International Platform on Sustainable Finance

Common Ground Taxonomy Multi-Jurisdiction Activity Tables

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Multi-jurisdiction Common Ground Taxonomy (CGT) Methodology

Contents

Disclaimer

The present analysis represents a technical work based on comparison between the EU, China, and Singapore-Asia taxonomies and is not legally binding for IPSF member jurisdictions. The result can be used to enhance the interoperability of taxonomies, whilst it does not create either a 'common' or single standard that is mandatory for IPSF member jurisdictions.

Scope of analysis

Objectives and screening criteria

The European Union[1]

This analysis of Multi-jurisdiction CGT covers only the climate change mitigation objective of the EU Taxonomy and corresponding substantial contribution technical screening criteria for the activities in scope of the Multi-jurisdiction CGT. The analysis of Multi-jurisdiction CGT looked in detail at each of the technical screening criteria for each activity and, where relevant, considered other cross-referenced EU regulation.

It does not cover the Do No Significant Harm and the Minimum Safeguards components of the EU Taxonomy.

China[2]

The China taxonomy defines the economic activities that are supportive of environment improvement, climate change mitigation and more efficient resource utilization objectives, and mainly include the financing, operation and risk management for projects in areas such as environmental protection, energy savings, clean energy, green transportation, and green buildings as required in the Guidelines for Establishing the Green Financial System[3] . The China taxonomy does not map each activity to a single specific objective like in the EU or Singapore Taxonomies. To facilitate the technical analysis the activities serving the climate change mitigation objective of the China taxonomy were extracted and analysed for the multi-jurisdiction mapping and comparison exercise.

The China Taxonomy has four levels of granularity which includes a description for each of the requirements listed in the explanatory notes of the Green Industry Guiding Catalogue (2019 Edition) and the corresponding "instructions/conditions" of the China Taxonomy

[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02021R2139-20240101
[2] http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/4342400/2021091617180089879.pdf
[3] http://www.pbc.gov.cn/en/3688110/3688172/4048320/3712404/index.html

(2021). The relevant regulations, codes and standards referred in the China Taxonomy were analysed on a best-efforts basis to understand the comparability with criteria/thresholds in the other two taxonomies.

The technical criteria comparison does not dive into the compliance requirements referring to China's national safety, environmental protection and quality regulations and standards, which reflect the DNSH Principles and the Minimum Safeguards component of the China Taxonomy in market practice.

Singapore[4]

This Multi-jurisdiction CGT analysis covers the climate mitigation objective of the Singapore-Asia Taxonomy for Sustainable Finance (SAT). The SAT was developed by the Green Finance Industry Taskforce (GFIT) convened by the Monetary Authority of Singapore (MAS), building upon extensive process of public consultations. The SAT sets out detailed thresholds and criteria for defining green and transition activities that contribute to climate change mitigation across eight focus sectors. The analysis of Multi-jurisdiction CGT looked in detail at each of the technical screening criteria for each activity, and where relevant, considered other domestic and international standards and certifications.

It does not cover the Do No Significant Harm and Minimum Safeguards components of the SAT.

[4] https://www.mas.gov.sg/-/media/mas-media-library/development/sustainable-finance/singaporeasia-taxonomy-updated.pdf

Section mapping
Mapping against ISIC as a neutral code

The International Standard Industrial Classification of All Economic Activities (ISIC) is the international reference classification. A majority of countries around the world have used ISIC as their national activity classification or derived from ISIC.

The statistical classification of economic activities used in the EU called NACE (Nomenclature statistique des Activités économiques dans la Communauté européenne), is derived from ISIC (the United Nations' International Standard Industrial Classification) of all Economic Activities. The Industrial Classification for National Economic Activities (ICNEA 2017) of China is also derived from the UN ISIC Rev.4. with additional details at lower levels. To enable interoperability with other taxonomies, the SAT's classification of activities was also derived from the ISIC.

The reference to a common classification system allowed the comparison of taxonomies based on a neutral code rather than taking one taxonomy to compare the other. It also helped to group activities in a neutral way when there were differences between the scope of the activities in the taxonomies. For example, many construction activities could be classified within the construction headlines sector or within the individual sectors that they relate to (e.g. construction of waste treatment facilities) – wherever possible, it is referred to ISIC for this grouping.

While useful, in many sectors and activities, ISIC (Rev 4.) is not sufficiently granular to capture all the detailed mapping and comparison that is required. This is particularly the case for emerging potentially scalable technologies, such as hydrogen or carbon capture, utilisation and storage (CCUS). Industrial activities are intended to cover economic activities rather than environmental objectives which means that, for example, "Electric power generation, transmission and distribution" is the most granular level of detail available within ISIC for electricity generation but the type of fuel that is used is not covered.

For this reason, the mapping, while following ISIC at the Section and Division levels, also goes beyond ISIC as depicted in the image below.

There were also some areas like Carbon Capture that do not fit into an ISIC classification framework. These were put under 'Other' at the end.

ISIC Section	ISIC Division	Group	Class	Beyond ISIC
D, Electricity, gas, steam and air conditioning supply	35, Electricity, gas, steam and air conditioning supply	351, Electric power generation, transmission and distribution	3510,Electric power generation, transmission and distribution	• Electricity generation from ocean energy technologies • Electricity generation from hydropower • Electricity generation using solar photovoltaic technology
A, Agriculture, forestry and fishing	02,Forestry and logging	021,Silviculture and other forestry activities	0210,Silviculture and other forestry activities	• Afforestation • Forest Management • Rehabilitation and restoration of forests

Updated scenario analysis to enable inclusion of more jurisdiction

Description of approach: what is a scenario analysis methodology and why was it used?

Once the mapping was complete, activities that were present in at least two taxonomies were selected to be included in the Multi-jurisdiction CGT. Subsequently the detailed description of the scope and technical screening criteria for each of the activities were compared to ascribe each line with a scenario based on their characteristics in terms of comparability:

- For activities with same or interoperable metrics, the comparability analysis focused on level of stringency of outlined criteria
- For activities for which metrics differed, the comparability analysis focused on identification of commonalities in requirements of outlined criteria

This methodology allowed for analysis without requiring any taxonomies to change and without requiring any taxonomies to accept other standards or laws as equivalent to their own criteria.

This was a core underpinning of the CGT – that the common ground is based on what currently exists rather than how further common ground might be found if small changes were made to any of the taxonomies.

Multi-jurisdiction common ground taxonomy scenario description

Scenario 1: Criteria across all taxonomies are equally stringent

- Scenario 1 was assigned to activities in which the scope and associated criteria are all fully aligned.
- In this case, the criteria of the given Multi-jurisdiction CGT activity are aligned with all analysed taxonomies.
- Scenario 1 is only applicable to cases where all analysed taxonomies have a corresponding activity

Example: The activity “Electricity generation from wind power” has same criteria across all 3 taxonomies.

Scenario 2: Criteria in one of the taxonomies are the most stringent and/or detailed

- Scenario 2 was assigned to activities in which the alignment in scope has been identified but where the screening criteria of one of the taxonomies (Taxonomy X) were either narrower in scope or the most stringent and/or more detailed than the other taxonomies.
- In this case, the criteria of Taxonomy X will be the substantial contribution criteria of the Multi-jurisdiction CGT.
- Note, if one of the analysed taxonomies does not entail the described activity, the

criteria stringency analysis only takes into account taxonomies in which the given activity exists.

Example: For the activity, “Electricity generation using solar PV”, China taxonomy requires that the technology used for solar power generation meets certain efficiency thresholds.
On the other hand, the EU and Singapore taxonomies define all activities related to power generation from solar PV technology as directly eligible.
Thus, the criteria in China taxonomy is the most stringent and will be the substantial contribution criteria of the Multi-jurisdiction CGT.

Scenario 3: Two or more taxonomies have the same criteria, which are more stringent or detailed than the remaining ones

- Scenario 3 was assigned to activities in which the alignment in scope has been identified but where the screening criteria of more than one of the taxonomies (Taxonomy X and Taxonomy Y) were equally either narrower in scope or more stringent and/or detailed than the remaining taxonomies.
- In this case, the criteria of Taxonomy X and Y will be the substantial contribution criteria of the Multi-jurisdiction CGT.
- Note, if one of the analysed taxonomies does not entail the described activity, the criteria stringency analysis only takes into account taxonomies in which the given activity exists.

Example: For the activity, “Electricity generation from hydropower”, both the EU and Singapore taxonomies have the same criteria, while criteria in China taxonomy do not specify detailed requirements. Thus, the criteria in EU and Singapore taxonomy are the most stringent and will be the substantial contribution criteria of the Multi-jurisdiction CGT.

Scenario 4: Identifiable overlap pursuant to the narrative description of the green activities; however, the stringency of criteria is not comparable across taxonomies due to varied technical metrics or technological details

- Scenario 4 was assigned to activities in which the overlap in scope has been identified, however the stringency of the criteria across the taxonomies is not comparable across taxonomies.
- Given that it was challenging to establish substantial contribution criteria, it is agreed that the described activity would have to meet criteria of at least one of the analysed taxonomies.
- Where possible, a mapping of the common requirements of at least two analysed taxonomies is provided as reference.
- Note, if one of the analysed taxonomies does not entail the described activity, the criteria stringency analysis only takes into account taxonomies in which the given activity exists.

Example: For the activity "Electricity generation from bio-energy" most of the criteria in all of the taxonomies are qualitative and refer either to regulations or guidelines as well as standards. While it is currently challenging to compare stringency of the technical criteria across taxonomies, a mapping of the common requirements across the analysed taxonomies is provided.

Scenario 5: Lack of commonality

- Scenario 5 was assigned to activities for which it was difficult to define and map the commonality in scope across taxonomies.
- Scenario 5 is excluded from the multi-jurisdictional CGT.
- Note, if one of the analysed taxonomies does not entail the described activity, the criteria stringency analysis only takes into account taxonomies in which the given activity exists.

