MSCI Sustainable Impact Metrics

Methodology

MSCI ESG Research

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MSCI Sustainable Impact Metrics overview

Objective

MSCI Sustainable Impact Metrics is designed to identify companies that generate revenues from products or services with positive impact on the environment or society, which are identified in the MSCI Sustainable Impact Metric taxonomy. The metrics are based on disclosed activities, disclosed revenue and estimates of revenue that are extrapolated from company disclosures and eligible sources (such as NGOs).

MSCI ESG Research LLC is committed to research that is independent, transparent, and objective.

- **Independent:** Research that is free of external influence or conflicts of interest.
- **Transparent:** Research based on clearly defined methodologies, using traceable, and publicly available data.
- **Objective:** Research that is based on rules, standards and definitions that are consistently applied.

Coverage universe

MSCI Sustainable Impact Metrics aims to cover companies in certain corporate equity and fixed income indexes such as MSCI ACWI Investable Market Index (IMI).[1]

1. Methodology

Methodology summary and data structure

MSCI ESG Research has identified specific categories of products and services that companies can offer as potential solutions to environmental and social challenges. This taxonomy of impact solutions draws from MSCI ESG Research's sector expertise, as well as global taxonomies, client feedback, and discussions with stakeholders including academics, consultants, and civil society through MSCI ESG Research's Thought Leaders Council.[2]

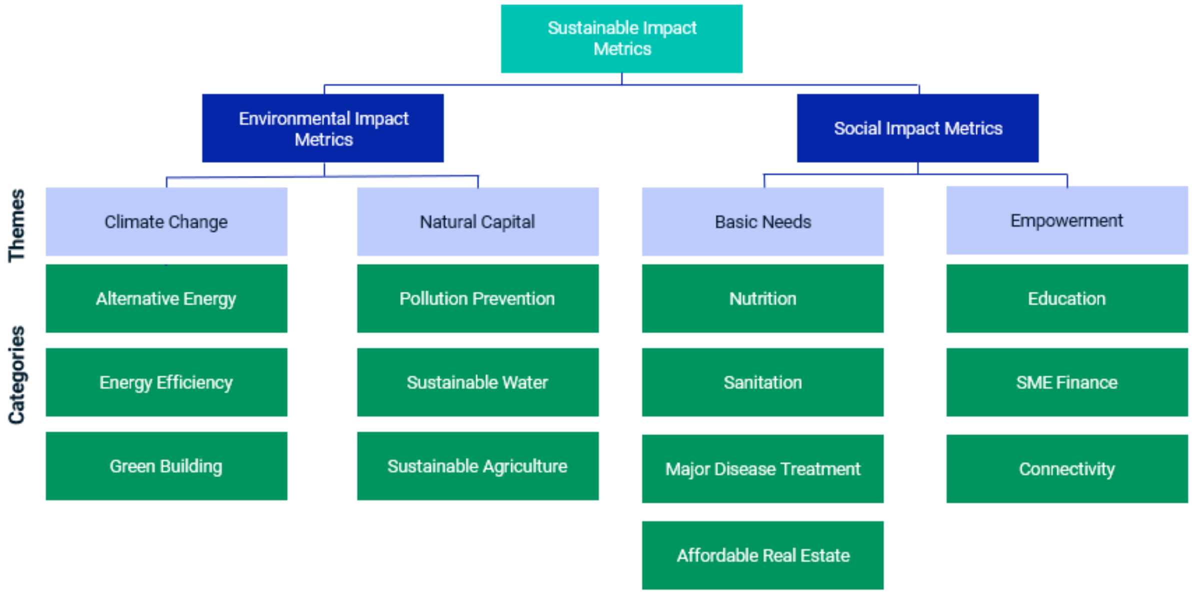
The MSCI Sustainable Impact Metrics framework could be leveraged to assess the extent companies' products and services address at least one of the major social and environmental challenges, as defined, for example, by the UN Sustainable Development Goals (UN SDGs). The MSCI Sustainable Impact Metrics framework may be used for assessing alignment with other recognized frameworks, such as the EU Taxonomy for Sustainable Activities.

The Sustainable Impact Metrics are comprised of six environmental impact categories and seven Social Impact categories arranged and aggregated by theme.

[1] See MSCI ESG Product Coverage document available on MSCI Support Site for more information.

[2] ESG Thought Leadership Council: Impact Investing. July 2015. MSCI ESG Research.

Exhibit 1: MSCI Sustainable Impact Metric taxonomy



Source: MSCI ESG Research, as of February 2024.

The taxonomy structure above also demonstrates how data is aggregated. For example:

- A company's percentage of revenue from **Sustainable Impact Metrics** is the aggregate of the percentage of revenue from Environmental Impact Solutions and Social Impact Solutions.
- The percentage of revenue from **environmental impact solutions** is the aggregate of the percentage of revenue from climate change and natural capital.
- The percentage of revenue from **climate change** is the aggregate of the percentage of revenue from alternative energy, energy efficiency, and green building, and so forth.

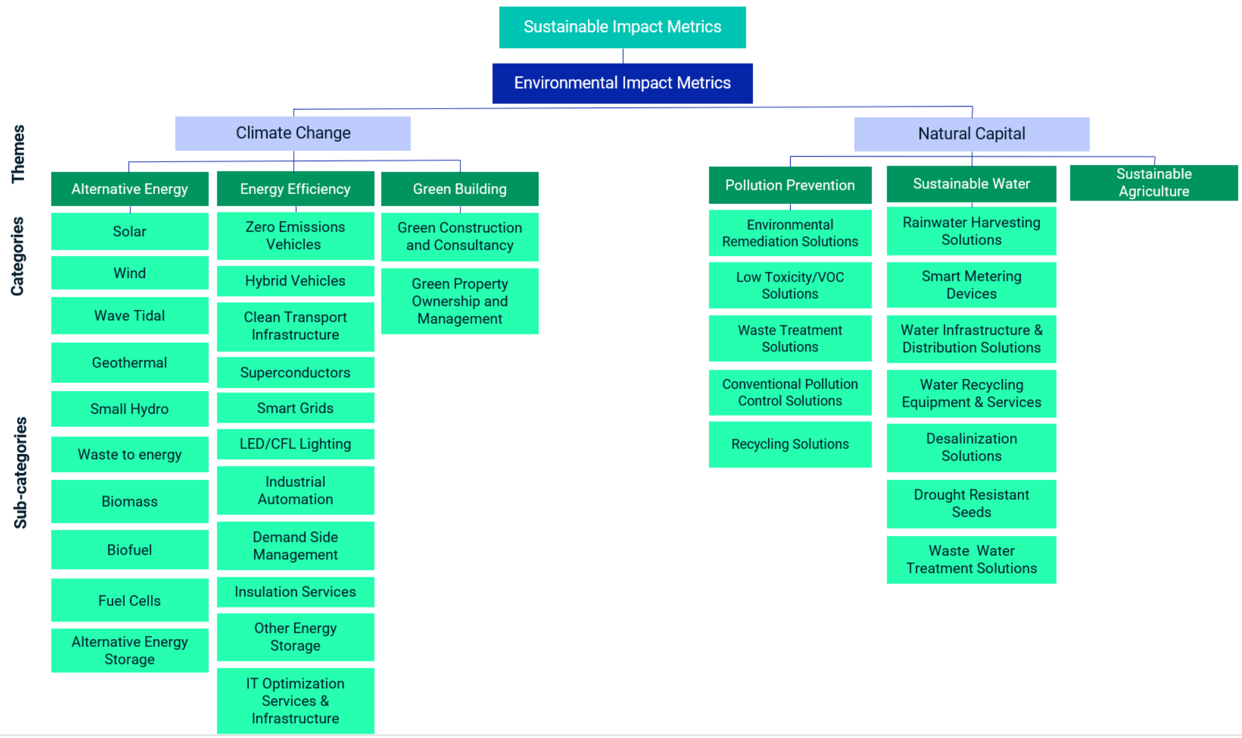
Environmental impact metrics summary

Environmental impact metrics are designed to identify companies that derive revenue from products or services with positive impact on the environment. Eligible revenue-generating activities have or result in one or more of the following attributes:

- **Improve** positive environmental outcomes.
- **Reduce** adverse environmental impact.
- **Support** the achievement of UN Sustainable Development Goals specific to environmental matters.
- Technologies that **enable** the above to occur.

Beyond impact categories, the environmental impact metrics are further granularized into sub-categories.

Exhibit 2: Granularization of environmental impact metrics

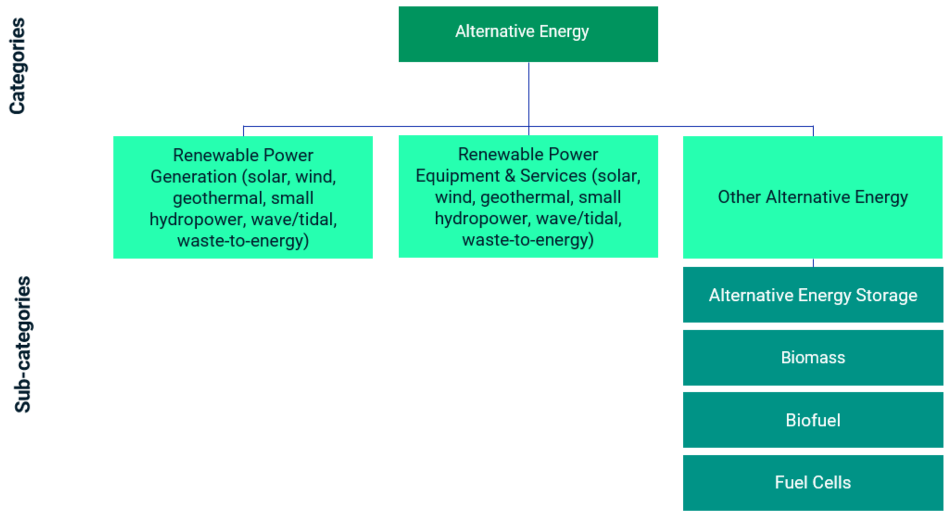


Source: MSCI Research, as of February 2024.

Each environmental impact sub-category is explained in further detail in section 3: Details for environmental impact metrics.

