through energy performance monitoring and assessment.
7.7	Acquisition and ownership of buildings	Buying real estate and exercising ownership of that real estate. 2. For buildings built after 31 December 2020, the building meets the criteria specified in Section 7.1 of this Annex that are relevant at the time of the acquisition.	Buying real estate and exercising ownership of that real estate. 3. Where the building is a large non-residential building (with an effective rated output for heating systems, systems for combined space heating and ventilation, air-conditioning systems or systems for combined air-conditioning and ventilation of over 290 kW) it is efficiently operated through energy performance monitoring and assessment.
8.1	Data processing, hosting and related activities	The activity has implemented all relevant practices listed as “expected practices” in the most recent version of the European Code of Conduct on Data Centre Energy Efficiency, or in CEN-CENELEC document CLC TR50600-99-1 “Data centre facilities and infrastructures - Part 99-1: Recommended practices for energy management”. The global warming potential (GWP) of refrigerants used in the data center cooling system does not exceed 675.	The implementation of those practices is verified by an independent third-party and audited at least every three years. Where an expected practice is not considered relevant due to physical, logistical, planning or other constraints, an explanation of why the expected practice is not applicable or practical is provided. Alternative best practices from the European Code of Conduct on Data Centre Energy Efficiency or other equivalent

			sources may be identified as direct replacements if they result in similar energy savings.
8.2	Data-driven solutions for GHG emissions reductions	The ICT solutions are predominantly used for the provision of data and analytics enabling GHG emission reductions.	Where an alternative solution/technology is already available on the market, the ICT solution demonstrates substantial life-cycle GHG emission savings compared to the best performing alternative solution/technology. Life-cycle GHG emissions and net emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ETSI ES 203 199, ISO 14067:2018 or ISO 14064-2:2019. Quantified life-cycle GHG emission reductions are verified by an independent third party which transparently assesses how the standard criteria, including those for critical review, have been followed when the value was derived.

Appendix 2: Mapping Trucost business activity to EU Taxonomy activity

TC UID	TC sector list	Environmental Objective	NACE-based Business Activity in the EU Taxonomy V2 (Primary activity)	Secondary Mapped Taxonomy Activities (Concatenated)
113300	Logging	Climate Change Mitigation	Forest management	
113A00	Forest nurseries, forest products, and timber tracts	Climate Change Mitigation	Afforestation	Rehabilitation and restoration of forests, including reforestation and natural forest regeneration after an extreme event
115000	Support activities for agriculture and forestry	Climate Change Mitigation	Conservation forestry	
221111	Hydroelectric Power Generation	Climate Change Mitigation	Electricity generation from hydropower	
221119d	Wave & Tidal Power Generation	Climate Change Mitigation	Electricity generation from ocean energy technologies	
221119f	Landfill Gas Power Generation	Climate Change Mitigation	Electricity generation from renewable non-fossil gaseous and liquid fuels	Landfill gas capture and utilization
221119a	Solar Power Generation	Climate Change Mitigation	Electricity generation using solar photovoltaic technology	Electricity generation using concentrated solar power (CSP) technology; Cogeneration of heat/cool and power from solar energy
221119b	Wind Power Generation	Climate Change Mitigation	Electricity generation from wind power	
221119c	Geothermal Power Generation	Climate Change Mitigation	Electricity generation from geothermal energy	Cogeneration of heat/cool and power from geothermal energy

221119e	Biomass Power Generation	Climate Change Mitigation	Electricity generation from bioenergy	Cogeneration of heat/cool and power from bioenergy
221121	Electric Bulk Power Transmission and Control	Climate Change Mitigation	Transmission and distribution of electricity	
221222	Electric Power Distribution	Climate Change Mitigation	Transmission and distribution of electricity	
221300	Water, sewage and other systems	Climate Change Mitigation	Construction, extension and operation of wastewater collection and treatment	District heating/cooling distribution; Cogeneration of heat/cool and power from renewable non-fossil gaseous and liquid fuels; Production of heat/cool from solar thermal heating; Production of heat/cool from geothermal energy; Production of heat/cool from renewable non-fossil gaseous and liquid fuels; Production of heat/cool from bioenergy; Production of heat/cool using waste heat; Construction, extension and operation of water collection, treatment and supply systems; Renewal of water collection, treatment and supply systems; Renewal of wastewater collection and treatment; Anaerobic digestion of sewage sludge
230101	Nonresidential commercial and health care structures	Climate Change Mitigation	Construction of new buildings	
230102	Nonresidential manufacturing structures	Climate Change Mitigation	Construction of new buildings	