CGT Activity Cards Templates

Template of the activity card (Scenario 1-3)

Number and Activity Name			
1. Scope of activity			
2. Scenario analysis for Multi-jurisdiction CGT			
3. Corresponding activities	China taxonomy:	EU taxonomy:	SAT:
4. Multi-jurisdiction CGT substantial contribution criteria			
5. Additional notes			

Glossary of the terminology used in the activity card (Scenario 1-3):

Terminology of the sections in the Multi-jurisdiction CGT Activity card:

1. Number and activity name:
    - This section labels the activity
2. Description of the scope of activity:
    - This section presents the scope of activity for which the Multi-jurisdiction CGT substantial contribution criteria are provided, it is identified based on the comparison of the description of corresponding activities in each of the analysed taxonomies

3. Scenario analysis for Multi-jurisdiction CGT:
    - This section outlies under which scenario the given activity has been classified as well as provides justification for its selection
4. Corresponding activities
    - This section identifies corresponding activities in the analysed taxonomies
5. Multi-jurisdiction CGT substantial contribution criteria:
    - This terminology is used when the common ground comparison is equivalent to Scenario 1, 2 and 3, i.e. the criteria can be clearly compared across all selected taxonomies, and the stringency of the criteria can be assessed.
    - This section refers to the criteria identified based on highest level of stringency and international interoperability.
6. Additional notes (where applicable):
    - This section provides additional notes related to the analysed criteria e.g. recommended methodologies

Template of the activity card (Scenario 4)

Number and Activity Name			
1. Scope of activity			
2. Scenario analysis for Multi-jurisdiction CGT			
3. Corresponding activities	China taxonomy:	EU taxonomy:	SAT:
4. Multi-jurisdiction CGT substantial contribution criteria			
5. Common requirements across analysed taxonomies			
6. Additional notes			

Glossary of the terminology used in the activity card (Scenario 4):

Terminology of the sections in the Multi-jurisdiction CGT Activity card:

1. Number and activity name:
    - This section labels the activity
2. Description of the scope of activity:
    - This section presents the scope of activity for which the Multi-jurisdiction CGT substantial contribution criteria are provided, it is identified based on the comparison of the description of corresponding activities in each of the analysed taxonomies
3. Scenario analysis for Multi-jurisdiction CGT:
    - This section outlies under which scenario the given activity has been classified as well as provides justification for its selection
4. Corresponding activities
    - This section identifies corresponding activities in the analysed taxonomies
5. Multi-jurisdiction CGT substantial contribution criteria:
    - While for Scenario 1-3 this section refers to the criteria identified based on highest level of stringency and international interoperability, in scenario 4 substantial contribution criteria are met if the activity meets criteria of at least one of the analysed taxonomies.
6. Common requirements across analysed taxonomies
    - This terminology is used when the common ground comparison is equivalent to Scenario 4, i.e. it is currently challenging to compare stringency of the substantial contribution criteria across taxonomies,
    - This section provides mapping of the common requirements across substantial contribution criteria of the analysed taxonomies
7. Additional notes (where applicable):
    - This section provides additional notes related to the analysed criteria e.g. recommended methodologies

A: Agriculture, forestry and fishing

ISIC Mapping

ISIC Section	ISIC Division	Common Ground Taxonomy category
A. Agriculture, forestry and fishing	1. Crop and animal production, hunting and related service activities	A1. Crop and Animal Production
	2. Forestry and Logging	A2. Forestry and Logging

A1. Crop and Animal Production

Number and Activity Name	A1.1 Perennial and non-perennial crops		
Scope of activity	Perennial crops (Palm (oil), coffee, cocoa, tea, rubber trees, nuts, fruits); Non-perennial crops (rice, wheat, soybeans, corn, cassava, sugar cane, sugar beet, tobacco, vegetables) includes conventional, protected and hydroponic systems		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies; Justification of the scenario selection: while China relies heavily on national regulation, SAT refers to certification schemes, which pose challenge for direct comparison. There is no EU corresponding activity.		
Corresponding activities	China taxonomy: 4.1.3.1 Green Organic Agriculture 4.1.2.1 Control and Prevention of Crop Diseases and Insect Pests	SAT: 10.1. Perennial and non-perennial crops	EU taxonomy: Activity is not in EU taxonomy
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		N/A
Common requirements across analysed taxonomies	Following activities have been identified by both taxonomies as eligible • Organic farming, • Use of organic and biofertilisers; or • Use of physical and biocontrol of pathogens, pests and weeds; • Use of superior inputs which enables production with less resources e.g. superior seeds obtained through plant breeding		N/A

Number and Activity Name	A1.2 Animal Production		
Scope of activity	Animal production (bovine cattle and poultry)		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies; Justification of the scenario selection: Both the China and SAT criteria are referred to different standards and certifications for compliance and a comparison of them is not possible. There is no EU corresponding activity		
Corresponding activities	China taxonomy: 4.1.3.2 Green Animal Husbandry	SAT: 10.2. Animal production	EU taxonomy: Activity is not in EU taxonomy
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		N/A
Common requirements across analysed taxonomies	Following activities have been identified by both taxonomies as eligible: Bio-digesters (Bio-septic tank)		N/A

A2. Forestry and Logging

	A2.1 Afforestation		
Scope of activity	Establishment of forest through planting, deliberate seeding or natural regeneration on land that, until then, was under a different land use or not used. Afforestation implies a transformation of land use from non-forest to forest, in accordance with the Food and Agriculture Organization of the United Nations ('FAO') definition of afforestation, where forest means a land matching the forest definition as set out in national law, or where not available, is in accordance with the FAO definition of forest. Afforestation may cover past afforestation as long as it takes place in the period between the planting of the trees and the time when the land use is recognized as a forest.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies; Justification of the scenario selection: Both the EU and SAT criteria are more stringent than China taxonomy, as they provide detailed processes, while China taxonomy includes the enabling types of projects for which limited criteria details are provided.		
Corresponding activities	China taxonomy: 4.2.2.1 Forest Resources Cultivation Industry 4.2.2.3 Forest Carbon Sequestration, Tree and Grass Planting, Forestry Seedlings, and Ornamental Flowers 4.2.1.5 Projects of turning farmlands back to forests or grasslands and restoring grazing lands to grasslands 4.2.1.8 Comprehensive treatment of key ecological areas 4.2.1.10 Comprehensive treatment of desertification, rocky desertification and soil erosion	EU taxonomy: 1.1 Afforestation	SAT: 5.2. Forestry plantation
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		
Common requirements across analysed taxonomies	The SAT taxonomy criteria are benchmarked against numerous private and public certification schemes, each aligning with EU criteria to varying degrees. China's taxonomy does not include details with this level of granularity.		

	Key alignment points include: detailed description of the area based on its classification in the land registry; clearly defined management goals and major constraints; comprehensive strategies and activities planned to achieve these goals, including anticipated operations throughout the entire forest cycle; and thorough assessment of forest-related risks, such as forest fires, pest infestations, and disease outbreaks. These alignments aim to prevent, reduce, and control risks, ensuring robust protection and adaptation measures against residual threats.

Number and Activity Name	A2.2 Rehabilitation and restoration of forests, including reforestation and natural forest regeneration after an extreme event		
Scope of activity	Rehabilitation and restoration of forests as defined by national law, including reforestation and natural forest regeneration after an extreme event. The economic activities in this category imply no change of land use and occurs on degraded land matching the forest definition as set out in national law, or where not available, in accordance with the FAO definition of forest.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies; Justification of the scenario selection: Both the EU and SAT criteria are more stringent than China taxonomy, as they provide detailed processes, China taxonomy criteria have different approach, focusing on enabling types of projects for which criteria they offer limited details.		
Corresponding activities	China taxonomy: 4.2.1.1 Protection of Natural Forest Resources 4.2.1.5 Projects of turning farmlands back to forests or grasslands and restoring grazing lands to grasslands □ 4.2.1.7 Protection and restoration of national ecological security barriers	EU taxonomy: 1.2 Rehabilitation and restoration of forests, including reforestation and natural forest regeneration after an extreme event	SAT: 5.3. Conservation, restoration, and maintenance of natural/pristine forests
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		
Common requirements across analysed taxonomies	The SAT taxonomy criteria are benchmarked against numerous private and public certification schemes, each aligning with EU criteria to varying degrees. China's taxonomy does not include details with this level of granularity. Key alignment points include: detailed description of the area based on its classification in the land registry; clearly defined management goals and major constraints; comprehensive strategies and activities planned to achieve these goals, including anticipated operations throughout the entire forest cycle; and thorough assessment of forest-related risks, such as forest fires, pest infestations, and disease outbreaks. These alignments aim to prevent, reduce, and control risks, ensuring robust protection and adaptation measures against residual threats.		

Number and Activity Name	A2.3 Forest management		
Scope of activity	Forest management as defined by national law. Where national law does not contain such a definition, forest management corresponds to any economic activity resulting from a system applicable to a forest that influences the ecological, economic or social functions of the forest. Forest management assumes no change in land use and occurs on land matching the definition of forest as set out in national law, or where not available, in accordance with the FAO definition of forest		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies; Justification of the scenario selection: Both the EU and SAT criteria are more stringent than China taxonomy, as they provide detailed processes, while China taxonomy includes the enabling types of projects for which limited criteria details are provided.		
Corresponding activities	China taxonomy: 4.2.1.1 Protection of natural forest resources 4.2.2.1 Forest Resources Cultivation Industry 4.2.2.2 Under-forest economy of planting and animal farming industry	EU taxonomy: 1.3 Forest management	SAT: 5.1. Sustainable forest management
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		
Common requirements across analysed taxonomies	The SAT taxonomy criteria are benchmarked against numerous private and public certification schemes, each aligning with EU criteria to varying degrees. China's taxonomy does not include details with this level of granularity. Key alignment points include: detailed description of the area based on its classification in the land registry; clearly defined management goals and major constraints; comprehensive strategies and activities planned to achieve these goals, including anticipated operations throughout the entire forest cycle; and thorough assessment of forest-related risks, such as forest fires, pest infestations, and disease outbreaks. These alignments aim to prevent, reduce, and control risks, ensuring robust protection and adaptation measures against residual threats.		

Number and Activity Name	A2.4 Conservation forestry		
Scope of activity	Forest management activities with the objective of preserving one or more habitats or species. Conservation forestry assumes no change in land category and occurs on land matching the forest definition as set out in national law, or where not available, in accordance with the FAO definition of forest.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies; Justification of the scenario selection: Both the EU and SAT criteria are more stringent than China taxonomy, as they provide detailed processes, China taxonomy criteria have different approach, focusing on enabling types of projects for which criteria they offer limited details		
Corresponding activities	China taxonomy: 4.2.2.1 Forest Resources Cultivation Industry 4.2.1.3 Construction and operation of nature reserves 4.2.2.5 Protection and operation of national parks, world's heritages, national-level scenic and historic interest areas, national forest parks, national geo-parks, and national wetland parks	EU taxonomy: 1.4 Conservation forestry	SAT: 5.3. Conservation, restoration, and maintenance of natural/pristine forests
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		
Common requirements across analysed taxonomies	The SAT taxonomy criteria are benchmarked against numerous private and public certification schemes, each aligning with EU criteria to varying degrees. China's taxonomy does not include details with this level of granularity. Key alignment points include: detailed description of the area based on its classification in the land registry; clearly defined management goals and major constraints; comprehensive strategies and activities planned to achieve these goals, including anticipated operations throughout the entire forest cycle; and thorough assessment of forest-related risks, such as forest fires, pest infestations, and disease outbreaks. These alignments aim to prevent, reduce, and control risks, ensuring robust protection and adaptation measures against residual threats.		

C: Manufacturing

ISIC Mapping

ISIC Section	ISIC Division	Common Ground Taxonomy category
C. Manufacture	10 – 19, 21-23, 31	Not covered
	20. Manufacture of chemicals and chemical products	C1. Manufacture of low-carbon footprint materials
	24. Manufacture of basic metals	
	27. Manufacture of electrical equipment	C2. Manufacture of clean energy technologies
	28. Manufacture of machinery and equipment n.e.c.	
	29. Manufacture of motor vehicles, trailers and semi-trailers	C3. Manufacture of clean energy vehicles and parts
	30. Manufacture of other transport equipment	
	28. Manufacture of machinery and equipment n.e.c.	C4. Manufacture of recycling equipment
	25. Manufacture of fabricated metal products, except machinery and equipment	
	26. Manufacture of computer, electronic and optical products	
	27. Manufacture of electrical equipment	C5. Manufacture of energy-saving equipment
	28. Manufacture of machinery and equipment n.e.c.	