To provider user flexibility, the alternative energy category can also be aggregated by isolating power generation from renewable sources, the associated equipment and services supporting renewable energy sources, and all other alternative energy activities, as shown in Exhibit 3. The alternate calculation for alternative energy would result in the same percentage of revenue regardless of which aggregation is applied.

Exhibit 3: Alternative aggregation for the alternative energy category



Source: MSCI Research, as of February 2024.

Social impact metrics summary

Social impact metrics are designed to identify companies that derive revenue from products or services with a positive impact on society.

MSCI ESG Research applies a general approach to eligibility as underscored by the Universal Declaration of Human Rights (UDHR). The articles in the UDHR, particularly Article 25 and 26, specify the universal right of all people to food, education, and an adequate standard of living.[3] However some eligible products and services are considered only when they address the needs of underserved demographics (such as affordable real estate and connectivity).

Eligible revenue-generating activities have or result in one or more of the following attributes::

- **Improve** positive social outcomes.
- **Reduce** adverse social impacts.
- **Promote** accessibility or affordability of products.
- **Support** the achievement of UN Sustainable Development Goals specific to social matters.
- **Enable** positive impact on society.

The data is aggregated based on the structure shown in Exhibit 1 and there is no further granularization of the social impact metrics.

Each category is explained in further detail in section 4: Details for social impact metrics.

[3] United Nations. Universal Declaration of Human Rights. 1948.

Revenue data and estimation

Data output

The MSCI Sustainable Impact Metrics data is provided in the maximum percentage of revenue, meaning an output of 40.30 means 40.30% of total revenue. Maximum percentage of revenue refers to the company's reported revenue (or, where not disclosed, maximum estimated revenue) from the product or service as a percentage of total revenue in its most recently reported fiscal year.

There is a revenue value for all researched companies in MSCI ESG Research's coverage universe. A revenue of zero means we found no evidence of involvement in eligible products or services. Companies with blank values are either still in the research queue or outside the coverage universe.

Revenue ranges

Regardless of whether the revenue is reported by the company or estimated by MSCI ESG Research, MSCI ESG Research uses ranges to categorize the company's involvement in the two pillars (environmental and social impact) using three revenue ranges:

- 1 to 19.99%
- 20 to 49.99%
- 50 to 100%

If the revenue is <1%, the revenue range field is left blank.

Gross, net, and negative revenue

Gross revenue is used for revenue data when it is available, net revenue is used as an alternative.

- **Gross revenue**: total sales or income earned by the company, before deducting any expenses.
- **Net revenue**: the gross sales or revenue of a company less adjustments, such as refunds or returns.

If the disclosed total revenue of a company is zero or negative, then a value of 0.00% is attributed to Sustainable Impact Metrics reflecting a non-involvement in revenue generating activities.

Revenue figures are based on the most recently reported data. Fiscal years may not be aligned for global companies within the same industry.

Revenue estimation

When a company does not directly disclose revenue from each product and service eligible for the MSCI Sustainable Impact Metrics taxonomy, or when corporate disclosures do not align with our activity definitions, MSCI ESG Research estimates the maximum percentage of total revenue from relevant solutions.

The way in which revenue is estimated depends on what disclosures are available about the company's involvement. The following methods would be used based on available disclosures, listed in order of priority:

1. Revenue is **disclosed by the company**.

2. Revenue is **estimated using proportional unit, product or service split**.
    - When revenue is available for a business segment with details on the product mix and units of products sold within a business segment, MSCI ESG Research's ESG analytical personnel estimate revenue based on the proportional unit or product mix. For example, if a pure play auto manufacturer sold 700,000 vehicles, and 60,000 were electric vehicles, revenue would be estimated based on the electric vehicle proportion of 8.57% (60,000 / 700,000) of total revenue. This method assumes that each unit or vehicle is sold at the same price. The same proportional split applies for services offered the company.
3. Revenue is **estimated assuming an equal unit or product split**.
    - In the absence of proportional unit or product mix information, revenues are estimated by the equal weight of products within the disclosed segments. Proportional unit or product mixes can be used to define the potential segment revenue, when available, before using the equal product split to best reflect the products revenue. For example, if 5 of the 10 vehicle models offered by the auto manufacturer are electric vehicles, then 50% of vehicle sales are estimated to come from electric vehicles. This method assumes the same number of vehicles are sold for each model, and the price of each is the same. The same applies for services offered by the company.
4. Revenue cannot be estimated with current disclosures, but **evidence suggests the company generates at least some revenue from the product or solution**. In such instances, we apply a minimal revenue estimation (0.01%) to indicate the company's involvement in eligible revenue generating products and services. In cases where the revenue disclosure or estimate is below 0.01% of total revenue, we round up to 0.01% to indicate the company is involved in the activity.

Further examples of how the revenue estimate is calculated are provided in the appendix.

Certain impact categories have unique estimation rules or processes, which are explained in detail in the impact categories section of this methodology document (see section 3 and 4 on details of environmental and social impact metrics). For example, small and medium enterprise (SME) lending is calculated using a specific formula for SME loans and interest income. If not noted otherwise, the generic estimation process explained above is followed.

MSCI ESG Research use revenue key factors which illustrate whether environmental and social impact metrics are disclosed by the company or estimated by an analyst.

Treatment of absent data

In the event that there is no conclusive evidence of either current involvement or a discontinuation of involvement in an eligible activity and the company is not subject to corporate action suggesting a change in its business structure, MSCI ESG Research retains the previously established revenue estimate for up to three years. After the three year period, if there is no evidence of continued involvement in the activity, revenue for the subject category is changed to zero.

If MSCI ESG Research determines conclusively that a company is not involved or is no longer involved in activities that generate revenue in a MSCI Sustainable Impact Metrics category, the revenue for that category would be set at zero.

As noted in step 4 above, in the absence of either disclosed data or any basis for revenue estimation, we attempt as a minimum to capture evidence of companies' involvement in sustainable solutions. Such involvement is captured by assigning a very small percentage of a revenue (0.01%) to the category where we can find evidence of involvement but insufficient information to reliably estimate revenue.

2. Research process

Obtaining screening data

MSCI ESG Research uses a wide range of tools and sources to screen companies for involvement in products and services which have a positive impact on society or the environment. Data from preferred sources can be used for up to three years from the publication or involvement date. Supplemental sources may be used in certain cases, including where the preferred sources do not yield sufficient information for the assessment.

Preferred sources – public disclosures

The following public disclosures are considered as primary sources to collect company revenue and involvement data:

- **Company direct disclosure**: sustainability reports, annual reports and regulatory filings, and company websites.
- **Company indirect disclosure**: government agencies’ published data, industry and trade associations’ data, and financial data providers’ data.

Preferred sources – direct company communication

In certain cases, such as to clarify publicly disclosed information or to inquire about information from outdated sources, ESG analytical personnel may communicate directly with the company to obtain clarifying information. This information is not confidential and considered as publicly available upon request. Such information may be used to confirm or clarify publicly disclosed information.

ESG analytical personnel may contact companies on all themes throughout the year when it is necessary to confirm involvement, the nature of the involvement or the revenue derived from the theme.

Companies may also provide feedback on the revenue assessment of any of the Sustainable Impact Metrics categories when its information is updated, at a minimum of once a year. Where MSCI ESG Research has contact information, the companies are proactively invited to review MSCI ESG Research’s assessments and reports, and to provide updates, clarifications, and comments. Information provided by companies during this process is reviewed by ESG analytical personnel and incorporated into the research as appropriate.

MSCI ESG Research is committed to transparent communication with corporate issuers in its coverage universe. For more details, please refer to the “Procedures for Corporate Issuer Interaction” document[4] publicly available on msci.com.

[4] Procedures for Corporate Issuers Interaction. December 2023. MSCI ESG Research.

Supplemental sources

MSCI ESG Research may also use the following sources for revenue and involvement data:

- Company material that is not provided on their official website(s).
- Sources beyond three years old that contain information of contracted involvement that specify timelines.
- Media and periodicals.
- Business directories.
- Nongovernmental organizations (NGOs) reports and websites.

Minimum data availability requirements

All companies in the Sustainable Impact Metrics coverage universe are subject to the first assessment stage. There is no minimum financial or ESG data required for a Sustainable Impact Metrics assessment to be undertaken.

Analytical review

The Sustainable Impact Metrics analytical process includes multiple steps to review the quality of analysis and consistent application of the methodology.

The first stage in the process is to identify companies that have potential involvement in an activity that is relevant to one or more sustainable impact activities. Companies may be identified if they have the following:

- Relevant industry classification; or
- Business description that includes certain keywords.

Companies found without any potential involvement during this first step would receive 0.00% revenue from Sustainable Impact Metrics.

In the second stage of the process, ESG analytical personnel would review available sources to determine if the involvement is revenue generating (e.g., the company could be involved in solar power but may not generate revenue from it). If no revenue is generated from the involved activity, the company would receive 0.00% revenue from Sustainable Impact Metrics. If involvement is revenue generating, the company moves to the third state of review.

In the third stage, ESG analytical personnel determine whether the revenue is disclosed or must be estimated using disclosed information. If estimated, the available information is prioritized based on the revenue estimation methodology explained under the “Revenue data and estimation” section.

Timing of the analytical review

MSCI ESG Research aims to review all companies in the coverage universe annually. These updates involve a multi-step process:

- **Ongoing review and identification of Sustainable Impact Metrics categories**: Companies are reviewed throughout the year, based on fiscal-year reporting cycles.

  - MSCI ESG Research aims to review constituents of the MSCI ACWI Index within one quarter of their annual filings.
  - MSCI ESG Research aims to review the rest of the coverage universe on a rolling schedule, within 12 months of the issuers' annual filings.

- **New additions to the indexes in the Sustainable Impact Metrics coverage universe:** MSCI Research aims to assess additions to the MSCI ACWI Index and MSCI US Investable Market Index (IMI) within one quarter of their inclusion in the relevant index. Any other additions to indexes in the Sustainable Impact Metrics coverage universe would be assessed within two quarters of index inclusion.[5]

Occasionally, the assessment of companies may require an additional review and publication approval by the MSCI ESG Impact and Screening Methodology Committee, which may impact the timing of publication.