230103	Other nonresidential structures	Climate Change Mitigation	Low-carbon airport infrastructure	Infrastructure for rail transport; Infrastructure enabling low-carbon road transport and public transport; Infrastructure enabling low-carbon water transport; Infrastructure enabling road transport and public transport; Infrastructure for water transport; Airport infrastructure
230201	Residential permanent site single- and multi-family structures	Climate Change Mitigation	Construction of new buildings	
230202	Other residential structures	Climate Change Mitigation	Construction of new buildings	
230301	Nonresidential maintenance and repair	Climate Change Mitigation	Renovation of existing buildings	
230302	Residential maintenance and repair	Climate Change Mitigation	Renovation of existing buildings	
321219	Reconstituted wood product manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
32121B	Engineered wood member and truss manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	

321910	Wood windows and doors and millwork	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
321992	Prefabricated wood building manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
321999	All other miscellaneous wood product manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
33712A	Metal and other household furniture manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
324122	Asphalt shingle and coating materials manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
325110	Petrochemical manufacturing	Climate Change Mitigation	Manufacture of organic basic chemicals	
325120	Industrial gas manufacturing	Climate Change Mitigation	Manufacture of hydrogen	
325181	Alkalies and chlorine manufacturing	Climate Change Mitigation	Manufacture of chlorine	
325182	Carbon black manufacturing	Climate Change Mitigation	Manufacture of carbon black	
325188	All other basic inorganic chemical manufacturing	Climate Change Mitigation	Manufacture of soda ash	

325190	Other basic organic chemical manufacturing	Climate Change Mitigation	Manufacture of organic basic chemicals	Manufacture of biogas and biofuels for use in transport and of bioliquids
325211	Plastics material and resin manufacturing	Climate Change Mitigation	Manufacture of plastics in primary form	
325212	Synthetic rubber manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
325310	Fertilizer manufacturing	Climate Change Mitigation	Manufacture of anhydrous ammonia	
3259A0	All other chemical product and preparation manufacturing	Climate Change Mitigation	Manufacture of nitric acid	
326110	Plastics packaging materials and unlaminated film and sheet manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
326122	Plastics pipe and pipe fitting manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
326130	Laminated plastics plate, sheet (except packaging), and shape manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
326140	Polystyrene foam product manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	

326150	Urethane and other foam product (except polystyrene) manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
326160	Plastics bottle manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
32619A	Other plastics product manufacturing	Climate Change Mitigation	Manufacture of plastics in primary form	
326290	Other rubber product manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
336612	Boat building	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
326210	Tire manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
326220	Rubber and plastics hoses and belting manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
32712A	Brick, tile, and other structural clay product manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
32712B	Clay and nonclay refractory manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
327211	Flat glass manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
327310	Cement manufacturing	Climate Change Mitigation	Manufacture of cement	

327320	Ready-mix concrete manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
327330	Concrete pipe, brick, and block manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
327390	Other concrete product manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
331110	Iron and steel mills and ferroalloy manufacturing	Climate Change Mitigation	Manufacture of iron and steel	
331200	Steel product manufacturing from purchased steel	Climate Change Mitigation	Manufacture of other low-carbon technologies	
331314	Secondary smelting and alloying of aluminum	Climate Change Mitigation	Manufacture of aluminum	
33131A	Alumina refining and primary aluminum production	Climate Change Mitigation	Manufacture of aluminum	
33131B	Aluminum product manufacturing from purchased aluminum	Climate Change Mitigation	Manufacture of other low-carbon technologies	
331420	Copper rolling, drawing, extruding and alloying	Climate Change Mitigation	Manufacture of other low-carbon technologies	

331490	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding and alloying	Climate Change Mitigation	Manufacture of other low-carbon technologies	
331510	Ferrous metal foundries	Climate Change Mitigation	Manufacture of iron and steel	
332114	Custom roll forming	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33211A	All other forging, stamping, and sintering	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33211B	Crown and closure manufacturing and metal stamping	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33221B	Handtool manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
332310	Plate work and fabricated structural product manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
332320	Ornamental and architectural metal products manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
332410	Power boiler and heat exchanger manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	
332420	Metal tank (heavy gauge) manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	