C1. Manufacture of low-carbon footprint materials

Number and Activity Name	**C1.1.1 Manufacture of selected high value chemicals**		
Scope of activity	Manufacture of selected high value chemicals (HVC): ethylene; propylene; butadiene.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: SAT has the most stringent quantitative carbon intensity threshold for the manufacturing of selected HVC, while the EU Taxonomy also has quantitative threshold, though less ambitious, the China taxonomy only entails qualitative requirements.		
Corresponding activities	China taxonomy: 2.1.3.2 Transformation of major Industries into cleaner production	EU Taxonomy: 3.14. Manufacture of organic basic chemicals	SAT: 4.1. Manufacture of basic chemicals
Multi-jurisdiction CGT substantial contribution criteria	Carbon intensity cannot exceed 0.51tCO2e/t of HVC in scope The following emissions should be accounted for when comparing to the thresholds: • Scope 1 emissions which include all direct emissions from the production processes: emissions generated during the chemical reactions, emissions from fuel combustion onsite • Scope 2 emissions which includes indirect emissions from the energy imported from off-site.		
Additional information	• Fossil gas (used as a fuel source and/or feedstock): Only eligible for existing facilities prior to 2030Biomass (used as a fuel source and/or feedstock) complies with the criteria applicable for biomass sourcing set out in the relevant section of the CGT for bio-energy criteria • Hydrogen (used as a fuel source and/or feedstock) complies with the criteria applicable for manufacturing of hydrogen set out in the relevant section of the CGT • Facilities using heat supplied from alternative sources, such as geothermal, solar thermal, and waste heat recovery: The heat source must comply with the CGT criteria for each source of energy • Criteria are only applicable to the activity where production rate of selected high value chemicals amounts to at least 50% of annual production by volume of a given facility[5]		

[5] The starting point for eligibility is to consider assets and projects where the production rate of the basic chemicals in scope are at least 50% of the total amount of products produced in a year by the relevant asset or project. This is a minimum set as it is understood that a facility producing more than 50% of other coproducts is not viewed as a facility dedicated to chemicals in scope, and the investment may be going into the production of products with high carbon intensities. This also mitigates the risk of greenwashing due to artificially making basic chemicals products low carbon by allocating more carbon emissions to other products not in scope of this Criteria.

Number and Activity Name	C1.1.2 Manufacture of selected aromatics		
Scope of activity	Manufacture of selected aromatics: benzene, xylene, toluene		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: EU Taxonomy and SAT have equally stringent quantitative threshold, while China taxonomy only entails qualitative requirements		
Corresponding activities	China taxonomy: 2.1.3.2 Transformation of major Industries into cleaner production	EU Taxonomy: 3.14. Manufacture of organic basic chemicals	SAT: 4.1. Manufacture of basic chemicals
Multi-jurisdiction CGT substantial contribution criteria	GHG emissions are lower than 0.0072 tCO2e/t of complex weighted throughput The following emissions should be accounted for when comparing to the thresholds: • Scope 1 emissions which include all direct emissions from the production processes: emissions generated during the chemical reactions, emissions from fuel combustion onsite • Scope 2 emissions which includes indirect emissions from the energy imported from off-site.		
Additional notes	• Fossil gas (used as a fuel source and/or feedstock): Only eligible for existing facilities prior to 2030 • 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. • Biomass (used as a fuel source and/or feedstock) complies with the criteria applicable for biomass sourcing set out in the relevant section of the CGT for bio-energy criteria • Hydrogen (used as a fuel source and/or feedstock) complies with the criteria applicable for manufacturing of hydrogen set out in the relevant section of the CGT • Facilities using heat supplied from alternative sources, such as geothermal, solar thermal, and waste heat recovery: The heat source must comply with the CGT criteria for each source of energy • Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018(147) or ISO 14064-1:2018(148). • Quantified life-cycle GHG emissions are verified by an independent third party.		

	• Criteria are only applicable to the activity where production rate of selected high value chemicals amounts to at least 50% of annual production by volume of a given facility[6]		
Number and Activity Name	**C1.1 Manufacture of other organic basic chemicals**		
Scope of activity	Manufacture of: (a)high value chemicals (HVC): (i) acetylene; (b) Aromatics: (i) mixed alkylbenzenes, mixed alkylnaphthalenes other than HS 2707 or 2902; (ii) cyclohexane; (viii) ethylbenzene; (ix) cumene; (x) biphenyl, terphenyls, vinyltoluenes, other cyclic hydrocarbons excluding cyclanes, cyclenes, cycloterpenes, benzene, toluene, xylenes, styrene, ethylbenzene, cumene, naphthalene, anthracene; (xi) benzol (benzene), toluol (toluene) and xylol (xylenes) (xii) naphthalene and other aromatic hydrocarbon mixtures (excluding benzole, toluene, xylene). (c) vinyl chloride; (d) styrene; (e) ethylene oxide; (f) monoethylene glycol; (g) adipic acid.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: EU Taxonomy has quantitative threshold, while China taxonomy only entails qualitative requirements There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 2.1.3.2 Transformation of major Industries into cleaner production	EU Taxonomy: 3.14. Manufacture of organic basic chemicals	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	GHG emissions from the organic basic chemicals in scope production processes are lower than: (a) for HVC: 0,693 tCO2e/t of HVC; (b) for aromatics: 0,0072 tCO2e/t of complex weighted throughput; (c) for vinyl chloride: 0,171 tCO2e/t of vinyl chloride; (d) for styrene: 0,419 tCO2e/t of styrene; (e) for ethylene oxide/ethylene glycols: 0,314 tCO2e/t of ethylene oxide/glycol; (f) for adipic acid: 0,32 tCO2e /t of adipic acid. For HVC and aromatics the following emissions should be accounted for when comparing to the thresholds:		N/A

[6] The starting point for eligibility is to consider assets and projects where the production rate of the basic chemicals in scope are at least 50% of the total amount of products produced in a year by the relevant asset or project. This is a minimum set as it is understood that a facility producing more than 50% of other coproducts is not viewed as a facility dedicated to chemicals in scope, and the investment may be going into the production of products with high carbon intensities. This also mitigates the risk of greenwashing due to artificially making basic chemicals products low carbon by allocating more carbon emissions to other products not in scope of this Criteria.

	Scope 1 emissions which include all direct emissions from the production processes: emissions generated during the chemical reactions, emissions from fuel combustion onsite Scope 2 emissions which includes indirect emissions from the energy imported from off-site.	
Additional notes	• 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	N/A

Number and Activity Name	C1.2 Manufacture of iron and steel		
Scope of activity	Manufacture of iron and steel.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies; Justification of the scenario selection: Both the EU and SAT criteria are more stringent than China taxonomy, as they provide quantitative thresholds; it is challenging to compare stringency given that the EU taxonomy focuses on GHG emissions intensity at each of the stages of the manufacturing process and SAT provides requirements according to the technology type.		
Corresponding activities	China taxonomy: 2.1.3.2 Transformation of major Industries into cleaner production[7]	EU Taxonomy: 3.9 Manufacture of basic iron and steel	SAT: 4.3. Manufacture of basic iron and steel
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		
Common requirements across analysed taxonomies	For the production of steel through the manufacturing process that entails Electric Arc Furnace, both the EU and SAT taxonomies entail criteria for the steel scrap input (not being lower than 70% for both taxonomies). For other production pathways the alignment is often dependent on CCS/CCUS. The CCS/CCUS needs to meet criteria focused around leakage rates and define permanent CO2 storage		

[7] The China activity covers broader range of industries than iron and steel.

Number and Activity Name	C1.3 Manufacture of liquid biofuel for use in transport		
Scope of activity	Manufacture of liquid biofuel for use in transport excluding biogas		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The China and EU activities has overlap with but is broader than the specified scope. EU taxonomy is explicit on the technical criteria, whilst China implies it national standards in its green industry guideline. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 3.2.2.3 Construction and operation of biomass energy utilization facilities	EU Taxonomy: 4.13. Manufacture of biogas and biofuels for use in transport and of bioliquids	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		N/A
Common requirements across analysed taxonomies	EU Criteria: 1. Agricultural biomass used for the manufacture of liquid biofuel for use in transport, such as fuel ethanol and biodiesel, complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass use 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. 2. The greenhouse gas emission savings from the manufacture of liquid biofuel for use in transport are at least 65 % in relation to the GHG saving methodology and the relative fossil fuel comparator 3. Where the CO2 that otherwise would be emitted from the Manufacture 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 China Criteria: 1. Code for Design of Liquide Biofuel Plant (GB 50957-2013) 2. Management standard for production preparation and process of biomass liquid fuel construction project (NB/T 13006-2016)		N/A

<table>
<tr><th>Number and Activity Name</th><th colspan="3">C1.4 Manufacture of cement</th></tr>
<tr><td>Scope of activity</td><td colspan="3">Manufacture of cement / cementitious product excluding manufacturing of pureplay clinker</td></tr>
<tr><td>Scenario analysis for Multi-jurisdiction CGT</td><td colspan="3">Scenario 2 – SAT criteria more stringent;
Justification of the scenario selection: While SAT and EU Taxonomy have same starting point for 2020 for quantitative thresholds, SAT has further restrictions on fuel source. There is no corresponding China activity</td></tr>
<tr><td>Corresponding activities</td><td>China taxonomy:
Activity is not in China taxonomy</td><td>EU Taxonomy:
3.7 Manufacture of cement</td><td>SAT:
4.2. Manufacture of cement</td></tr>
<tr><td>Multi-jurisdiction CGT substantial contribution criteria</td><td>N/A</td><td colspan="2">GHG emissions intensity from the cement / cementitious product* production processes are lower than: 0.416 t CO2/ t cementitious product (2025)[8]

* cementitious product means clinker, cement and cement substitutes produced by the reporting company

For the comparison purposes, calculation of the facilities' correction factor adjusted emissions intensity must be conducted to account for the cement grade being produced.

<table>
<tr><th>Cement class</th><th>Expected emissions
(t CO_2eq/ t cementitious product)</th><th>Correction factor</th></tr>
<tr><td>32.5</td><td>0.550</td><td>1.18</td></tr>
<tr><td>42.5</td><td>0.649</td><td>1.00</td></tr>
<tr><td>52.5</td><td>0.748</td><td>0.87</td></tr>
</table>
</td></tr>
<tr><td>Additional notes</td><td>N/A</td><td colspan="2">If facilities are using biomass, hydrogen, or waste as a fuel source they are eligible only if they meet the following criteria:
• Hydrogen: The hydrogen used meets criteria for hydrogen production set out in the relevant section of the CGT
• Biomass: The biomass used complies with the criteria applicable for biomass sourcing set out in the relevant section of the CGT for bio-energy criteria</td></tr>
</table>

[8] Note: emissions intensity threshold is the value that SAT envisages for 2025. The yearly threshold values forming the emissions pathway for all cement production facilities are available in Appendix L (Table 21) of SAT.

		• Waste-Derived Fuels, including Municipal Solid Waste (MSW) must meet the following criteria 1) All waste of recycling potential must be removed prior to burning in line with the waste hierarchy and 2) Municipal solid waste will not be eligible as a fuel type after 2035 And if the plant uses Carbon Capture and Storage (CCS) equipment on site, it must comply with the criteria for CCS Storage set out in the relevant section of the CGT.