In addition, ad-hoc reviews may be scheduled where MSCI ESG Research receives issuer or client feedback or at MSCI ESG Research's discretion.

Treatment of subsidiaries in the Sustainable Impact Metrics assessment

For companies that own 50% or more of a subsidiary involved in any Sustainable Impact Metrics category, data from the subsidiary is incorporated into the parent company's assessment. In these cases, revenue attributed to the parent company is adjusted based on the percentage of revenue the subsidiary derives from an eligible activity, the percentage of stake held by the parent, and the parent's other revenue-generating activities.

For example, Company A holds a majority ownership (60%) in Company B, which has solar farm operations and generated 11.50% of revenue from such activities, represented under the Alternative Energy category and Solar subcategory. Company B's involvement is mapped to Company A's assessment in addition to its own involvement in the same category, if any. In this case, Company A's revenue would be 6.9% (= 60% * 11.50%) under Alternative Energy and Solar categories.

In most cases, parent companies already consolidate the revenues of their subsidiaries into consolidated financial statements. In the example above, Company A may already be reporting revenue for "solar power segment" as 6.9%, in which case MSCI ESG Research does not manually compute the revenue figure.

In certain instances, companies may include minority owned investments (<50% ownership), joint ventures, or associates in consolidated reports. In such case, MSCI ESG Research uses company reported consolidated revenues and does not subtract the minority owned involvement from the reported revenue segment data.

Entity selection and data mapping

Entity selection

MSCI ESG Research applies a set of rules to select the optimal entities to evaluate for the Sustainable Impact Metrics methodology to reflect scenarios where the issuer of securities may

[5] See MSCI ESG Product Coverage document available on MSCI Support Site for more information.

differ from the operating entity. These entities are determined based on the type of issuer and its relationship with other entities in its financing structure. They are also subject to the minimum data availability criteria.

The entity types that are typically assessed as part of Sustainable Impact Metrics include operating companies, management companies, investment holding companies, and group holding companies.

Data mapping

Data Mapping is the process whereby ESG evaluations for a company (a data entity) are attributed to related companies. ESG evaluations are mapped based on observed parent-subsidiary relationships, subject to certain company and data point requirements.

- Certain companies (such as those classified as financing companies) included in the coverage universe may be covered by data mapping from the relevant data entity.
- Bond issuers outside the Sustainable Impact Metrics coverage universe may also have their evaluations mapped from parent entities that are included in the Sustainable Impact Metrics coverage universe.

Note that ESG evaluations are not mapped to:

- Equity issuers, or
- Companies that have already been evaluated by MSCI ESG Research.

Note that Sustainable Impact Metrics mapping involvement data points would not be mapped to a subsidiary that issues equities or already has been researched by MSCI ESG Research.

For further information on Entity Selection and Data Mapping, please see the ESG & Climate Entity Selection & Data Mapping Methodologies.

Quality of the assessment process

The following quality assurance and oversight processes are observed when applying the methodology to companies in the coverage universe:

- **Quality review process**: Data quality checks are conducted on all companies prior to the publication of Sustainable Impact Metrics.
- **Analytical review**: Assessments are reviewed for data and content accuracy. Assessments can be escalated to the MSCI ESG Impact and Screening Methodology Committee for assistance in application or interpretation of the methodology.
- **MSCI ESG Impact and Screening Methodology Committee**: This committee addresses the following specific cases, as well as other escalations related to methodology application:
    - Requests to deviate from the standard methodology (decisions involving a company’s pending addition to, or removal from, a Sustainable Impact Metric screen for reasons that do not clearly fall within the current scope of the methodology).
    - Periodic review of assessments prior to publication to ensure consistent methodology application, particularly when the year-over-year percentage of revenue from Sustainable Impact Metrics increases or decreases substantially.

- Methodological clarifications or interpretations.

- **ESG Assessment Committee**: This committee presides over methodology application cases escalated from the MSCI ESG Impact and Screening Methodology Committee and other critical methodology application cases.

Prior to the publication of the Sustainable Impact Metrics, certain decisions that influence the assessment are reviewed by the **Entity Classification Methodology Committee.** This committee oversees the methodologies relating to the classification of corporate entities and identification of the reference entity and proxy reference entity. Approval by this committee is required for methodological overrides and where it is proposed to drop coverage for a fixed income issuer due to methodological or data availability reasons.

Data errors and corrections

MSCI ESG Research clients are informed of data corrections that meet the communication thresholds detailed in the ESG Data Correction Policy on MSCI's client support site. Notifications are typically provided in advance of the data correction. Updates resulting from information that was not available when the revenue assessment was made is not considered a data error and does not result in a client notification.

Corporate actions

ESG analytical personnel review and incorporate corporate actions to the research. Corporate events include acquisitions, consolidations, mergers, name changes, public offerings and spinoffs.

- **Spin-offs:** both the company that spins off operations as well as the new business entity are assessed to estimate the extent of their involvement in covered categories (if any).
  - MSCI ESG Research aims to review constituents of MSCI ACWI Index within one quarter of their index inclusion.
  - MSCI ESG Research aims to review all other entities within two quarters of the transaction completion.
- **Mergers and Acquisitions:** MSCI ESG Research assesses involvement in covered Sustainable Impact Metric categories for merged entities, acquiring companies and acquired companies.
  - Constituents of MSCI ACWI Index are assessed within one quarter of the transaction completion.
  - All other entities are researched independently within two quarters of the transaction completion.
- **Name changes:** The name of the company in our systems would reflect the new name. However, the body of the company's report may continue to reflect the old name until the company undergoes scheduled data review.

Methodology governance and changes

The Sustainable Impact Metrics methodology is overseen by the **ESG Methodology Committee**. This committee considers proposals for methodological changes across MSCI ESG Research, including but not limited to the Sustainable Impact Metrics.

Separately, the **ESG Data Definitions Committee** oversees MSCI ESG Research's new and existing data points and their definitions across all ESG data sets.

Methodology changes

The Sustainable Impact Metrics methodology may be updated to reflect product and methodology enhancements as well as process improvements. We aim to conduct client consultations on significant methodology changes. Prior to implementing any significant adjustments, MSCI ESG Research notifies clients and where possible provides simulated impact results prior to methodological changes. The ESG Methodology Committee presides over the internal approval of major methodology updates and additions.

Details of recent methodology updates are provided in the Appendix.

3. Details on environmental impact metrics

The following sections provides a non-exhaustive list of products and services considered eligible and ineligible for the Sustainable Impact Metrics methodology.

Solar

Solar is a subcategory of alternative energy under the climate change theme. It includes revenue ranging from solar power generation (both photovoltaic and solar thermal), services and equipment for household, commercial and industrial purposes. This extends to the manufacturing of key components that are integral to the functioning of solar power technology such as solar panels, wafers, and cells.

However, not all solar technology components across the value chain are eligible for inclusion. The manufacturers of generic components such as metal or screws are ineligible. Additionally, revenue from mining raw materials is excluded given the high environmental impact and often lack of evidence that the materials are used for renewable technologies only. This means that materials such as silicon oxide and silicon ingot are not considered.

MSCI ESG Research furthermore only considers some ancillary services that have direct impact on implementation or production of solar. Site assessments and feasibility studies for solar projects are not included as they do not guarantee the actual development of the project and related positive product.

Inclusions

- Solar power generation.
- Solar power plants (includes both concentrated solar power (CSP) and photovoltaics (PV)).
- Other solar power equipment such as solar cells (PEC, DSSC, OPVC, TPV, CPV), solar ingots, wafers, modules, and inverters.
- Solar trackers.

- Transmission and distribution of solar power.
- Installation of solar fields.

Exclusions

- Raw materials used for solar power equipment.
- Site assessments for future solar power projects.
- Recycling services for end-of-life solar panels.
- Mining of minerals used in solar panels.
- Generic materials used in manufacturing solar panels or components of components.

Wind

Wind is a subcategory of alternative energy under the climate change theme. It includes revenue from wind power generation (both onshore and offshore) as well as equipment exclusively used for wind power such as wind bearings and rotors.

Within alternative energy, some parts of the value chain are omitted. For example, the sourcing of raw materials and the end-of-life stages are typically excluded. For wind, the recycling of wind turbine blades would not be included in this section.

MSCI ESG Research furthermore does not consider all ancillary services. Repair services are included however site assessments are not as they do not guarantee the actual development of the project and related positive product.

Inclusions

- Wind power generation.
- Wind power equipment such as turbines, blades, gearboxes, towers and nacelles.

Exclusions

- Raw materials used in wind power equipment.
- Site assessments for future wind power projects.
- Recycling services for wind turbine blades.

Wave and tidal

Wave and tidal is a subcategory of alternative energy under the climate change theme. Wave and tidal includes revenue from wave tidal power generation, services, and equipment.

Within alternative energy, some parts of the value chain are omitted. For example, the sourcing of raw materials and the end-of-life stages are typically excluded. For wave and tidal, the recycling of turbine blades would not be considered in this section. Similarly, MSCI ESG Research does not include raw materials such as metal given the lack of evidence that the materials are used for wave and tidal technologies only.

MSCI ESG Research furthermore does not consider all ancillary services. For example, site assessments and feasibility studies for wind projects are not included as they do not guarantee the actual development of the project and related positive product.

Inclusions

- Wave and tidal power generation.

- Wave and tidal equipment such as turbines, absorbers, oscillating water columns (OWC), and attenuators.

Exclusions

- Raw materials used for wave and tidal equipment.
- Site assessments for future wave and tidal projects.
- Recycling services for wave and tidal equipment.

Geothermal

Geothermal is a subcategory of alternative energy under the climate change theme. This includes power generation from the earth's heat, with both flash cycle steam and binary geothermal power plants considered.

Within alternative energy, some parts of the value chain are omitted. For example, the sourcing of raw materials and the end-of-life stages are typically excluded. For geothermal, the recycling of turbine blades would not be considered in this section. Similarly, MSCI ESG Research does not include raw materials such as the metal given the lack of evidence that the materials are used for geothermal technologies only.

MSCI ESG Research furthermore does not consider all ancillary services. For example, site assessments for geothermal projects are not included as they do not guarantee the actual development of the project and related positive product.