332430	Metal can, box, and other metal container (light gauge) manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
332600	Spring and wire product manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
332720	Turned product and screw, nut, and bolt manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33291A	Valve and fittings other than plumbing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
332991	Ball and roller bearing manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
332996	Fabricated pipe and pipe fitting manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33299C	Other fabricated metal manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
333111	Farm machinery and equipment manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
333220	Plastics and rubber industry machinery manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33329A	Other industrial machinery manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	

333415	Air conditioning, refrigeration, and warm air heating equipment manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
33399A	Other general purpose machinery manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	
33411A	Computer terminals and other computer peripheral equipment manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
333319	Other commercial and service industry machinery manufacturing	Climate Change Mitigation	Manufacture of equipment for the production and use of hydrogen	
33331A	Vending, commercial, industrial, and office machinery manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33351B	Rolling mill and other metalworking machinery manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
333611	Turbine and turbine generator set units manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	

333612	Speed changer, industrial high-speed drive, and gear manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	
333613	Mechanical power transmission equipment manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	
333618	Other engine equipment manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
333911	Pump and pumping equipment manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
333912	Air and gas compressor manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
333920	Material handling equipment manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
333991	Power-driven handtool manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
333993	Packaging machinery manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33399B	Fluid power process machinery	Climate Change Mitigation	Manufacture of renewable energy technologies	
334111	Electronic computer manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	

334112	Computer storage device manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
334419	Other electronic component manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
334413	Semiconductor and related device manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	
334417	Electronic connector manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
334418	Printed circuit assembly (electronic assembly) manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
33441A	Electronic capacitor, resistor, coil, transformer, and other inductor manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
334512	Automatic environmental control manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
334513	Industrial process variable instruments manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	

33461A	Software, audio, and video media reproducing	Climate Change Adaptation	Motion picture, video and television program production, sound recording and music publishing activities	
335110	Electric lamp bulb and part manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
335120	Lighting fixture manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
335210	Small electrical appliance manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
335221	Household cooking appliance manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
335222	Household refrigerator and home freezer manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
335224	Household laundry equipment manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
335228	Other major household appliance manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
335311	Power, distribution, and specialty transformer manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	
335312	Motor and generator manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	

335313	Switchgear and switchboard apparatus manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
335314	Relay and industrial control manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
335911	Storage battery manufacturing	Climate Change Mitigation	Manufacture of batteries	
335912	Primary battery manufacturing	Climate Change Mitigation	Manufacture of batteries	
335920	Communication and energy wire and cable manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
335930	Wiring device manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
335991	Carbon and graphite product manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
335999	All other miscellaneous electrical equipment and component manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	
336111	Automobile manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	

336112	Light truck and utility vehicle manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336120	Heavy duty truck manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336211	Motor vehicle body manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336212	Truck trailer manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336213	Motor home manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336214	Travel trailer and camper manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336300	Motor vehicle parts manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336412	Aircraft engine and engine parts manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
336413	Other aircraft parts and auxiliary equipment manufacturing	Climate Change Mitigation	Manufacture of other low-carbon technologies	
336500	Railroad rolling stock manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336611	Ship building and repairing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
336991	Motorcycle, bicycle, and parts manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	

336999	All other transportation equipment manufacturing	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
337920	Blind and shade manufacturing	Climate Change Mitigation	Manufacture of energy efficiency equipment for buildings	
33999A	All other miscellaneous manufacturing	Climate Change Mitigation	Manufacture of renewable energy technologies	
482000a	Rail transportation (Electric)	Climate Change Mitigation	Passenger interurban rail transport	Freight rail transport
482000b	Rail transportation (Diesel)	Climate Change Mitigation	Passenger interurban rail transport	
483000	Water transportation	Climate Change Mitigation	Inland passenger water transport	Inland freight water transport; Sea and coastal freight water transport, vessels for port operations and auxiliary activities; Sea and coastal passenger water transport
484000	Truck transportation	Climate Change Mitigation	Freight transport services by road	
485000	Transit and ground passenger transportation	Climate Change Mitigation	Urban and suburban transport, road passenger transport	Transport by motorbikes, passenger cars and light commercial vehicles