Number and Activity Name	C 1.5 Manufacture of aluminium		
Scope of activity	Manufacture of aluminium through primary alumina (bauxite) process or secondary aluminium recycling		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: the SAT criteria are more stringent than the EU criteria in terms of electricity intensity threshold. There is no corresponding China activity		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU Taxonomy: 3.8 Manufacture of aluminium	SAT: 4.5 Manufacture of aluminium
Multi-jurisdiction CGT substantial contribution criteria	N/A	The activity complies with one of the following criteria: • Primary aluminium where the economic activity complies with two of the following criteria until 2025 and with all of the following criteria after 2025: • the GHG emissions do not exceed CO2e emissions intensity thresholds of 1.484 CO2e/t aluminium. • the average carbon intensity for the indirect GHG emissions does not exceed 100 g CO2e/kWh. • the electricity consumption for the manufacturing process does not exceed 14.86MWh/t Al. • Secondary aluminium – all eligible.	

Number and Activity Name	C1.6 Manufacture of plastics in primary form		
Scope of activity	Manufacture of plastics in primary form		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: the SAT criteria are more stringent than the EU criteria as they restrict single-use products. There is no corresponding China activity		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU Taxonomy: 3.17 Manufacture of plastics in primary form	SAT: 4.6 Manufacture of plastics in primary form
Multi-jurisdiction CGT substantial contribution criteria	N/A	The activity complies with one of the following criteria: • the plastic in primary form that is fully manufactured by mechanical recycling of plastic waste is directly eligible, without any further requirements incl. these focused on GHG emissions accounting; • 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 lifecycle GHG emissions of the manufactured plastic, excluding any calculated credits from the production of fuels, are lower than the lifecycle GHG emissions of the equivalent plastic in primary form manufactured from fossil fuel feedstock. • derived wholly or partially from renewable feedstock and its lifecycle GHG emissions are lower than the lifecycle GHG emissions of the equivalent plastics in primary form manufactured from fossil fuel feedstock. Lifecycle GHG emissions are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified lifecycle GHG emissions are verified by an independent third party. And food or feed crops are not used as bio-based feedstock for the manufacture of plastic in primary form. And at least 90% of the produced plastic must not knowingly be used for single use consumer products.	
Additional notes		Lifecycle GHG emissions are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified lifecycle GHG emissions are verified by an independent third party.	

Number and Activity Name	C1.7 Manufacture of carbon black		
Scope of activity	Manufacture of carbon black		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent Justification of the scenario selection: EU taxonomy and SAT have equally stringent quantitative threshold. There is no corresponding China activity		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU Taxonomy: 3.11 Manufacture of carbon black	SAT: 4.1 Manufacture of basic chemicals
Multi-jurisdiction CGT substantial contribution criteria	N/A	GHG emissions from the carbon black production processes are lower than 1,141 tCO2e per tonne of product. The following emissions should be accounted for when comparing to the thresholds: • Scope 1 emissions which include all direct emissions from the production processes: emissions generated during the chemical reactions, emissions from fuel combustion onsite • Scope 2 emissions which includes indirect emissions from the energy imported from off-site.	
Additional notes	N/A	• Fossil gas (used as a fuel source and/or feedstock): Only eligible for existing facilities prior to 2030 • 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. • Biomass (used as a fuel source and/or feedstock) complies with the criteria applicable for biomass sourcing set out in the relevant section of the CGT for bio-energy criteria • Hydrogen (used as a fuel source and/or feedstock) complies with the criteria applicable for manufacturing of hydrogen set out in the relevant section of the CGT • Facilities using heat supplied from alternative sources, such as geothermal, solar thermal, and waste heat recovery: The heat source must comply with the CGT criteria for each source of energy	

		• Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018(147) or ISO 14064-1:2018(148). • Quantified life-cycle GHG emissions are verified by an independent third party. • Criteria are only applicable to the activity where production rate of selected high value chemicals amounts to at least 50% of annual production by volume of a given facility[9]

[9] The starting point for eligibility is to consider assets and projects where the production rate of the basic chemicals in scope are at least 50% of the total amount of products produced in a year by the relevant asset or project. This is a minimum set as it is understood that a facility producing more than 50% of other coproducts is not viewed as a facility dedicated to chemicals in scope, and the investment may be going into the production of products with high carbon intensities. This also mitigates the risk of greenwashing due to artificially making basic chemicals products low carbon by allocating more carbon emissions to other products not in scope of this Criteria.

Number and Activity Name	C1.8 Manufacture of chlorine		
Scope of activity	Manufacture of chlorine		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: EU taxonomy and SAT have equally stringent quantitative threshold when it comes to electricity consumption, however in the EU both the electricity consumption and GHG emissions thresholds need to be met and in SAT meeting only one of them is mandatory. There is no corresponding China activity		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU Taxonomy: 3.13 Manufacture of chlorine	SAT: 4.1 Manufacture of basic chemicals
Multi-jurisdiction CGT substantial contribution criteria	N/A	Electricity consumption for electrolysis and chlorine treatment is equal or lower than 2.45 MWh per tonne of chlorine. And Average life-cycle GHG emissions of the electricity used for chlorine production is at or lower than 100 g CO2e/kWh.	
Additional notes	N/A	Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018(136) or ISO 14064-1:2018(137). Quantified life-cycle GHG emissions are verified by an independent third party.	

Number and Activity Name	C1.9 Manufacture of anhydrous ammonia		
Scope of activity	Manufacture of anhydrous ammonia		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: the SAT criteria are more stringent than the EU criteria as they have further provisions regarding CO2 management from ammonia production. There is no corresponding China activity		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU Taxonomy: 3.15 Manufacture of anhydrous ammonia	SAT: 4.1 Manufacture of basic chemicals
Multi-jurisdiction CGT substantial contribution criteria	N/A	The activity complies with one of the following criteria: (a) ammonia is produced from hydrogen that complies with the criteria set out by the relevant section of CGT for Manufacturing of hydrogen; Or (b) ammonia is recovered from waste water AND CO2 from ammonia production should not be used for urea production	
Additional notes	N/A	• Fossil gas (used as a fuel source and/or feedstock): Only eligible for existing facilities prior to 2030 • Biomass (used as a fuel source and/or feedstock) complies with the criteria applicable for biomass sourcing set out in the relevant section of the CGT for bio-energy criteria • Hydrogen (used as a fuel source and/or feedstock) complies with the criteria applicable for manufacturing of hydrogen set out in the relevant section of the CGT • Facilities using heat supplied from alternative sources, such as geothermal, solar thermal, and waste heat recovery: The heat source must comply with the CGT criteria for each source of energy • Criteria are only applicable to the activity where production rate of selected high value chemicals amounts to at least 50% of annual production by volume of a given facility[10]	

[10] The starting point for eligibility is to consider assets and projects where the production rate of the basic chemicals in scope are at least 50% of the total amount of products produced in a year by the relevant asset or project. This is a minimum set as it is understood that a facility producing more than 50% of other coproducts is not viewed as a facility dedicated to chemicals in scope, and the investment may be going into the production of products with high carbon intensities. This also mitigates the risk of greenwashing due to artificially making basic chemicals products low carbon by allocating more carbon emissions to other products not in scope of this Criteria.

Number and Activity Name	C1.10 Manufacture of nitric acid		
Scope of activity	Manufacture of nitric acid		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent Justification of the scenario selection: EU taxonomy and SAT have equally stringent quantitative threshold. There is no corresponding China activity		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU Taxonomy: 3.16 Manufacture of nitric acid	SAT: 4.1 Manufacture of basic chemicals
Multi-jurisdiction CGT substantial contribution criteria	N/A	GHG emissions from the manufacture of nitric acid are lower than 0,038 tCO2e per tonne of nitric acid. The following emissions should be accounted for when comparing to the thresholds: Scope 1 emissions which include all direct emissions from the production processes: emissions generated during the chemical reactions, emissions from fuel combustion onsite.	
Additional notes	N/A	• Fossil gas (used as a fuel source and/or feedstock): Only eligible for existing facilities prior to 2030 • 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. • Biomass (used as a fuel source and/or feedstock) complies with the criteria applicable for biomass sourcing set out in the relevant section of the CGT for bio-energy criteria • Hydrogen (used as a fuel source and/or feedstock) complies with the criteria applicable for manufacturing of hydrogen set out in the relevant section of the CGT • Facilities using heat supplied from alternative sources, such as geothermal, solar thermal, and waste heat recovery: The heat source must comply with the CGT criteria for each source of energy • Life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018(147) or ISO 14064-1:2018(148).	

		• Quantified life-cycle GHG emissions are verified by an independent third party. • Criteria are only applicable to the activity where production rate of selected high value chemicals amounts to at least 50% of annual production by volume of a given facility[11]

[11] The starting point for eligibility is to consider assets and projects where the production rate of the basic chemicals in scope are at least 50% of the total amount of products produced in a year by the relevant asset or project. This is a minimum set as it is understood that a facility producing more than 50% of other coproducts is not viewed as a facility dedicated to chemicals in scope, and the investment may be going into the production of products with high carbon intensities. This also mitigates the risk of greenwashing due to artificially making basic chemicals products low carbon by allocating more carbon emissions to other products not in scope of this Criteria.

Number and Activity Name	C1.11 Manufacture of soda ash		
Scope of activity	Manufacture of soda ash		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: SAT introduces two options for compliance either it is possible to meet GHG emissions threshold, or the threshold related to the carbon intensity of the electricity used; while the EU only allows for the former option. There is no corresponding China activity		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU Taxonomy: 3.12 Manufacture of soda ash	SAT: 4.1 Manufacture of basic chemicals
Multi-jurisdiction CGT substantial contribution criteria	N/A	GHG emissions from the soda ash production processes are lower than 0,789 tCO2e per tonne of product.	

C2. Manufacture of clean energy technologies

Number and Activity Name	C2.1 Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution that result in or enable a substantial contribution to climate change mitigation		
Scope of activity	The economic activity develops, manufactures, installs, maintains or services electrical products, equipment or systems, or software aimed at substantial GHG emission reductions in high, medium and low voltage electrical transmission and distribution systems through electrification, energy efficiency, integration of renewable energy or efficient power conversion. The economic activity includes systems to integrate renewable sources of energy in the electric grid, interconnect or increase grid automation, flexibility and stability, manage demand-side response, develop low carbon transport or heat, or deploy smart metering technologies for substantial improvement of energy efficiency. The economic activity in this category does not include heat and power generating equipment and electrical appliances.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: The EU criteria detail quantitative criteria for several types of products, while China taxonomy outlines eligible categories of activities without specifying quantitative or qualitative thresholds. There is no corresponding SAT activity.		
Corresponding activities	China taxonomy: 3.1.1.1 Production of smart grid products and equipment 3.1.1.2 Construction and Operation of Smart Grids 5.5.4.1 Construction and operation of charging, battery replacement, hydrogen refueling and gas refueling facilities	EU Taxonomy: 3.20. Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution that result in or enable a substantial contribution to climate change mitigation	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	1. The activity manufactures, installs, or maintains one or more of the following, or provides maintenance, repair and technical consulting services essential to the functioning over the lifetime of one or more of the following: a. electric vehicle charging stations and supporting electric infrastructure for the electrification of transport that is installed primarily to enable electric vehicle charging. Any activity included in Section 7.4. is excluded from this point. b. transmission and distribution current-carrying wiring devices and non-current-carrying wiring devices for wiring electrical circuits, and transformers that comply with the Tier 2 (1 July 2021) requirements for large power transformers set out in Annex I to Commission Regulation (EU) 548/2014[(169)], and medium power transformers with highest voltage for equipment not exceeding 36 kV, with AA0 level requirements on no-		N/A

load losses set out in standard EN 50708 series, provided those devices and transformers contribute to increasing the proportion of renewable energy in the system or improve energy efficiency;

c. low voltage electrical products, equipment and systems, that increase the controllability of the electricity system, and contribute to increasing the proportion of renewable energy or improve energy efficiency, that are:
    i. low voltage circuit breakers, switchgears, switchboards, panel boards or control centres that are connectable, automated or equipped with power or energy metering devices and that comply with IEC TR 63196 Low-Voltage Switchgear and Control gear and their assemblies – Energy efficiency;
    ii. Home and Building Electronic Systems (HBES), as referred to in EN IEC 63044 series, where the products and systems are needed to measure, control and reduce energy consumption;
    iii. technologies that enable to increase the energy efficiency of low voltage installations, recognised under HD 60364-8-1: Low-voltage electrical installations – Part 8-1: Energy efficiency and HD 60364-8-82: Low-voltage electrical installations – Part 8-82: Functional aspects – Prosumer's low-voltage electrical installations, including energy and power meters, external customer display, power compensation, phase compensation and filtering and efficient electric motor-driven systems;
d. high and medium voltage switchgears and control gears that increase the controllability of the electricity system, are integrated to increase the proportion of renewable energy or improve energy efficiency.