Inclusions

- Geothermal power generation.
- Geothermal power plants (includes both binary cycle and flash steam power plants).
- Geothermal equipment such as turbines, condensers, monitoring equipment and geothermal heat pumps (GHP).

Exclusions

- Raw materials used for geothermal power plants equipment.
- Site assessments for future geothermal power projects.
- Recycling services of geothermal power equipment.

Small hydro

Small hydro is a subcategory of alternative energy under the climate change theme. Small hydro includes power generation from hydropower plants that either have a maximum capacity of 25MW or are run-of-river. The exclusion of large hydropower plants is largely due to negative environmental and social concerns. For example, a large dam could cause changes to the river flow leading to biodiversity loss, food security issues and community displacements.

Within alternative energy, some parts of the value chain and/or life cycle are omitted. For example, the sourcing of raw materials and the end-of-life stages are typically excluded. For small hydro, we do not look at the retirement of hydropower plants nor do we consider the recycling of turbine blades. Similarly, we do not include raw materials such as steel given the lack of evidence that the materials are used for small hydro technologies only.

MSCI ESG Research does not consider all ancillary services. For example, site assessments for small hydro projects are not included as they do not guarantee the actual development of the project and related positive product. Pumped storage hydropower is currently excluded.

Inclusions

- Small hydro power generation.
- Small hydro power plants and run-of-river installations.
- Small hydro equipment such as turbines and generators.

Exclusions

- Raw materials used in the equipment dedicated for small hydropower.
- Large hydropower plants >25MW.
- Site assessments or feasibility studies for future small hydropower projects.
- Retirement of hydropower plants.
- Pumped storage hydropower (PSH).

Waste-to-energy

Waste-to-energy is a subcategory of alternative energy under the climate change theme. It largely consists of power generation from the incineration of waste stemming from municipal solid waste (MSW), including refused derived fuel (RDF). We however differentiate waste-to-energy from biomass, which is defined in a separate category below. Maintenance and engineering services for waste-to-energy facilities are also considered.

MSCI ESG Research does not consider all ancillary services. For example, site assessments for waste-to-energy are not included as they do not guarantee the actual development of the project and related positive product.

Inclusions

- Waste-to-energy power generation.
- Waste treatments such as chemicals and enzymes.
- Refused derived fuel (RDF).

Exclusions

- Site assessments for future waste-to-energy projects.

Biomass

Biomass is a subcategory of alternative energy under the climate change theme. Most biomass in this category comes from agricultural feedstock such as bagasse, husks, straw and nut shells. MSCI ESG Research does not include municipal solid waste (MSW) as this is categorized under the waste-to-energy category.

Inclusions

- Agricultural waste such as bagasse, husks, straw, nut shells, etc.
- Forest products waste such as wood chips, wood shavings and logging residues.

Exclusions

- Biomass from palm trees as these are typically linked to deforestation.

Biofuel

Biofuel is a subcategory of alternative energy under the climate change theme. Both first- and second-generation biofuels are included. Biofuels, when produced and utilized responsibly, can offer several environmental benefits compared to traditional fossil fuels.

Inclusions

- Hydrous ethanol.
- Cellulosic ethanol.
- Bagasse-based cogeneration.

Exclusions

- Biofuels from palm trees as these are typically linked to deforestation.

Alternative energy storage

Alternative energy storage is a subcategory of alternative energy under the climate change theme. Energy storage plays a crucial role in the integration of renewable energy sources. This helps to address the intermittent nature of renewable energy and reduces the reliance on fossil fuel-based power plants.

Inclusions

- Batteries used to store energy from alternative energy sources.

Exclusions

- Raw metals to make batteries such as lithium is not included. Similarly, chemicals that are used for electrolytes.
- Batteries which store non-renewable energy.

Fuel cells

Fuel cells are a subcategory of alternative energy under the climate change theme. Fuel cells are devices that convert chemical energy directly into electrical energy through a reaction between hydrogen and oxygen, with water and heat as byproducts. These are widely used in clean and efficient power generation, particularly in transportation (such as fuel cell vehicles (FCVs)).

Inclusions

- Power stored in fuel cells.
- Engineering Procurement and Construction (EPC) of fuel cell powered plants.
- Anodes and cathodes for fuel cells with disclosed renewable energy applications.

Exclusions

- Manufacturing of hydrogen.

Zero emissions vehicles

Zero emissions vehicles (ZEVs) are a subcategory of energy efficiency under the climate change theme. This includes the manufacturing of all the key components to make the zero-emission vehicle function. ZEVs across all categories (private, commercial, freight and public transport vehicles) are included.

The value chain of ZEVs is limited to its manufacturing of components for automobiles and motorcycles. It does not extend to other personal mobility devices such as e-scooters or e-bikes. Similarly, electric all-terrain vehicles (ATVs) are not included as they are considered a leisure product.

Ride sharing platforms with drivers of ZEVs are excluded due to the fact the platform does not own or operate the vehicles itself.

Inclusions

- Manufacturing of zero emission vehicles, including electric vehicles.
- Manufacturing of batteries for electric vehicles.
- Manufacturing of key components of zero emission vehicles, such as electric motors.
- Secondhand sellers of zero emission vehicles.
- Rental of zero emission vehicles.

Exclusions

- Electric all-terrain vehicles (ATVs).
- Generic components that can be used for an internal combustion vehicle such as steering wheels.
- Autonomous vehicle semiconductors.
- Ride sharing platforms with zero emission vehicles.

Hybrid vehicles

Hybrid electric vehicles (HEVs) are a subcategory of energy efficiency under the climate change theme. Hybrid vehicles are vehicles that combine two or more different power sources to propel the vehicle. The most common type of hybrid vehicle is the gasoline-electric hybrid, which combines an internal combustion engine powered by gasoline with an electric motor and a battery.

The value chain of HEVs is limited to its manufacturing of key components for automobiles and motorcycles to make the low carbon vehicle function. It does not extend to other personal mobility devices such as e-scooters or e-bikes.

Ride sharing platforms with drivers of HEVs are excluded due to the fact the platform does not own or operate the vehicles itself.

Inclusions

- Manufacturing of hybrid vehicles including plug-in hybrids (PHEV) which typically have larger battery than regular hybrids and can be charged from an external power source, such as an electrical outlet or a charging station.
- Rental of hybrid vehicles.
- Second hand sales of hybrid vehicles.

Exclusions

- Generic components that can be used for an internal combustion vehicle such as steering wheels.
- Platform sharing for hybrid vehicles.

Clean transport infrastructure

Clean transport infrastructure is a subcategory of energy efficiency under the climate change theme. It refers to the development and implementation of transportation systems that prioritize environmental sustainability, energy efficiency, and the reduction of negative impacts on the environment. Eligible activities enable an efficient and low-emission transportation network that minimizes the environmental footprint associated with the movement of people. Aviation and maritime transport services are not in scope for this subcategory.

Inclusions

- E-vehicle charging stations.
- Intelligent traffic systems such as traffic sensors to enhance transport efficiency.
- Urban mass transit such as buses, light rail and commuter trains.

Exclusions

- Freight and shipping, including related infrastructure.

Superconductors

Superconductors are a subcategory of energy efficiency under the climate change theme. These are typically integrated as part of distributed storage systems in households to support decentralized, intermittent power generation. Superconductors are only eligible if they have an environmental application.

Inclusions

- Applications relating to smart grids, electric power transmissions, transformers, power storage devices, and electric motors.

Exclusions

- Medical and healthcare applications such as MRI machines.

Smart grids

Smart grids are a subcategory of energy efficiency under the climate change theme. Smart grids help modernize electrical grids to improve the efficiency and reliability of the production and distribution of electricity.

Inclusions

- Advanced Meter Infrastructure (AMI) or smart power meters for power which report data to users so that they can reduce energy consumption.
- Manufacturing and operation of smart grid technologies.

Other battery storage

Other battery storage is a subcategory of energy efficiency under the climate change theme. Battery storage facilitates the shift towards electrification and supports many sustainable applications. Batteries in this subcategory must have a clear environmentally positive application to be eligible.

Inclusions

- Batteries with a sustainable application such as batteries for electric vehicles.
- Key components for batteries such as cathodes, anodes, and electrolytes.

Exclusions

- Raw metals to make batteries such as lithium is not included. Similarly, chemicals that are used for electrolytes.

LED/CFL lighting

Light-emitting diodes (LEDs) and compact fluorescent lamps (CFLs) are part of a subcategory of energy efficiency under the climate change theme. LEDs have advantages over incandescent light sources, including lower energy consumption and a longer lifetime.

Inclusions

- LED light bulbs.

Exclusions

- Decorative lighting such as festive LED lights.
- Consumers electronic devices that use LED.
- Retailers that sell LED/CFL lighting.

Industrial automation

Industrial automation is a subcategory of energy efficiency under the climate change theme. Industrial automation, which involves the use of advanced technologies such as robotics, control systems, and information technologies to handle different processes and tasks in manufacturing and other industries, can have several positive impacts on the environment such as energy efficiency, reduced waste, and lower emissions.

Inclusions

- Industrial automation that discloses energy savings or efficiency gains.

IT optimization services & infrastructure

IT optimization services and infrastructure is a subcategory of energy efficiency under the climate change theme. The main services identified here are infrastructure as a service (IaaS) and platform as a service (PaaS). Other business applications are considered such as teleconference, virtualization, and remote desktop which are alternative solutions to face-to-face meetings and thereby reduce the need to physical travel.

Inclusions

- Infrastructure as a service (IaaS).
- Platform as a service (PaaS).
- Software that manages environmental footprint such as GHG accounting software.
- Transportation software such as telematics.

Exclusions

- Software as a service (SaaS).
- Network optimization such as internet speed.

Demand side management

Demand side management is a subcategory of energy efficiency under the climate change theme. Eligible activities in this category promote energy conservation by encouraging consumers to use electricity more efficiently. This can involve the adoption of energy-efficient technologies, appliances, and practices, ultimately leading to a reduction in overall energy consumption.

Inclusions

- Automated controls and sensors.
- Heat pumps that are powered by renewable energy.
- Renewable powered device such as solar powered elevators and solar powered heaters
- Automated building and house products.

Exclusions

- Home appliances.