486000	Pipeline transportation	Climate Change Mitigation	Transmission and distribution networks for renewable and low-carbon gases	Transport of CO2
48A000	Support activities for transportation	Climate Change Mitigation	Operation of personal mobility devices, cycle logistics	Infrastructure for personal mobility, cycle logistics; Retrofitting of inland water passenger and freight transport; Retrofitting of sea and coastal freight and passenger water transport
512100	Motion picture and video industries	Climate Change Adaptation	Motion picture, video and television program production, sound recording and music publishing activities	
512200	Sound recording industries	Climate Change Adaptation	Motion picture, video and television program production, sound recording and music publishing activities	
515100	Radio and television broadcasting	Climate Change Adaptation	Programming and broadcasting activities	
515200	Cable and other subscription programming	Climate Change Adaptation	Programming and broadcasting activities	
516110	Internet publishing and broadcasting	Climate Change Adaptation	Programming and broadcasting activities	
517000	Telecommunications	Climate Change Mitigation	Data-driven solutions for GHG emissions reductions	
518100	Internet service providers and web search portals	Climate Change Mitigation	Data processing, hosting and related activities	
518200	Data processing, hosting, and related services	Climate Change Mitigation	Data processing, hosting and related activities	

519100	Other information services	Climate Change Mitigation	Data processing, hosting and related activities	
524100	Insurance carriers	Climate Change Adaptation	Non-life insurance: underwriting of climate-related perils	Reinsurance
524200	Insurance agencies, brokerages, and related activities	Climate Change Adaptation	Non-life insurance: underwriting of climate-related perils	
531000	Real estate	Climate Change Mitigation	Acquisition and ownership of buildings	
541300	Architectural, engineering, and related services	Climate Change Mitigation	Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings; Installation, maintenance and repair of renewable energy technologies; Professional services related to energy performance of buildings
541511	Custom computer programming services	Climate Change Adaptation	Computer programming, consultancy and related activities	
541512	Computer systems design services	Climate Change Mitigation	Data-driven solutions for GHG emissions reductions	
5416A0	Environmental and other technical consulting services	Climate Change Adaptation	Engineering activities and related technical consultancy dedicated to adaptation to climate change	
541700	Scientific research and development services	Climate Change Mitigation	Close to market research, development and innovation	Research, development and innovation for direct air capture of CO2
562000	Waste management and	Climate Change Mitigation	Collection and transport of non-hazardous waste in source segregated fractions	Anaerobic digestion of bio-waste; Composting of bio-waste; Material recovery from non-

	remediation services			hazardous waste; Underground permanent geological storage of CO2
611100	Elementary and secondary schools	Climate Change Adaptation	Education	
611A00	Junior colleges, colleges, universities, and professional schools	Climate Change Adaptation	Education	
611B00	Other educational services	Climate Change Adaptation	Education	
623000	Nursing and residential care facilities	Climate Change Adaptation	Residential care activities	
711100	Performing arts companies	Climate Change Adaptation	Creative, arts and entertainment activities	
711500	Independent artists, writers, and performers	Climate Change Adaptation	Creative, arts and entertainment activities	
711A00	Promoters of performing arts and sports and agents for public figures	Climate Change Adaptation	Creative, arts and entertainment activities	
712000	Museums, historical sites, zoos, and parks	Climate Change Adaptation	Libraries, archives, museums and cultural activities	
713B00	Other amusement and recreation industries	Climate Change Adaptation	Creative, arts and entertainment activities	
8111A0	Automotive repair and maintenance, except car washes	Climate Change Mitigation	Manufacture of low-carbon technologies for transport	
811300	Commercial and industrial machinery and	Climate Change Mitigation	Installation, maintenance and repair of energy efficiency equipment	Installation and operation of electric heat pumps

	equipment repair and maintenance			
221113	Nuclear Electric Power Generation	Electricity generation from nuclear energy in existing installations	Pre-commercial stages of advanced technologies to produce energy from nuclear processes with minimal waste from the fuel cycle; Construction and safe operation of new nuclear power plants, for the generation of electricity or heat, including for hydrogen production, using best-available technologies	
221122B	Natural Gas Power Generation	Electricity generation from fossil gaseous fuels	High-efficiency co-generation of heat/cool and power from fossil gaseous fuels; Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	
336411	Aircraft manufacturing	Climate Change Mitigation	Manufacturing of aircraft	
532100	Automotive equipment rental and leasing	Climate Change Mitigation	Leasing of aircraft	
481000	Air transportation	Climate Change Mitigation	Passenger and freight air transport	Air transport ground handling operations
624200	Community food, housing, and other relief services, including rehabilitation services	Climate Change Adaptation	Emergency Services	
332913	Plumbing fixture fitting and trim manufacturing	Water and Marine Resources	Manufacture, installation and associated services for leakage control technologies enabling leakage	