The equipment referred to in this point (d) complies with EN 62271-1 High-voltage switchgear and control gear – Part 1: Common specifications for alternating current switchgear and control gear and EN 62271-200 High-voltage switchgear and control gear – Part 200: AC metal-enclosed switchgear and control gear for rated voltages above 1 kV and up to and including 52 kV or with EN 62271-203 High-voltage switchgear and control gear – Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52kV;

e. demand response and load shifting equipment, systems and services that increase the flexibility of the electricity system and support grid stability, that include:
    i. solutions to carry information to users for remotely acting on supply or consumption, including customer data hubs;
    ii. automated control centres for load management and their core components (switchboards, contactors, relays, circuit breakers, automatic transfer switches).
    iii. Core components are installed as part of control centres;
    iv. where not included in Section 8.2., advanced software and analytics to maximise efficiency and automation of electricity networks or integration of decentralised energy resources, at the level of the electricity grid or an industry, that include:

	advanced control rooms, automation of electrical substations, voltage control capabilities; operation software enabling operators to simulate the operation of grids for the purpose of ensuring grid stability, managing Distributed Energy Resources or improving grid performance. The software supports dynamic grid characteristics required for the transition towards renewable energy. It is capable of processing data from near-real time grid measurements to observe how the power transmission, distribution and consumption really occur, and use this information to improve simulation studies and operation activities, including the avoidance of outages, black-outs, and wastes; where not included in Section 8.2., software supporting the design and planning of new grids or grid upgrades. The software supports dynamic grid characteristics required for the transition towards renewable energy, including volatile power generation at distribution level ("prosumers"), changing of power flow directions, and the use of grid storage units; meteorological sensors for forecasting renewable electricity production; stand-alone or embedded connectable controllers and relays that enable an efficient use of electrical sources and loads; load-shedding and load-shifting equipment for load management and source-switching equipment, where the equipment is compliant with EN IEC 62962:2019 Particular requirements for load-shedding equipment; a. where not included in Section 8.2., communication systems, software and control equipment, products, systems and services for energy efficiency or integration of renewable energy: i. equipment to allow for exchange specifically of renewable electricity between users; ii. battery swapping technology or service, supporting the electrification of transport; iii. microgrid management systems; iv. energy or power management systems, energy or power controls systems and SCADA systems for power management; v. contactors, motor starters and motor controls that are connectable or automated and enable remote or automated control of electricity consumption and optimisation of load variation; vi. variable speed drives and other variable speed drive solutions, excluding soft starters, that enable energy efficiency in electrical motor applications, where the equipment is compliant with EN 61800-9-1: Adjustable speed electrical power drive systems - Part 9-1: Ecodesign for power drive systems, motor starters, power electronics and their driven applications - General requirements for setting energy efficiency standards for power driven equipment using the extended product approach (EPA) and semi analytic model (SAM) and EN 61800-9-2: Adjustable speed electrical power drive systems - Part 9-2: Ecodesign for power drive systems, motor starters, power electronics and their driven applications - Energy efficiency indicators for power drive systems and motor starters;	

	vii. low-voltage electrical motors with an energy efficiency class (according to EN 60034-30-1: Rotating electrical machines - Part 30-1: Efficiency classes of line operated AC motors (IE code)) exceeding the requirements set by Commission Regulation 2019/1781[(170)], specifically: viii. single-phase motors with a rated output of 0,12 kW or higher and an efficiency class of IE3 or higher; ix. Ex eb increased safety motors with a rated output between 0,12 kW and 1 000 kW, with 2, 4, 6 or 8 poles and an efficiency class IE3 or higher; x. 3-phase motors with a rated output between 0,75 kW and 1000 kW, with 2, 4, 6 or 8 poles, which are not Ex eb increased safety motors and have (i) an efficiency class of IE5 for motors with 2,4 or 6 poles and a rated power between 75 kW and 200 kW, (ii) an efficiency class of IE 4 or higher for all other motors; xi. 3-phase motors with a rated output between 0,12 kW and 0,75 kW, with 2, 4, 6 or 8 poles, which are not Ex eb increased safety motors and have an efficiency class of IE3 or higher; xii. 3-phase VSD only motors with a rated output between 0,75 kW and 1000 kW with 2, 4, 6 or 8 poles, classified according to the EN IEC TS 60034-30-2 and an efficiency class IE5; a. medium- and high-voltage motors with a rated power above 1000 kW and an energy efficiency class IE 4 or higher according to draft standard IEC 60034-30-3. 2. The following elements are not compliant: a. infrastructure dedicated to creating a direct connection or expanding an existing direct connection between a substation or network and a power production plant that is more greenhouse gas intensive than 100 g CO_2e/kWh measured on a life cycle basis. That exclusion only applies to equipment that is directly used to connect, or reinforce the connection to, a power production plant that is more greenhouse gas intensive than 100 g CO_2e/kWh measured on a life cycle basis; b. products, equipment, systems and software that are installed in an infrastructure dedicated to the extraction, transport, distribution, storage, manufacturing or transformation of fossil fuels. 3. Switchgears with insulating or breaking medium using, or whose functioning relies on gases with a Global Warming Potential above 10 are not compliant. For all power ranges, switchgears containing SF6 are not compliant. 4. All products, equipment and systems comply with mandatory energy and material efficiency performance requirements laid down in Directive 2009/125/EC of the European Parliament and of the Council. Manufacturers refer to the latest applicable performance requirements in the Union.	

Number and Activity Name	C2.2 Manufacture of batteries		
Scope of activity	Manufacture of rechargeable batteries, battery packs and accumulators for transport, stationary and off-grid energy storage and other industrial applications. Manufacture of respective components (battery active materials, battery cells, casings and electronic components). Recycling of end-of-life batteries.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: The EU and SAT criteria are the same and contain details on the nature of batteries being manufactured and make reference to secondary raw materials, as well as a requirement for substantial reductions in emissions. The two activities under Chinese Taxonomy are covering partially the manufacturing of batteries and do not refence the battery specific guidelines.		
Corresponding activities	China taxonomy: 1.6.1.1 Manufacturing of Key Components of New Energy Vehicles And its Industrialization n 3.1.1.1 Production of Smart Grid Products and Equipment	EU Taxonomy: 3.4 Manufacture of batteries	SAT: 4.7 Manufacture of batteries
Multi-jurisdiction CGT substantial contribution criteria	The economic activity manufactures rechargeable batteries, battery packs and accumulators (and their respective components), including from secondary raw materials, that result in substantial GHG emission reductions in transport, stationary and off-grid energy storage and other industrial applications. The economic activity recycles end-of-life batteries.		

Number and Activity Name	C2.3 Production of wind generators		
Scope of activity	Manufacture of onshore and offshore wind turbines, wind turbine generators, wind turbine blades, bearings, cables, gearboxes, towers and other key components of 3MW and above wind turbines for plateau, low-temperature, low wind speed environments, and wind farm-related systems and equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China criteria are more specific than the EU and SAT taxonomies, as the Chinese Taxonomy references the capacity of the generators.		
Corresponding activities	China taxonomy: 3.2.1.1 Manufacture of Wind Generators	EU Taxonomy: 3.1 Manufacture of renewable energy technologies	SAT: 4.8. Manufacture of renewable energy technologies
Multi-jurisdiction CGT substantial contribution criteria	Manufacture of onshore and offshore wind turbines, wind turbine generators, wind turbine blades, bearings, cables, gearboxes, towers and other key components of 3MW and above wind turbines for plateau, low-temperature, low wind speed environments, and wind farm-related systems and equipment.		

Number and Activity Name	C2.4 Production of solar generators		
Scope of activity	Manufacture of photovoltaic (PV) power generators and solar thermoelectric equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China criteria are more specific than the EU and SAT taxonomies. Both the EU and SAT activities are covering the production of all renewable energy technologies. However, the Chinese Taxonomy is more precise and provides specific requirements for the manufacturing of the generator and specific requirements for the production of PV panels.		
Corresponding activities	China taxonomy: 3.2.1.2 Manufacture of Solar Generators	EU Taxonomy: 3.1 Manufacture of renewable energy technologies	SAT: 4.8. Manufacture of renewable energy technologies
Multi-jurisdiction CGT substantial contribution criteria	PV power generator manufacture enterprises and projects as specified in the Specifications for the Photovoltaic Manufacture Industry (2021 Edition). The production of PV cells as specified in the Level 1 requirements in the System of Clean Production Assessment Indexes for the Photovoltaic Cell Industry (2016 Edition)		

Number and Activity Name	C2.5 Production of biomass energy utilization equipment		
Scope of activity	Manufacture of collection, crushing, transportation, and storage equipment for agricultural by-products such as straw and rice husk; Manufacture of biomass-power generators and heating equipment, marsh gas and biogas production equipment, biomass solid and liquid fuel production equipment, and other equipment making use of biomass energy.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China's scope is more specific than the EU and SAT taxonomies. Both the EU and SAT activities are covering the production of all renewable energy technologies. However, the Chinese Taxonomy is more precise and provides a narrower description of the production of Biomass energy with a detailed description of all stages throughout the process.		
Corresponding activities	China taxonomy: 3.2.1.3 Manufacture of Biomass Production Facilities	EU Taxonomy: 3.1 Manufacture of renewable energy technologies	SAT: 4.8. Manufacture of renewable energy technologies
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	C2.6 Production of hydropower generators and pumped-storage equipment		
Scope of activity	Manufacture of high-performance and large-capacity hydropower generators, high-head and large-capacity pumped storage equipment, thousand-megawatt large hydraulic turbine generators, variable-speed pumped storage equipment, ultra-high-head large-impact hydraulic turbine generators, seawater pumped storage equipment, and other relevant hydropower generators and pumped storage equipment		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: Scope of China activity is more specific than the EU and SAT taxonomies. Both the EU and SAT activities are covering the production of all renewable energy technologies. However, the Chinese Taxonomy is more precise and provides a narrower description with specific requirements for each stage of the Hydropower manufacturing process.		
Corresponding activities	China taxonomy: 3.2.1.4 Manufacture of Hydropower and Pumped-storage Facilities	EU Taxonomy: 3.1 Manufacture of renewable energy technologies	SAT: 4.8. Manufacture of renewable energy technologies
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	C2.7 Production of fuel cell equipment		
Scope of activity	Manufacture of fuel cells using proton exchange membrane, direct methanol, alkaline fuel, molten carbonic acid fuel, phosphoric acid fuel, and solid oxide		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The EU activity does not refer to specific technologies as does China's taxonomy, however, it requires substantial life-cycle GHG emission savings. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 3.2.1.7 Production of Fuel Cell Equipment	EU Taxonomy: 3.6. Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	The economic activity manufactures technologies demonstrate substantial life-cycle GHG emission savings compared to the best performing alternative technology/product/solution available on the market.		N/A
Additional notes	Life-cycle GHG emission savings are calculated using ISO 14067:201897 or ISO 14064-1:201898.		N/A