Insulation solutions

Insulation is a subcategory of energy efficiency under the climate change theme. Insulation plays a significant role in environmental sustainability by contributing to energy efficiency and reducing the overall environmental impact of buildings and industrial processes. Insulation solutions can also support adaptation and resilience to physical climate risks by protecting buildings from, for example, external temperature changes or from wildfires.

Inclusions

- Building materials that insulate heat, fire, and sound. This includes spray foam, fiberglass, loose fill, mineral, animal, and synthetic insulation.
- Companies that offer insulation installation services.

Green construction and consultancy

Green construction and consultancy are a subcategory of green building under the climate change theme. Green construction and consultancy provide expertise on implementing sustainable building practices, ensuring compliance with green building standards, and optimizing resource efficiency (see list of approved certifications in exhibit 4 below). Green buildings that are under construction or development are excluded, even if the company advertises that it is pre-certified to certain green building standards.

Inclusions

- Construction of green certified properties, facilities, or buildings.
- Redevelopment of non-certified properties to comply with green building standards.
- Retrofitting of non-certified properties to comply with green building standards.

Exclusions

- Green hospitals as they do not generate revenue from leasing the property.

Green property ownership and management

Green property ownership and management are a sub-category of green building under the climate change theme. Green property ownership and management involve practices that prioritize sustainability, energy efficiency, and environmental responsibility in the ownership and operation of real estate. This approach seeks to minimize the environmental impact of buildings, promote resource efficiency, and create healthier, more sustainable living and working environments.

Inclusions

- Ownership and management of properties, facilities and buildings designed and built according to environmental or sustainable standards and certified by third parties.

Exclusions

- Green property leasing and consulting services.
- Hotels and serviced residences are excluded as companies generate revenues from rooms and not the whole property itself.

Exhibit 4: MSCI Sustainable Impact Metrics eligible green building certifications.

Green building certifications (non-exhaustive list)
LEED (United States) BREEAM (United Kingdom) BELS (Japan) Green Star (Australia) Green Mark (Singapore) MINERGIE (Switzerland) BEAM (Hong Kong) BEE (India) BOMA (Canada) CASBEE (Japan) China Three Star (China) DGNB (Germany) Green Building Index (Malaysia) Green Globe (United States) Green Key (Denmark) Green Star (Australia) Green Star SA (South Africa) GRIHA (India) G-SEED (South Korea) HQE (France) Homestar (New Zealand) IGBC (India) Living Building Challenge (United States) Mostadam (Saudi Arabia) NABERS (Australia) Nordic Swan Ecolabelling (Denmark, Finland, Iceland, Norway, Sweden)

Qualiverde (Brazil)
Superior Energy Performance (United States)

Source: MSCI ESG Research, as of February 2024

Waste treatment

Waste treatment is a subcategory of pollution prevention under the natural capital theme. Waste treatment involves technologies and services which manage and process different types of waste materials, aiming to minimize environmental impact and promote resource recovery. MSCI ESG Research gives credit only to recycling, composting, and waste-to-energy. Landfill or incineration without waste-to-energy is not included. Specialized treatments exist for hazardous waste, employing chemical or biological processes to render it less harmful.

Inclusions

- Waste-to-energy services and equipment.
- Biomedical waste such as contaminated equipment or Personal Protective Equipment (PPE).
- Treatment and processing of hazardous waste.

Exclusions

- Landfill or incineration without waste-to-energy.

Conventional pollution control

Conventional pollution control is a subcategory of pollution prevention under the natural capital theme. Conventional pollution control refers to a set of established and widely adopted methods and technologies employed to mitigate the release of pollutants into the environment. Eligible activities have a focus on reducing or eliminating contaminants at the source or through treatment processes before they are released into the air, water, or soil. Conventional pollution control technologies include the use of air pollution control devices such as scrubbers and filters to capture and remove pollutants from industrial emissions.

Inclusions

- Pollution control equipment such as biofilters, carbon absorbers, catalytic reactors, fabric filters, ventilators, and dehumidifier/humidifier.
- Selective catalytic reduction for automobiles (SCR).
- Operation and construction of ambient air pollution control facilities.

Exclusions

- Low toxicity electronic materials (e.g., stemming from wafers, semiconductors).
- Indoor air purifiers.

Environmental remediation

Environmental remediation is a subcategory of pollution prevention under the natural capital theme. This includes activities and technologies that aim to remove pollution or contaminants from environmental media, such as soil, groundwater, sediment, or surface water. MSCI ESG Research considers oil spill cleanup services and the removal of heavy metals from mining areas as eligible.

Inclusions

- Removal of contaminants from soil, groundwater, sediment, or surface water.
- Oil spill cleanup services.
- Equipment such thermal desorption, excavation, solubilization, pump and treat, stabilization, oxidation, and soil vapor extraction.

Exclusions

- Environmental site assessments as the assessment may or may not lead to remediation efforts.

Low toxicity/Volatile Organic Compounds (VOCs)

Low toxicity/volatile organic compounds (VOCs) is a subcategory of pollution prevention under the natural capital theme. VOCs are a group of organic chemicals that can easily evaporate into the air, potentially contributing to air pollution. Low toxicity VOCs refer to volatile organic compounds that have a reduced potential for causing harmful health effects or environmental impacts. These compounds are selected or designed to have lower levels of toxicity compared to traditional or high toxicity VOCs. The aim is to minimize the negative impact on indoor air quality and human health.

Inclusions

- Low or no VOC labeled building materials including paints, adhesives, flooring products (carpets, vinyl), formaldehyde in reconstituted fiber boards or plywood.

Exclusions

- Low VOC electronic components such as wafers.

Recycling solutions

Recycling solutions is a subcategory of pollution prevention under the natural capital theme. Recycling solutions encompass a variety of strategies and processes aimed at diverting waste from landfills, conserving resources, and minimizing environmental impact. These solutions involve the collection, sorting, and processing of recyclable materials, such as paper, plastics, metals, and glass, to transform them into new products. Innovative technologies, including advanced sorting systems and material recovery facilities, play a crucial role in efficiently separating recyclables.

Inclusion

- Equipment for recycling such as shredders, compactors, and balers.

Exclusion

- Products from recycled goods (paper, plastic bottles, recycled textiles) and packaging.
- Bottle collecting machines are also often excluded as MSCI ESG Research distinguishes between collection and actual recycling.

Smart metering devices

Smart metering devices is a subcategory of sustainable water under the natural capital theme. Smart metering devices for water play a crucial role in modernizing water infrastructure, enhancing efficiency, and promoting sustainable water use practices.

Inclusions

- Automated metering systems that accurately help manage consumption for the purpose of water conservation.

Rainwater harvesting

Rainwater harvesting is a subcategory of sustainable water under the natural capital theme. This mainly includes equipment that collects and stores rainwater for reuse before it reaches the aquifer, with the purpose of conserving water.

Inclusions

- Products that enable to collect rainwater such as guttering, ground tanks and cisterns.

Exclusions

- Irrigation.

Desalinization solutions

Desalinization is a subcategory of sustainable water under the natural capital theme. Desalinization refers to any of several processes that remove some amount of salt and other minerals from saline water. Desalinization is particularly important in places where water is scarce as it provides an alternative for human consumption and agricultural purposes.

Inclusions

- Desalinization plants.
- Installations such as reverse osmosis (RO), multi-effect distillation (MED) and electrodialysis (ED).

Water infrastructure and distribution

Water infrastructure and distribution is a subcategory of sustainable water under the natural capital theme. The purpose is to ensure the reliable and efficient supply of clean and safe water to residents, businesses, and industries.

Inclusions

- Pipeline infrastructure on a city-wide level.
- Watershed protection and conservation efforts, including acquisition of aquifers for conservation purposes.
- Flood mitigation or storm water infrastructure.
- Drip irrigation.

Exclusions

- Pipes for personal home usage.
- Generic water utility operations and maintenance.

Waste water treatment

Waste water treatment is a subcategory of sustainable water under the natural capital theme. The treatment of waste water is to prevent environmental harm. Technologies that aim to remove the contaminated materials from water before releasing the water or reusing it within the cycle. Treatment is for industrial use and not for improving drinking water quality.

Inclusions

- Waste water treatment plants.
- Equipment such as filters, drainage.
- Deicing fluid treatment systems.

Exclusions

- Deep well water treatment.

Water recycling and services

Water recycling equipment and services is a subcategory of sustainable water under the natural capital theme. Water recycling equipment may incorporate membrane technologies which promote resource conservation and address water scarcity challenges by maximizing the efficient use of available water supplies.

Inclusions

- Fluid treatment products.
- Equipment such as pumps, advanced membrane filtration, separation systems.

Exclusions

- Rainwater harvesting (this would be captured in rainwater harvesting, another sustainable water category).

Drought-resistant seeds

Drought-resistant seeds is a subcategory of sustainable water under the natural capital theme. Drought-resistant seeds, also known as drought-tolerant or drought-resistant crops, are plant varieties specifically developed to withstand and thrive in conditions of water scarcity. These seeds are bred through traditional breeding methods or genetic engineering to possess traits that enhance their ability to endure prolonged periods of drought, limited water availability, or arid climates. Traits commonly targeted for enhancement include improved water-use efficiency, deeper root systems for better access to soil moisture, and the ability to maintain the same characteristics under water stress.

Inclusions

- Drought-resistant genetically modified organisms (GMOs).
- Non-GMO drought-resistant seeds such as sorghum grain.

Sustainable agriculture

This category currently includes revenues from forest and agricultural products that meet environmental and organic certification requirements to address significant biodiversity loss, pollution, land disturbance, and water overuse.

Inclusions

- Sustainably certified food products such as poultry, fruits, vegetables, and seafood.
- Sustainably certified timber products such as pulp.

Exclusions

- Cattle and beef products due to the high overall environmental impact of beef production not fully offset through certification themes.
- Forestry services such reforestation.
- Services to assess the sustainability of a food product.
- Products that use certified raw materials (e.g., paper from certified pulp).
- Buildings that use certified wood or building materials.