			reduction and prevention in water supply systems	
32222A	Coated and laminated paper, packaging paper and plastics film manufacturing	Circular Economy	Manufacture of plastic packaging goods	
541610	Management, scientific, and technical consulting services	Circular Economy	Provision of IT/OT data-driven solutions	
811200	Electronic and precision equipment repair and maintenance	Circular Economy	Repair, refurbishment and remanufacturing	
811400	Personal and household goods repair and maintenance	Circular Economy	Repair, refurbishment and remanufacturing	
423800a	Motor Vehicle and Machinery, Equipment, and Supplies Wholesalers	Circular Economy	Sale of spare parts	
332710	Machine shops	Circular Economy	Sale of spare parts	
325412	Pharmaceutical preparation manufacturing	Pollution Prevention and Control	Manufacture of active pharmaceutical ingredients (API) or active substances	
325411	Medicinal and botanical manufacturing	Pollution Prevention and Control	Manufacture of medicinal products	
7211A0	Hotels and motels, including casino hotels	Biodiversity and ecosystems	Hotels, holiday, camping grounds and similar accommodation	

Appendix 3: Data sources used for Substantial Contribution (SC) Assessment

EUT Activities	Data sources used	Assessment logic
Manufacture of cement	Trucost Paris alignment and TAC	Priority is given to Paris alignment data that analyzes an activity based on emission intensity for manufacturing cement. If this data is not available, then TAC scores are used for assessment.
Manufacture of iron and steel	Trucost Paris alignment and TAC	Priority is given to Paris alignment data that analyzes an activity based on emission intensity for manufacturing Iron and Steel. If this data is not available, then TAC scores are used for assessment. For Iron and steel manufacturing the EUT SC emission threshold values were broken down to individual stages. However, Paris alignment data was available only for the whole process. Hence, the stage level emission threshold values provided by EUT were summed to arrive at the emission intensity threshold for the entire manufacturing process and this was used for assessment.
Manufacture of aluminum	Trucost Sector Revenue; Paris alignment data and TAC	Priority is given to Trucost sector revenue for assessment. Activities covered under the TC sector "Secondary smelting and alloying of aluminum" is considered to be substantially contributing, as the SC criteria considers manufacture of secondary aluminum as met. If the activity manufactures primary aluminum, then Paris alignment dataset is used for assessment. When both these Trucost data are not available, TAC is used for assessment.
Electricity generation using solar photovoltaic technology	Trucost Sector Revenue	Activity is considered to be substantially contributing due to the renewable energy sector it belongs to. There are no specific emission thresholds to be met and it is sufficient if the activity belongs to this sector.
Electricity generation from wind power	Trucost Sector Revenue	Activity is considered to be substantially contributing due to the renewable energy sector it belongs to. There are no specific emission thresholds to be met and it is sufficient if the activity belongs to this sector.
Electricity generation from ocean energy technologies	Trucost Sector Revenue	Activity is considered to be substantially contributing due to the renewable energy sector it belongs to. There are no specific emission thresholds to be met and it is sufficient if the activity belongs to this sector.
Electricity generation from bioenergy	MI power plant and TAC	Priority is given to MI power plant database and in the absence of this, TAC is used for assessing the activity.
Electricity generation from nuclear energy in existing installations	MI power plant	Considering the importance given to Euratom treaty and the project being located in a member state, a sub-criterion was dedicated to assessing the location of the nuclear plant. The Market Intelligence power plant dataset was used to shortlist nuclear plants located in EU member states and identify companies associated with them. The data on revenue generated by a company from nuclear energy was available only at sector level and not at project level. Given this limitation, aggregated assessment was conducted for companies to verify whether all their associated nuclear plants were located within EU member states. Only if they meet this condition, they will qualify the sub-criteria around plant location. If the company in nuclear sector is associated