Number and Activity Name	C2.8 Production of geothermal energy utilization equipment		
Scope of activity	Manufacture of ground source heat pumps, high-temperature geothermal heat pumps, key equipment of geothermal absorption refrigeration systems, medium and low-temperature geothermal power generation systems and geothermal drying and hot water supply systems, and anti-corrosion and anti-incrustation equipment for geothermal energy utilization.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China's scope of activity is more specific than the EU and SAT taxonomies. Both the EU and SAT activities are covering the production of all renewable energy technologies. However, the Chinese Taxonomy is more precise and provides a narrower description with specific requirements for each stage of the Geothermal Energy manufacturing process.		
Corresponding activities	China taxonomy: 3.2.1.8 Production of Geothermal Energy Utilization Equipment	EU Taxonomy: 3.1 Manufacture of renewable energy technologies	SAT: 4.8. Manufacture of renewable energy technologies
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	C2.9 Production of marine energy utilization equipment		
Scope of activity	Manufacture of marine energy utilization equipment that generates electricity from resources, such as marine tidal energy, tidal current energy, wave energy, temperature difference energy, and salt difference energy.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China's scope of activity is more specific than the EU and SAT taxonomies. Both the EU and SAT activities are covering the production of all renewable energy technologies. However, the Chinese Taxonomy is more precise and provides a narrower description with specific requirements for each stage of the Marine Energy Utilisation equipment manufacturing process.		
Corresponding activities	China taxonomy: 3.2.1.9 Manufacture of Marine Energy Exploitation Facilities	EU Taxonomy: 3.1 Manufacture of renewable energy technologies	SAT: 4.8. Manufacture of renewable energy technologies
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	C2.10 Manufacture of hydrogen		
Scope of activity	Manufacture of hydrogen and hydrogen-based synthetic fuels.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: EU Taxonomy and SAT have equally stringent emission intensity threshold, while China taxonomy refers to technical rather than emission standards		
Corresponding activities	China taxonomy: 3.2.2.8 Construction and Operation of Hydrogen Energy Utilization Facilities	EU taxonomy: 3.10 Manufacture of hydrogen	SAT: 4.4. Manufacture of hydrogen
Multi-jurisdiction CGT substantial contribution criteria	Life cycle GHG emissions from the hydrogen production processes are lower than 3 $kgCO2e/kgH_2$		
Additional notes	• 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. Feedstock: • Using biomass as a feedstock: Biomass from primary sources is not eligible as a feedstock. Wood and other dedicated crops are not eligible (only waste biomass sources are eligible). The biomass used complies with the criteria applicable for biomass sourcing set out in the CGT criteria for bioenergy • Using manure-biomethane as a feedstock: Issuers must demonstrate MRV (monitoring, reporting and verification), and mitigation measures for methane leakages on site and upstream . • The feedstock is not coal or coal derivatives. Electricity sources used: <u>Using Wind, solar, hydro, geothermal energy-based electricity:</u> • Renewable energy produced on site must comply with the most up to date Taxonomy criteria for the relevant source of energy. • Issuers must demonstrate the use of only additional renewable electricity. To do that, issuers can implement the following options: 1. Renewable-based captive power generation, or 2. A power purchase agreement demonstrating a commercial link of the electrolyser with new renewable power capacity; or 3. Excess of renewable-based electricity that would have been otherwise curtailed. • Further, temporal and geographical correlation between the additional renewable electricity generation and the electrolyser electricity consumption must be demonstrated. 1. Temporal correlation: Issuers must demonstrate that the electricity is produced		

	and used simultaneously, on a monthly basis, using telemetry measurement techniques. Renewable electricity that has been locally stored can be used as well. 2. Geographic correlation: Issuers must demonstrate physical capacity to transport the electricity from the renewable generation plant to the electricity consumption site. The electricity must not pass a zone of grid congestion. <u>Using low-carbon electricity</u> • The carbon intensity of the electricity grid must ensure that the production process is in compliance with the total carbon intensity benchmark for hydrogen CCS/CCU 1. The minimum capture rate from process and energy emission streams should be 90% or emissions reduction at the facility level have to be at least of 50%. 2. Issuers must present a quantitative performance report of the CCS operations, including the following information: ontended capture rate capacity, maximum capture rate capacity, annual capture of CO2, annual transport of CO2, annual utilisation of CO2. 3. Issuers must demonstrate MRV (monitoring, reporting and verification), and mitigation measures for methane leaks on site and upstream. 4. There is evidence that demonstrates the CO2 will be suitably transported in line with the Taxonomy criteria for CCS. Utilisation: 5. CO2 must be used for the manufacture of durable products (e.g. construction materials stored in buildings, or recyclable products that will not be incinerated as a final disposal alternative). 6. CO2 should not be used for products that release the CO2 immediately when the products are used (such as in urea, carbonated beverages, or fuels) 7. CO2 is not used for enhanced oil recovery, and the production of other forms of fossil energy sources.

Number and Activity Name	C2.11 Manufacture of hydrogen production equipment		
Scope of activity	Manufacture of hydrogen production equipment		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: While SAT criteria are more stringent than the EU given that they limit the production pathway to electrolysis, China criteria refer, among others, to hydrogen production from natural gas .		
Corresponding activities	China taxonomy: 3.2.2.8 Construction and Operation of Hydrogen Energy Utilisation Facilities	EU Taxonomy: 3.2 Manufacture of equipment for the production and use of hydrogen	SAT: 4.9 Manufacture of equipment for the production of hydrogen through electrolysis
Multi-jurisdiction CGT substantial contribution criteria	The economic activity manufactures equipment to produce hydrogen through electrolysis		

C3. Manufacture of clean energy vehicles and parts

Number and Activity Name	**C3.1 Manufacture of key components of new energy automobiles and its industrialization**		
Scope of activity	The economic activity manufactures low-carbon transport vehicles and their respective key components (excluding air and water transport)		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: EU and SAT focus on the manufacturing of vehicles with zero tailpipe CO2 emissions, but the EU has an interim alignment to EURO VI standard till 2025 for certain categories of vehicle. China taxonomy allows for inclusion of plug-in hybrids. Singapore is the only taxonomy that allows manufacturing of vehicles that have only zero direct (tailpipe) emissions.		
Corresponding activities	China taxonomy: 1.6.1.1 Manufacturing of Key Components of New Energy Vehicles and its Industrialization	EU Taxonomy: 3.3 Manufacture of low carbon technologies for transport 3.18. Manufacture of automotive and mobility components	SAT: 4.10. Manufacture of low-carbon technologies for transport
Multi-jurisdiction CGT substantial contribution criteria	The economic activity manufactures zero direct (tailpipe) emission vehicles and their respective key components		

Number and Activity Name	C3.2. 1 Manufacture of low carbon vessels (inland water transport)		
Scope of activity	Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of low carbon vessels (inland water transport)		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: SAT criteria only allow for manufacturing of vessels that have zero direct (tailpipe) CO2 emissions, while EU taxonomy allows until the end of 2025 manufacturing of vessels that are hybrid or 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. China taxonomy does not have zero direct (tailpipe) CO2 emissions focus.		
Corresponding activities	China taxonomy: 1.6.1.3 Manufacturing of Green Ships	EU Taxonomy: 3.3 Manufacture of low carbon technologies for transport	SAT: 4.10 Manufacture of low-carbon technologies for transport
Multi-jurisdiction CGT substantial contribution criteria	Activity manufactures vessels that have zero direct tailpipe CO2 emissions		

Number and Activity Name	C3.2.2 Manufacture of low carbon vessels (sea and coastal water transport)		
Scope of activity	Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of low carbon vessels (sea and coastal water transport)		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: All taxonomies allow for both the zero GHG emissions vessels as well as these that are low carbon/energy saving. However, both EU and SAT use different metrics to define low-carbon and China taxonomy does not provide further definition.		
Corresponding activities	China taxonomy: 1.6.1.3 Manufacturing of Green Ships	EU Taxonomy: 3.3 Manufacture of low carbon technologies for transport	SAT: 4.10 Manufacture of low-carbon technologies for transport
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	All taxonomies promote activities that are related to manufacturing of vessels that have zero direct tailpipe CO2 emissions. Otherwise, the support is oriented at vessels that can prove substantial energy efficiency improvements. Both EU and SAT taxonomies refer to metrics designed by IMO and highlight that vessels cannot be dedicated to transporting fossil fuels. China taxonomy does not entail guidelines on how to define energy-saving.		

C4. Manufacture of recycling equipment

Number and Activity Name	C4.1 Manufacture of equipment for the recycling and harmless treatment of food waste		
Scope of activity	Manufacture of equipment for kitchen waste reduction, harmless treatment, and recovery of resources through using food waste to produce biodiesel, organic fertilizer, biogas, and industrial ethanol, etc., including the manufacture of equipment produced for classification and recycling, transportation, sorting, pre-processing, and recycling of resources and energy.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The EU activity does not refer to specific technologies as does China taxonomy, however it requires substantial life-cycle GHG emission savings. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.5.1.4 Manufacturing of Equipment for the Recycling and Harmless Treatment of Food Waste	EU Taxonomy: 3.6. Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	The economic activity manufactures technologies demonstrate substantial life-cycle GHG emission savings compared to the best performing alternative technology/product/solution available on the market.		N/A
Additional notes	Life-cycle GHG emission savings are calculated using ISO 14067:201897 or ISO 14064-1:201898		N/A

Number and Activity Name	C4.2 Manufacture of facilities for resource recycle and reuse		
Scope of activity	Manufacture of equipment for kitchen waste reduction, harmless treatment, and recovery of resources through using food waste to produce biodiesel, organic fertilizer, biogas, and industrial ethanol, etc., including the manufacture of equipment produced for classification and recycling, transportation, sorting, pre-processing, and recycling of resources and energy.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The EU activity does not refer to specific technologies as does China taxonomy, however it requires substantial life-cycle GHG emission savings. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.5.1.6 Manufacturing of Facilities for Resources Recycle and Reuse	EU Taxonomy: 3.6. Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	The economic activity manufactures technologies demonstrate substantial life-cycle GHG emission savings compared to the best performing alternative technology/product/solution available on the market.		N/A
Additional notes	Life-cycle GHG emission savings are calculated using ISO 14067:201897 or ISO 14064-1:201898 China taxonomy references the following guidelines: The Technological Guidance for Recycle and Reuse of Waste Lubricating Oil (GB/T 17145), the Labels for Recyclable Products and Parts (GB/T 23384), the General Requirements and Labels for Recycled and Remanufactured Products (GB/T 27611), the Test Method for Oxidation Resistance of Nitrogen Oxide Materials -Variable Temperature Oxidation (GB/T 32329) and other national standards		N/A