Exhibit 5: Examples of sustainable agriculture certifications

Accepted Sustainable Agriculture certifications (non-exhaustive list)
Forest Stewardship Council Programme for the Endorsement of Forest Certification
Global Forest & Trade Network (GFTN)
Sustainable Forestry Initiative
Local Forestry Certifications
Marine Stewardship Council (MSC)
Aquaculture Stewardship Council (ASC)
International Seafood Sustainability Foundation (ISSF)
Local Organic Certifications

Source: MSCI Research, as of February 2024.

4. Details on social impact metrics

Nutrition

Nutrition is a category under the basic needs theme. It includes revenue from the manufacture and sale of basic food products. This category includes products classified under the "basic products" category as defined by Choices International,[6] a science-based multi-stakeholder organization focused on nutrition.

According to Choices International, basic products refer to those products that contribute to the daily intake of essential nutrients while non basic are not needed to fulfill daily requirements. In 2019, Choices International provided additional guidance on sugar, sodium, and saturated fat content thresholds for these basic products. Both the list of basic food products and their

[6] For more information on Choices International refer to https://www.choicesprogramme.org/downloads/international-choices-criteria-2019-version-4/?send=yes

associated sugar, sodium, and saturated fat content criteria are considered in the estimation of revenue for Nutrition category.

Revenue from retailing or distributing basic foods are only included when sold under the company's own brand or label. Otherwise, they are ineligible. The price of the product is not a direct factor in determining eligibility, but non-basic food products are excluded, such as flavored water, alternative meats, or premium non-basic products, which typically retail at higher prices.

Inclusions

Where Choices International criteria are met:

- Fruits and vegetables.
- Beans and legumes.
- Sources of carbohydrates.
- Meat, fish, poultry, eggs, and meat substitutes (such as insects).
- Dairy products.
- Non-dairy milk substitutes.
- Oils, fats and fat-containing spreads.
- Nuts.
- Water.
- Main meals such as salads, sandwiches, pizza, pasta/ rice/ noodles, etc.

Exclusions

- Confectionery items.
- Sauces, pastry, ice cream, and sweet and savory snacks.
- Beverages (excluding water) and processed fruit juices.
- Bread toppings.
- Food supplements, vitamins, and dietary supplements (e.g., protein shakes).
- Food for children under a year old.
- Trail mix.
- Basic food products that do not meet sodium, sugar, and fat criteria.
- Alternative meat products trying to replicate meat.

Sanitation

Sanitation is a category under the basic needs theme. It includes revenue from the manufacture and sale of basic sanitation products. Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities.

Eligible products include those that provide basic hygiene and sanitation. Revenue from retailing sanitation products is only eligible if the product is manufactured by the retailing company or sold under the company's own brand.

Beauty or cosmetic products and luxurious products are excluded as they extend beyond basic needs for society.

The price of the product is not a direct factor in determining eligibility. However, premium and luxury products are excluded, such as exfoliating soaps, as they typically retail at higher prices.

Furthermore, the definition of affordability varies region by region and there is limited data to certify product affordability in a region (unlike affordable real estate, for example).

Inclusions

- Soaps and shampoos.
- Oral care products such as toothbrush, toothpaste and toothpowder.
- Sanitary napkins, toilet paper and tissues.
- Adult or infant diapers.
- Surface cleaners.
- Laundry and dishwashing detergent.
- Toilets.
- Washbasins.
- Faucets such as taps, shower heads, etc.
- Insect repellent for home use.
- Water purifier.

Exclusions

- Hair oil.
- Deodorant.
- Interdental toothbrush, electric toothbrush, dental floss.
- Color cosmetics and make up.
- Products sold in salons.
- Perfume.
- Hair care products.
- Pre-wash fabric care, fabric softener, stain removers.
- Detergent for car wash.
- Skin care products such as sunscreen, moisturizers, etc.
- Bathtub and bidets.
- Waste trap.
- Insect repellant for garden use.
- Toilet bowl covers.

Major disease treatment

Major disease treatment is a category under the basic needs theme. It includes revenue from the manufacture and sale of products used to treat the world's major diseases as defined by the World Health Organization (WHO). Treatments for orphan diseases[7] and neglected tropical diseases[8], underserved by research and often impacting developing countries, are also eligible under this category.

[7] Orphan diseases are defined as those diseases that affect a small number of people. The threshold varies per country: For instance, in the US orphan diseases are those that affect less than 1 out of 1,500 people, in Japan 1 out of 2,500 and in Europe 1 out of 2,000.

[8] More information on neglected diseases can be found here: http://www.who.int/neglected_diseases/diseases/en/

Major diseases include those diseases with the highest daily adjusted life year (DALY),[9] collectively accounting for approximately 50% of global disease mortality. Mitigating major diseases would yield the most substantial effects on the global population and life expectancy. The source of this major disease list is the WHO's Global Health Estimates 2019 Summary, which was last published in 2020.

Neglected tropical diseases (NTD) affect impoverished communities and have a disproportionate impact on women and children in tropical areas. The WHO estimates over one billion people are affected by NTD and the diseases are often caused by local or regional environmental conditions. NTDs were not commonly addressed in the global policy agenda until recognized in the UN's Sustainable Development Goals (target 3.3). Treatment for and mitigation of these diseases can have outsized positive impacts on the communities most affected, including developing countries of Africa, Asia, and the Americas.[10]

Orphan diseases affect a small number of people. The threshold for "small" can vary by region: In the US orphan diseases are those that affect less than 1 out of 1,500 people, in Japan 1 out of 2,500 and in Europe 1 out of 2,000. The main sources used to identify orphan drugs are the US Food & Drug Administration, the European Commission, Orphanet, and the Australian Therapeutic Goods Administration.

For orphan drugs to be included in the eligible revenue calculation, the company must disclose the revenue associated with the drugs. This is to avoid overestimation by applying equal apportioning when the drug market is small in scale relative to the broader drug market.

Examples of Major Diseases, NTDs, and orphan diseases are provided below in Exhibit 6.

Exhibit 6: Examples of eligible diseases

Major diseases	Neglected diseases	Orphan diseases
Ischaemic heart disease Lower respiratory infections Stroke Preterm birth Complications Diarrheal diseases Chronic obstructive pulmonary disease Diabetes mellitus HIV/AIDS Tuberculosis Depressive disorders Cirrhosis of the liver Trachea, bronchus, lung cancers Malaria Kidney diseases	Buruli ulcer Chagas disease Dengue and Chikungunya Dracunculiasis (guinea-worm disease) Echinococcosis Foodborne trematodiases Human African trypanosomiasis (sleeping sickness) Leishmaniasis Leprosy (Hansen's disease) Lymphatic filariasis Mycetoma, chromoblastomycosis and other deep mycoses Onchocerciasis (river blindness)	Gaucher's disease Pompe disease Hodgkin's lymphoma Multiple myeloma Fabry's disease Thrombocytopenia purpura Wilson's disease

[9] The WHO DALY represents the number of years of life lost due to poor health/disability and earlier death. The sum of these DALYs across the population represents the global burden of disease. More information on DALY can be found here: http://www.who.int/healthinfo/global_burden_disease/metrics_daly/en

[10] Hotez, Peter J. 2011. The Neglected Tropical Diseases and the Neglected Infections of Poverty: Overview of their Common Features, Global Diseases Burgen and Distribution, New Control Tools, and Prospective for Disease Elimination.

Neonatal sepsis and infections	Rabies
Endocrine, blood, immune disorders	Scabies and other ectoparasites
Alzheimer disease and other dementias	Schistosomiasis
Asthma	Soil-transmitted helminthiases
Migraine	Snakebite envenoming
Anxiety disorders	Taeniasis/Cysticercosis
Meningitis	Trachoma
Liver cancer	Yaws (Endemic treponematoses)
Hepatitis B and C	

Source: MSCI Research, as of February 2024.

Inclusions

- Treatment, care, vaccines, and medicines that treat major diseases defined by the World Health Organization.
- Diagnostic testing and monitoring systems when used specifically for eligible diseases.
- Healthcare equipment, including dialysis machines, cardiopulmonary equipment, extracorporeal life support, stents, blood pressure monitors, ECG machine and insulin pumps, when used specifically for eligible diseases.

Exclusions

- Any drugs or equipment not specifically for the treatment or diagnosis of the eligible diseases, and any drug not designated and authorized as an orphan drug.
- Medical products that can be used generically, like needles.
- Drugs which are still in clinical testing stage.
- General practice or generic medical services.
- COVID-19 vaccines and tests.

Affordable real estate

Affordable real estate is a category under the basic needs theme. It includes revenue from developing eligible units as well as rental income from owning and operating affordably priced real estate.

Eligible units or properties include units sold or leased below market value (as disclosed by the company), or those disclosed by the company as low-income or affordable units. Revenue generating projects which are under construction are also included.

Revenue from this category is calculated by multiplying the percentage of revenue from the companies commercial and residential portfolio by the percentage of eligible affordable real estate in the portfolio. If the percentage of affordable real estate in the portfolio(s) is not disclosed, we apply a value of 0.05% of revenue to demonstrate the company's involvement when limited information is provided.

The percentage of the portfolio designated as 'low income housing' or 'affordable property' is based on company disclosures on the basis of the community or jurisdiction in which the properties exist.

Inclusions

- Properties reported as affordable or low income housing units.
- Properties leased or sold below market value.
- Senior living properties that offer independent living facilities.
- Student housing facilities offered below market value.
- Properties leased to SMEs as they are typically found to be sold or leased at a lower price point.

Exclusions

- Any residential property not explicitly offered as affordable, as low-income housing, or at a rate lower than market value.
- Properties that provide medical care, such as hospice, which usually rent at a premium.
- Senior living facilities marketed as luxurious or high-end.
- Hotels and aparthotels.

Education

Education is a category under the empowerment theme. It includes revenue from education-related products and services. Under the overarching framework of Sustainable Impact Metrics, it has been identified as a category deriving positive impact by empowering populations to increase education literacy, and workforce skillsets.

The key criteria for the education screen focuses on content with a direct link to increasing knowledge and skills. Ancillary services, like distributors of the content, are excluded as they do not have direct impact on enhancing the education of individuals.