		with even one nuclear plant outside the member states, it will be disqualified. It is important to note that sub-criteria around plant location is only one of the many criteria required to qualify the substantial contribution assessment. Irrespective of whether a company passes the sub-criteria around plant location or not, it will not be assessed by S&P Global to meet the overall substantial contribution assessment due to lack of data on remaining criteria.
Manufacture of low-carbon technologies for transport	Trucost Paris alignment and CIQ topic tags	Priority is given to Paris alignment data that provides emissions per vehicle kilometer. If Paris alignment data is not available for the activity, the assessment is done based on the topic tag "electric vehicle". This topic tag was utilized since SC criteria focuses on zero tail pipe emission.
Manufacture of energy efficiency equipment for buildings	CIQ topic tags	Analysis uses the topic tag "Smart building" for assessment. This topic tag was utilized since SC criteria refers to smart monitoring and regulating of heating system, and sensing equipment.
Transmission and distribution of electricity	TAC	TAC value of 100% used for assessment
Electricity generation from hydropower	TAC	TAC value of 100% used for assessment
Passenger interurban rail transport	TAC	TAC value of 100% used for assessment
Electricity generation from geothermal energy	TAC	TAC value of 100% used for assessment
Construction of new buildings	TAC	TAC value of 60% used for assessment
Urban and suburban transport, road passenger transport	TAC	TAC value of 50% used for assessment
Renovation of existing buildings	TAC	TAC value of 40% used for assessment
Acquisition and ownership of buildings	TAC	TAC value of 15% used for assessment
Manufacture of aluminum	TAC	TAC value of 3% used for assessment
Manufacture of cement	TAC	TAC value of 3% used for assessment
Manufacture of iron and steel	TAC	TAC value of 3% used for assessment

S&P Global Sustainable1 Disclaimer

This content (including any information, data, analyses, opinions, ratings, scores, and other statements) ("Content") has been prepared solely for information purposes and is owned by or licensed to S&P Global and/or its affiliates (collectively, "S&P Global").

This Content may not be modified, reverse engineered, reproduced or distributed in any form by any means without the prior written permission of S&P Global.

You acquire absolutely no rights or licenses in or to this Content and any related text, graphics, photographs, trademarks, logos, sounds, music, audio, video, artwork, computer code, information, data and material therein, other than the limited right to utilize this Content for your own personal, internal, non-commercial purposes or as further provided herein.

Any unauthorized use, facilitation or encouragement of a third party's unauthorized use (including without limitation copy, distribution, transmission, modification, use as part of generative artificial intelligence or for training any artificial intelligence models) of this Content or any related information is not permitted without S&P Global's prior consent and shall be deemed an infringement, violation, breach or contravention of the rights of S&P Global or any applicable third-party (including any copyright, trademark, patent, rights of privacy or publicity or any other proprietary rights).

This Content and related materials are developed solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. S&P Global gives no representations or warranties regarding the use of this Content and/or its fitness for a particular purpose and references to a particular investment or security, a score, rating or any observation concerning an investment or security that is part of this Content is not a recommendation to buy, sell or hold such investment or security, does not address the suitability of an investment or security and should not be relied on as investment advice.

S&P Global shall have no liability, duty or obligation for or in connection with this Content, any other related information (including for any errors, inaccuracies, omissions or delays in the data) and/or any actions taken in reliance thereon. In no event shall S&P Global be liable for any special, incidental, or consequential damages, arising out of the use of this Content and/or any related information.

The S&P and S&P Global logos are trademarks of S&P Global registered in many jurisdictions worldwide. You shall not use any of S&P Global's trademarks, trade names or service marks in any manner, and in no event in a manner accessible by or available to any third party. You acknowledge that you have no ownership or license rights in or to any of these names or marks.

Adherence to S&P's Internal Polices

S&P Global adopts policies and procedures to maintain the confidentiality of non-public information received in connection with its analytical processes. As a result, S&P Global employees are required to process non-public information in accordance with the technical and organizational measures referenced in the internal S&P Global Information Security and Acceptable Use policies and related guidelines.

Conflicts of Interest

S&P Global is committed to providing transparency to the market through high-quality independent opinions. Safeguarding the quality, independence and integrity of Content is embedded in its culture and at the core of everything S&P Global does. Accordingly, S&P Global has developed measures to identify, eliminate and/or minimize potential conflicts of interest for Sustainable1 as an organization and for individual employees. Such measures include, without limitation, establishing a clear separation between the activities and interactions of its analytical teams and non-analytical teams; email surveillance by compliance teams; and policy role designations. In addition, S&P Global employees are subject to mandatory annual training and attestations and must adhere to the Sustainable1 Independence and Objectivity Policy, the Sustainable1 Code of Conduct, the S&P Global Code of Business Ethics and any other related policies.

See additional Disclaimers at https://www.spglobal.com/en/terms-of-use