Number and Activity Name	C4.3 Manufacture of facilities for the recycling and harmless treatment of agricultural and forestry residues		
Scope of activity	Manufacture of equipment for the recycling and harmless treatment of agricultural and forestry residues, which produce fermented feed, biogas, bio-natural gas, solid fuel, and organic fertilizers, etc. based on using agricultural and forestry wastes such as straw, livestock and poultry feces, and rural toilet feces, etc.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The EU activity does not refer to specific technologies as listed China taxonomy, however it requires substantial life-cycle GHG emission savings. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.5.1.8 Facilities for the Recycling and Eco-friendly Treatment of Agro-waste	EU Taxonomy: 3.6. Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	The economic activity manufactures technologies demonstrate substantial life-cycle GHG emission savings compared to the best performing alternative technology/product/solution available on the market.		N/A
Additional notes	Life-cycle GHG emission savings are calculated using ISO 14067:201897 or ISO 14064-1:201898		N/A

C5. Manufacture of energy-saving equipment

Number and Activity Name	C5.1 Manufacture of energy-saving furnace/kiln		
Scope of activity	Manufacture of metallurgical heating furnaces, non-electric metal treatment furnaces, industrial electric furnaces, industrial kiln and other energy-saving furnaces/kiln using various energy-efficient technologies.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The EU activity does not refer to specific technologies as does China taxonomy, however it requires substantial life-cycle GHG emission savings. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.2 Energy-saving Furnace 1.1.2.3 The Utilization of Waste Heat and Pressure 1.1.2.5 The Systematic Improvement in Energy Efficiency of Steam Turbine Generator Sets 1.1.2.1 The Energy-saving Transformation and Energy-efficient Upgrade of Boiler (Furnace)	EU Taxonomy: 3.6. Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	The economic activity manufactures technologies demonstrate substantial life-cycle GHG emission savings compared to the best performing alternative technology/product/solution available on the market.		N/A
Additional notes	Life-cycle GHG emission savings are calculated using ISO 14067:201897 or ISO 14064-1:201898. Quantified life-cycle GHG emission savings are verified by an independent third party.		N/A

Number and Activity Name	C5.2 Manufacture of high-efficient energy-saving household appliances		
Scope of activity	Manufacture of household appliances such as energy-saving air conditioners, air-conditioning units, refrigerators, electric washing machines, flat-screen TVs, electric fans, etc.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: All taxonomies refer to respective regional/national energy efficiency regulations for household appliances.		
Corresponding activities	China taxonomy: 1.1.1.1 Energy-saving Boilers 1.1.1.11 High-Efficient Energy-saving Domestic Appliances 1.1.1.13 High-Efficient Lighting Products and Systems 1.1.1.12 High-Efficient Energy-saving Commercial Facilities	EU Taxonomy: 3.5 Manufacture of energy efficiency equipment for buildings 3.6 Manufacture of other low carbon technologies	SAT: 4.12. Manufacture of other low-carbon technologies for household sector
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	All taxonomies refer to their respective energy efficiency standards for household appliances, requiring in most cases that the appliance meets the highest possible class.		

Number and Activity Name	C5.3 Manufacture of energy-saving pumps and vacuum equipment		
Scope of activity	Manufacture of energy-saving pumps, energy-saving vacuum drying equipment, energy-saving vacuum kiln and other relevant equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China taxonomy has specific reference to a standard per each type of pump. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.3 Manufacturing of Energy-saving Pumps and Vacuum Equipment	EU Taxonomy: 3.5 Manufacture of energy efficiency equipment for buildings 3.6 Manufacture of other low-carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	The energy efficiency of energy-saving pumps should meet or exceed Level 1 of energy efficiency standards or relevant energy saving evaluation levels, including the • Minimum Allowable Values of Energy Efficiency and Evaluating Values of Energy Conservation of Centrifugal Pump for Fresh Water (GB19762), • Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Petrochemical Centrifugal Pumps (GB 32284) • Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Submersible Pumps for Deep Well (GB 32030), • Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Small-size Submersible Motor-pumps (GB32029) • Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Waste Submersible Motor-pumps (GB32031)		N/A

Number and Activity Name	C5.4 Manufacture of energy-saving gas compression equipment		
Scope of activity	Manufacture of energy-saving air compressors, compressors for air conditioners and other relevant equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China taxonomy has specific reference to energy efficiency standards. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.4 Manufacturing of Energy-saving Gas Compression Equipment	EU Taxonomy: 3.6 Manufacture of other low-carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	The energy efficiency of the equipment should meet or exceed Level 1 of the national standards including the: • Energy Efficiency Limits and Evaluation Value of Energy Conservation for Positive Displacement Air Compressors (GB 19153) • Energy Efficiency Limits and Grades of Fully Enclosed Motor Compressor for Air Conditioners (GB 35971).		N/A

Number and Activity Name	C5.5 Manufacture of energy-saving hydraulic and pneumatic pressure equipment		
Scope of activity	Manufacture of energy-saving hydraulic and pneumatic power generation machinery and components..		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The EU activity does not refer to specific technologies as does China taxonomy, however it requires substantial life-cycle GHG emission savings. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.5 Energy-saving Hydraulic and Pneumatic Pressure Equipment	EU Taxonomy: 3.6 Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	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.		N/A
Additional notes	Life-cycle GHG emission savings are calculated using Commission Recommendation 2013/179/EU96 or, alternatively, ISO 14067:201897 or ISO 14064-1:2018. Quantified life-cycle GHG emission savings are verified by an independent third party.		N/A

Number and Activity Name	C5.6 Manufacture of energy-saving blowers and fans		
Scope of activity	Manufacture of energy-saving ventilator, blower, industrial fan, ventilation hood, circulating air hood and other relevant equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China taxonomy has specific reference to energy efficiency standards. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.6 Manufacturing of Energy-saving Blowers and Fans	EU Taxonomy: 3.6 Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	The energy efficiency of the equipment should meet or exceed Level 1 of the national standards including the: • Energy Efficiency Limits and Energy Saving Evaluation for Ventilators (GB 19761) Energy Efficiency Limits and Energy Saving Evaluation Value for Centrifugal Blowers (GB 28381).		N/A

Number and Activity Name	C5.7 Manufacture of high-efficient generator and generator sets		
Scope of activity	Manufacture of energy-saving generators, generator sets and their special parts.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The EU activity does not refer to specific technologies as does China taxonomy, however it requires substantial life-cycle GHG emission savings. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.7 Manufacturing of High-efficient Generators and Generator Sets	EU Taxonomy: 3.6 Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	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.		N/A
Additional notes	Life-cycle GHG emission savings are calculated using Commission Recommendation 2013/179/EU96 or, alternatively, ISO 14067:201897 or ISO 14064-1:2018. Quantified life-cycle GHG emission savings are verified by an independent third party.		N/A

Number and Activity Name	C5.8 Manufacture of energy-saving motors		
Scope of activity	Manufacture of energy-saving AC, DC, AC/DC electrical equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China taxonomy has specific reference to energy efficiency standards. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.8 Manufacturing of Energy-saving Motors	EU Taxonomy: 3.6 Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	The energy efficiency of the equipment should meet or exceed Level 1 of the • Energy Efficiency Limits and Energy Saving Evaluation for Motor (GB 18613) • Energy Efficiency Limits and Energy Saving Evaluation for Permanent Magnet Synchronous Motor (GB 30253) • Energy Efficiency Limits and Energy Saving Evaluation for High Voltage Three-phase Cage Induction Motor (GB 30254) • Minimum Allowable Values of Energy Efficiency and Values of Efficiency Grade for Small-power Motors (GB 25958). Other energy-saving electrical equipment should meet the corresponding energy efficiency requirements		N/A

Number and Activity Name	C5.9 Manufacture of energy-saving transformers, rectifiers, inductors and electric welding machines		
Scope of activity	Manufacture of energy-saving transformers, mutual inductor, static converters, reactors, inductors, frequency converters, welding machines and other equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China taxonomy has specific reference to energy efficiency standards. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.9 Manufacturing of Energy-saving Transformers, Rectifiers, Inductors, and Electric Welding Machines	EU Taxonomy: 3.6 Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	The energy efficiency of energy-saving electrical transformers should meet or exceed Level 1 of the • Energy Efficiency Limits and Energy Saving Evaluation for Power Transformers (GB 20052) • Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for AC Contactors (GB 21518) Other energy-saving transformers and reactors should meet the corresponding energy efficiency requirements.		N/A

Number and Activity Name	C5.10 Manufacture of residual heat, pressure and gas utilization facilities		
Scope of activity	Manufacture of residual heat highly-recovering device for low-temperature flue gas, residual heat utilization device for the kiln, circulated water and residual gas recovering equipment based on heat pump, high-efficient heat exchanger, high-efficient accumulator, high-efficient condenser, and other relevant equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: China taxonomy has specific reference to energy efficiency standards. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.10 Manufacturing of Residual Heat, Pressure and Gas Exploitation Facilities	EU Taxonomy: 3.6 Manufacture of other low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	The energy efficiency of the heat exchanger shall meet the requirements of the Energy Efficiency Test and Evaluation Regulation for Heat Exchanger (TSG R0010). The utilization of residual energy should be carried out in accordance with the requirements of the Evaluation Method of Industrial Residual Energy Resource (GB/T 1028) and relevant national standards.		N/A

Number and Activity Name	C5.11 Manufacture of energy efficiency equipment for buildings		
Scope of activity	Manufacture of energy-saving ventilator, blower, industrial fan, ventilation hood, circulating air hood and other relevant equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: China, EU and SAT criteria substantially overlap, however each refer to their respective energy efficiency standards.		
Corresponding activities	China taxonomy: 1.1.1.6 Manufacturing of Energy-saving Blowers and Fans 1.1.1.11 Manufacturing of High-efficient and Energy-saving Household Appliances 1.1.1.12 Manufacturing of High-efficient and Energy-saving Commercial Appliances 1.1.1.13 Manufacturing of High-efficient Lighting Products and Systems 1.1.1.14 Manufacturing of Energy Measuring, Monitoring and Controlling Equipment	EU Taxonomy: 3.5 Manufacture of energy efficiency equipment for buildings	SAT: 4.11. Manufacture of energy efficiency equipment for buildings
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	The economic activity manufactures one or more of the following products and their key components: a) household appliances falling into the highest two classes of energy efficiency in accordance with local market standards b) light sources rated in the highest two classes of energy efficiency in accordance with local market standards c) space heating and domestic hot water systems rated in the highest two classes of energy efficiency in accordance with local market standards d) cooling and ventilation systems rated in the highest two classes of energy efficiency in accordance with local market standards e) presence and daylight controls for lighting systems; f) heat pumps g) façade and roofing elements with a solar shading or solar control function, including those that support the growing of vegetation; h) energy-efficient building automation and control systems for residential and non-residential buildings;		

	i) zoned thermostats and devices for the smart monitoring of the main electricity loads or heat loads for buildings, and sensoring equipment; j) products for heat metering and thermostatic controls for individual homes connected to district heating systems, for individual flats connected to central heating systems serving a whole building, and for central heating systems; k) district heating exchangers and substations compliant with the district heating/cooling distribution activity set out in the respective taxonomies l) products for smart monitoring and regulating of heating system, and sensoring equipment

Number and Activity Name	C5.12 Manufacture of high-efficiency energy-saving heat pumps and cooling/ventilation systems for buildings		
Scope of activity	Manufacture of energy-saving commercial refrigerating appliances, chillers, heat pump units, modular air conditioners and other cooling/ventilation systems		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: All taxonomies refer to respective regional/national energy efficiency regulations for household appliances.		
Corresponding activities	China taxonomy: 1.1.1.10 Manufacturing of Residual Heat, Pressure and Gas Exploitation Facilities 1.1.1.12 Manufacturing of High-efficient and Energy-saving Commercial Appliances 3.2.1.8 Production of Geothermal Energy Utilization Equipment	EU Taxonomy: 3.5 Manufacture of energy efficiency equipment for buildings	SAT: 4.11. Manufacture of energy efficiency equipment for buildings
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analyzed taxonomies		
Common requirements across analysed taxonomies	All taxonomies refer to their respective energy efficiency standards for household appliances, requiring in most cases that the appliance meets the two highest possible classes.		