Inclusions

- Educational books.
- Schools and institutions.
- Professional courses and trainings that provide a certification.
- Education services supporting kindergarten, primary, secondary, undergraduate, and postgraduate education.
- Providers of tutorial services or study materials / content for undergraduate or postgraduate examinations.
- Provider of tutoring services, study material for non-degree exams such as TOEFL, GMAT, GRE, English language skills or other professional exams such as CFA.

Exclusions

- General literature or illustrated books.
- Software platforms that distribute content that was developed by others.
- TV programs, newspapers and magazines.
- Product related training course.
- Products or services sold to education providers (such as computers).
- Subscription-based tutoring services not for a specific course.
- Tutoring services not for a specific course.
- Vocational training sources/programs.
- Any educational program that is being offered free of cost.

SME lending

SME lending is a category under the empowerment theme. It includes interest earned from banks and non-banking financing companies on loans to micro, small, and medium-sized enterprises (“SMEs”).

The SME Financing category is calculated using the following formula:

$$= Net\ Interest\ Income \times \frac{Percentage\ of\ loans\ to\ SMEs}{Total\ sales}$$

Information on net interest income, percentage of loans to SMES, and total sales must be disclosed by the company. While no estimation is applied in this category, processes exist to reasonably derive the information from other company disclosed figures.

1. If not disclosed as a percentage already, the percentage of loans to SMEs can be calculated as

$$= \frac{Outstanding\ loans\ to\ SMEs\ at\ fiscal\ year\ end}{Total\ outstanding\ loans\ at\ fiscal\ year\ end}$$

2. If only the percentage growth in SME loans is disclosed, then the percentage of loans can be estimated using the growth rate and the previous year’s SME loans.
3. If exposure at default is disclosed and includes SME loans – so long as it is not risk weighted or risk multiplied – this information can be used to derive the percentage of SME loans in the portfolio.

If loans to SMES are not provided in the company disclosed reposts, data from other sources such as regulatory disclosures (e.g., U.S. call reports or EU_CR1 template under Pillar 3) are used.

For companies with a demonstrated exposure to SMEs that do not provide additional information regarding the proportion of SME loans, MSCI ESG Research applies a value of 0.05% of revenue to demonstrate the company’s involvement.

While development banks provide resources to support economic, social, and environmental progress, the funding is usual indirect via a sovereign intermediary who distributes the funds. Due to this indirect involvement, development banks do not commonly display a percentage of revenue from SME finance in the Sustainable Impact Metrics dataset.

Inclusions

- Direct lending to micro and SMEs, short and long term.
- Credit guarantees for SMEs.
- Factoring services for SMEs.

Exclusions

- All other financial service products offered to SMEs including credit cards.
- Loans to self-employed individuals.
- Mutual funds that invest in SMEs.
- Indirect lending to SMEs, as is often the case for development banks or other financial institutes.

Connectivity

Connectivity is a category under the Empowerment theme. It includes products and services that bridge the digital divide and support underserved communities through better connectivity to information and communication. It was added to the MSCI Sustainable Impact Metrics framework in 2020.

Eligible services must be provided in Least Developed Countries (LDCs) to justify the greatest additional positive impact to society. LDCs are low-income countries with severe impediments to sustainable development. They are defined by the United Nations' Committee for Development and are reviewed every three years. [11]

Companies providing data roaming services in LDCs would be included only if there is evidence of international carrier agreements and subsequent evidence of revenue sharing or revenue being derived from such involvement.

Inclusions

- Products and services that help reduce digital divide in Least Developed Countries (LDCs) through development of telecommunications infrastructure.
- Access to internet communication in LDCs including internet service providers (cable internet, digital subscriber line, fiber broadband, WiMAX and wireless internet services).
- Telecommunication equipment provided to internet service providers including transceiver stations, transmission lines, multiplexers, digital switches, communication satellites, etc.
- Repair services for qualifying infrastructure/ service.
- Ethernet spine switches.

Exclusions

- Products and services that are not explicitly intended to provide or support internet access in the LDCs or individual use products that require network infrastructure. Examples included:
    - Consumer equipment such as modems, mobile devices, home wireless routers.
    - Raw material used in the construction of telecommunication equipment such as copper, glass, or plastic.
    - 2G wireless internet or 56.6K dial up access.
    - Cognitive WiFi.

[11] More information on LDCs can be found here: https://www.un.org/development/desa/dpad/least-developed-country-category.html

Appendix

Summary of methodology updates

MSCI ESG Research reviews and updates methodology documents on an ongoing basis to reflect methodology adjustments and enhancements. Recent key enhancements to MSCI Sustainable Impact Metrics include:

1. 2021 – Consistent with a gradual transition from fossil fuel to sustainable energy sources, starting in 2021 MSCI ESG Research no longer considers natural gas co-generation sub-category as an eligible sustainable activity under the alternative energy category.
2. 2020 - Addition of new Sustainable Impact Metric categories: sustainable agriculture and connectivity.
3. 2020 - Granularization of environmental solutions revenue data.

Revenue estimation examples

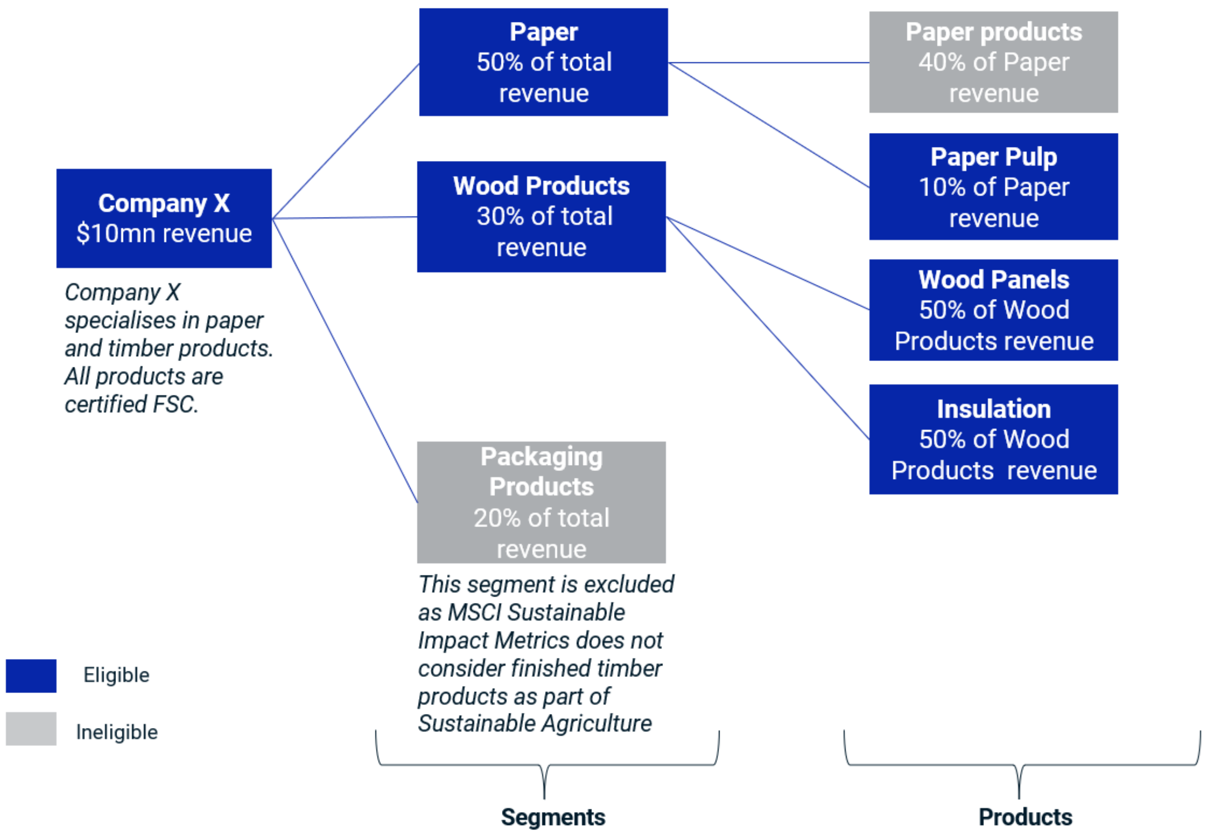
Example 1: Revenue from sustainable agriculture and insulation is disclosed by the company.

Company X specializes in paper and timber products which are all certified by the Forest Stewardship Council (FSC). The company reports three different business segments: paper, wood products and packaging products. The nature of the business suggests that revenue would be eligible for sustainable agriculture and energy efficiency.

Within the first reported segment, the paper business line would not be considered part of Sustainable Impact Metrics' methodology for sustainable agriculture, as finished products are excluded. Similarly, the packaging products segment would also be excluded for the same reasons. However, upon closer look on a product level, the company sells paper pulp which would be eligible.

In the second reported segment, wood products, the only product that would be eligible is insulation as part of the energy efficiency category. Lastly, the packaging products segment is also excluded as they are a finished product.

Exhibit 7: Company X revenue split



Source: MSCI Research, as of February 2024.

Example 2: Alternative energy revenue is estimating using a proportional unit split.

Company Y is a utilities company that generates power from a diversified fuel mix which includes hydropower, wind, solar and natural gas. Revenue from power generated by each fuel source is not disclosed, however the company reports power capacity for each of its power plants.

There are two main ways that alternative energy revenue can be estimated in the absence of reported revenue data:

1) Using power generation (MWh): electricity generated by hour.

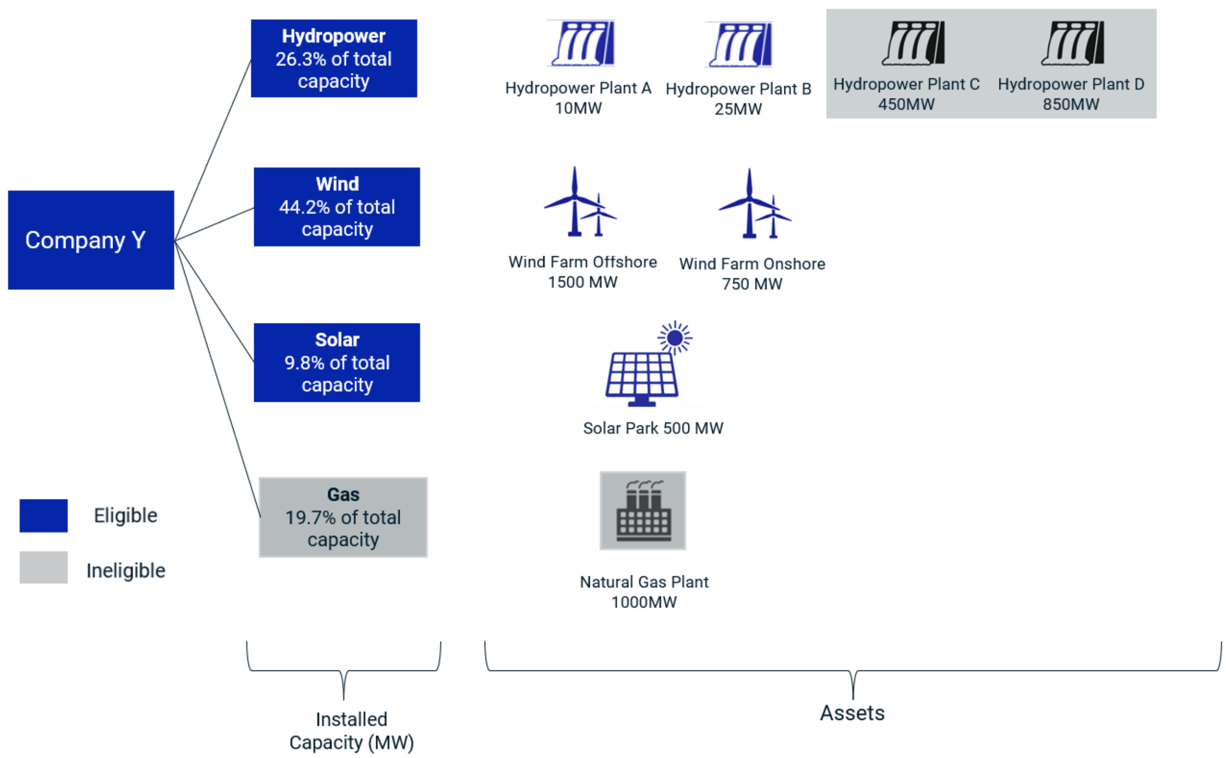
2) Using installed capacity (MW): the maximum output an electricity generator can handle. In the absence of power generation, the best available data is looking at plant capacity to understand the share of revenue available.

Based on eligibility, MSCI ESG Research can assess the proportion of revenue breakdown by using proportion of power capacity as proxy. In this example, only two hydropower plants are eligible as they are less than 25 MW. Similarly, MSCI ESG Research has excluded natural gas which is not eligible in the methodology.

Exhibit 8: Fuel mix breakdown for Company Y

Fuel Mix	Capacity (MW)	Capacity (%)
Large Hydro (> 25 MW)	1300	25.6%
Small Hydro (< 25MW)	35	0.7%
Wind	2250	44.2%
Solar	500	9.8%
Gas	1000	19.7%

Exhibit 9: Company Y revenue split.



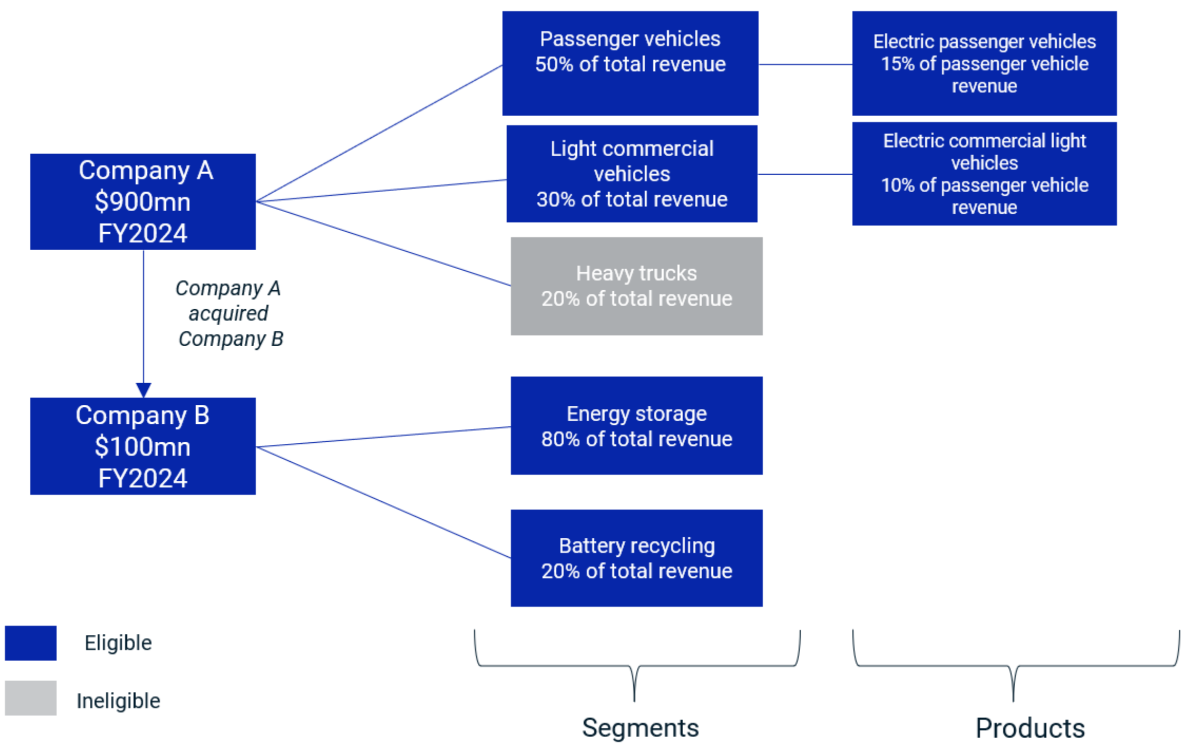
Source: MSCI ESG Research, as of February 2024. Note: Only small hydro is included as eligible in the Sustainable Impact Metrics methodology.

Example 3: Revenue estimation for corporate actions in the absence of pro forma revenue post transaction.

Company A is a transportation company which acquires Company B, a battery company.
If MSCI ESG Research determines the corporate action would have an impact on a company's involvement and revenue, forward-looking estimates for the year of the transaction would be created. In simple terms, the acquiring entity would incorporate the attributes of the acquired entity including assets and revenues. Analysts would use all available disclosed information to calculate new revenue estimates for business activities.

Company A total revenue for FY 2024 = USD900mn
Company B Electric Vehicles estimated revenue for FY 2024 = 12.5%

Company B total revenue for FY 2024 = USD100mn
Company B Battery Storage estimated revenue for FY 2024= 80%
Company B Recycling Solutions estimated revenue for FY2024=20%

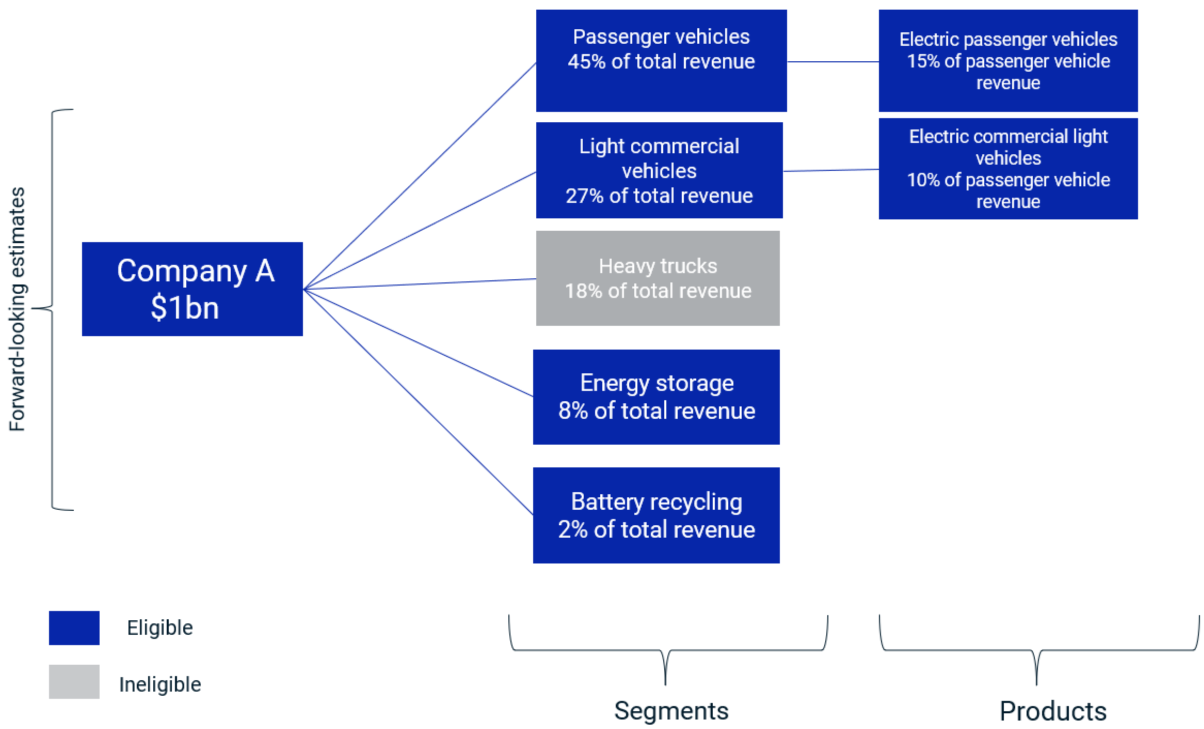


Source: MSCI Research, as of February 2024.

If the acquiring entity, Company A does not disclose pro forma revenue post-transaction, then estimates are calculated by way of simple combination of the two entities' revenues. The following year, when the surviving entity publishes its new annual filing, revenue estimates are reviewed and updated as necessary.

COMPANY A forward-looking revenue estimates FY2025 = USD1bn

- Electric Vehicles estimated revenue for FY 2025 = 10.5%
- Battery Storage estimated revenue for FY 2025= 8%
- Recycling Solutions estimated revenue for FY2025=2%



Source: MSCI Research, as of February 2024.

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