Number and Activity Name	C5.13 Manufacture of high-efficiency light-emitting diode (LED) products and systems		
Scope of activity	Manufacture of light-emitting diode LED in the semiconductor lighting industry chain.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: China taxonomy has specific reference to energy efficiency standards, EU taxonomy requires substantial life-cycle GHG emission savings. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 1.1.1.7 Manufacturing of High-efficient Generators and Generator Sets	EU Taxonomy: 3.6 Manufacture of other-low carbon technologies	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	The energy efficiency of the products should meet Level 1 of relevant energy efficiency standards, such as the • Energy Efficiency Limits and Grades of LED Products for Indoor Lighting (GB 30255), • Energy Efficiency Limits and Grades of LED Luminaires for Road and Tunnel Lighting (GB 37478), • Energy Efficiency Limits and Grades of LED Flat Lamp for General Lighting (GB 38450), • Energy Efficiency Limits and Grades of LED Flat Lamp for Tube Fluorescent Lamp (GB 17896), OR 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.		N/A
Additional notes	Life-cycle GHG emission savings are calculated using Commission Recommendation 2013/179/EU96 or, alternatively, ISO 14067:201897 or ISO 14064-1:2018. Quantified life-cycle GHG emission savings are verified by an independent third party		N/A

D: Electricity, gas, steam and air conditioning supply

ISIC Mapping

ISIC Section	ISIC Division	Common Ground Taxonomy category
D. Electricity, gas, steam and air conditioning supply	35. Electricity, gas, steam and air conditioning supply 35. Electricity, gas, steam and air conditioning supply	D1. Electric power generation, transmission and distribution D2. Steam and air conditioning supply

D1. Electric power generation, transmission and distribution

Number and Activity Name	D1.1 Electricity generation using solar photovoltaic technology		
Scope of activity	Operation of electricity generation facilities that produce electricity using solar photovoltaic (PV) technology.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – China criteria are the most stringent Justification of the scenario selection: While in both the EU and SAT taxonomies all activities related to power generation from solar PV technology are directly eligible, China taxonomy requires the technology used for solar power generation to meet certain efficiency thresholds.		
Corresponding activities	China taxonomy: 3.2.2.2 Construction and Operation of Solar Power Facilities	EU taxonomy: 4.1. Electricity generation using solar photovoltaic technology	SAT: 1.1. Electricity generation using solar PV and CSP (including electricity, heat, cool)
Multi-jurisdiction CGT substantial contribution criteria	The component products selected for solar photovoltaic power generation facilities should meet the following requirements: 1) The minimum photoelectric conversion efficiency of polycrystalline silicon cells and monocrystalline silicon cells shall not be less than 19% and 21% respectively; 2) The minimum photoelectric conversion efficiency of polycrystalline silicon cell modules and single crystal silicon battery modules shall not be less than 17% and 17.8% respectively; 3) The minimum photoelectric conversion efficiency of silicon-based, CIGS, CdTe and other thin-film battery modules shall not be less than 12%, 14% , 14% , 12% ; 4) The decay rates of polycrystalline silicon battery modules and monocrystalline silicon battery modules shall not be higher than 2.5% and 3% in the first year, and not higher than 0.7% per year, and not higher than 20% within the period of 25 years; the attenuation rate of thin-film battery module shall not be more than 5% in the first year, no more than 0.4% per year in the following year, no more than 15% within the period of 25 years.		

Number and Activity Name	D1.2 Electricity generation using concentrated solar power (CSP) technology		
Scope of activity	Electricity generation using concentrated solar power (CSP) technology.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 1 – alignment across taxonomies Justification of the scenario selection: All taxonomies have the same criteria		
Corresponding activities	China taxonomy: 3.2.2.2 Construction and Operation of Solar Power Facilities	EU taxonomy: 4.2. Electricity generation using concentrated solar power (CSP) technology	SAT: 1.1. Electricity generation using solar PV and CSP (including electricity, heat, cool)
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	D1.3 Electricity generation from wind power		
Scope of activity	Operation of electricity generation facilities that produce electricity from wind power.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 1 – alignment across taxonomies Justification of the scenario selection: All taxonomies have exactly the same criteria		
Corresponding activities	China taxonomy: 3.2.2.1 Construction and Operation of Wind Generators	EU taxonomy: 4.3 Electricity generation from wind power	SAT: 1.2 Electricity generation from wind power
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	D1.4 Electricity generation from ocean energy technologies		
Scope of activity	Operation of electricity generation facilities that produce electricity from ocean energy including g marine tidal energy, wave energy, tidal current energy, temperature difference energy, salt difference energy and other resources		
Scenario analysis for Multi-jurisdiction CGT	Scenario 1 – alignment across taxonomies Justification of the scenario selection: All taxonomies have exactly the same criteria		
Corresponding activities	China taxonomy: 3.2.2.7 Construction and Operation of marine energy utilization facilities	EU taxonomy: 4.4. Electricity generation from ocean energy technologies	SAT: 1.6 Electricity generation from ocean energy
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	D1.5 Electricity generation from hydropower		
Scope of activity	Operation of electricity generation facilities that produce electricity from hydropower.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: While both the EU and SAT taxonomies have the same explicit quantitative requirements, China taxonomy does not specify detailed requirements.		
Corresponding activities	China taxonomy: 3.2.2.4 Construction and operation of large-scale hydropower facilities	EU taxonomy: 4.5 Electricity generation from hydropower	SAT: 1.3 Electricity generation from hydropower
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with either of the following criteria: (a) the power density of the electricity generation facility is above 5 W/m2; (b) the life-cycle GHG emissions from the generation of electricity from hydropower, are lower than 100gCO2e/kWh.		
Additional notes	Methodology for life-cycle assessment: 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.		

Number and Activity Name	D1.6 Electricity generation from bio-energy		
Scope of activity	Operation of electricity generation installations that produce electricity exclusively from biomass, biogas or bioliquids wastes, excluding electricity generation from blending of renewable fuels with biogas or bioliquids		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: Most of the criteria in all of the taxonomies are qualitative and refer either to national or regional regulations or guidelines as well as standards. As it is currently challenging to compare stringency of the substantial contribution criteria across taxonomies, it is more practical to map the common requirements of the presented criteria.		
Corresponding activities	China taxonomy: 3.2.2.3 Construction and operation of biomass energy utilization facilities	EU taxonomy: 4.8. Electricity generation from bio-energy	SAT: 1.5. Electricity generation from bioenergy power
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	Common requirements across analysed taxonomies: 1) Biofuels, bioliquids and biomass fuels produced from waste and residues derived not from forestry but from agricultural land shall be taken into account only (i) where operators have monitoring or management plans in place in order to address the impacts on soil quality and soil carbon; (ii) when not made from raw material obtained from land with a high biodiversity value , (iii) when not made from raw material obtained from land with high-carbon stock, (iv) when not made from raw material obtained from land that was peatland , unless evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil. 2) Biofuels, bioliquids and biomass fuels produced from forest biomass aim to minimize the risk of using forest biomass derived from unsustainable production 3) Biofuels, bioliquids and biomass fuels produced from forest biomass can be considered only if management systems are in place at forest sourcing area level to ensure that carbon stocks and sinks levels in the forest are maintained, or strengthened over the long term. 4) Biofuels, bioliquids and biomass fuels produced from waste and residues, other than agricultural, aquaculture, fisheries and forestry residues, including municipal waste, are only required to fulfill the emission intensity criteria in point (5). 5) Emission intensity measured during the life cycle of the power plant is less than 100gCO2e/kWh or greenhouse gas emission savings from the use of biomass are at least 80 %.		

Number and Activity Name	D1.7 Electricity generation from geothermal energy		
Scope of activity	Operation of electricity generation facilities that produce electricity from geothermal energy.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: Both the EU taxonomy and SAT have explicit quantitative requirements for geothermal energy GHG emission intensity threshold, China taxonomy does not have the threshold.		
Corresponding activities	China taxonomy: 3.2.2.6 Construction and Operation of geothermal energy utilization facilities	EU taxonomy: 4.6 Electricity generation from geothermal energy	SAT: 1.4. Electricity generation from geothermal energy
Multi-jurisdiction CGT substantial contribution criteria	Life-cycle GHG emissions from the generation of electricity from geothermal energy are lower than 100gCO2e/kWh.		
Additional notes	Life-cycle GHG emission savings are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.		

Number and Activity Name	D1.8 Electricity generation from hydrogen or its derivatives (e.g. ammonia)		
Scope of activity	Operation of electricity generation facilities that produce electricity using hydrogen or its derivatives of renewable origin. This activity does not include electricity generation from the exclusive use of biogas and bio-liquid fuels		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: EU Taxonomy has more requirements such as these pertaining to abatement and methane leakage, compared to SAT that focuses only on emissions intensity threshold. China taxonomy does not introduce quantitative GHG emissions threshold.		
Corresponding activities	China taxonomy: 3.2.2.8 Construction and Operation of Hydrogen Energy Utilization Facilities	EU taxonomy: 4.7. Electricity generation from renewable non-fossil gaseous and liquid fuels	SAT: 1.11. Electricity generation from hydrogen or its derivatives (e.g.ammonia)
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with either of the following criteria: 1. Life-cycle GHG emissions from the generation of electricity using hydrogen or its derivatives are lower than 100gCO2e/kWh. 2. Where facilities incorporate any form of abatement (including carbon capture or use of decarbonised fuels), that abatement activity complies with the criteria set out in the relevant Section of the CGT. 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 in the relevant Section of the CGT. 3. The activity meets either of the following criteria: (a) at construction, measurement equipment for monitoring of physical emissions, such as methane leakage is installed or a leak detection and repair program is introduced; (b) at operation, physical measurement of methane emissions are reported and leak is eliminated. 4. Where the activity blends renewable gaseous or liquid fuels with biogas or bioliquids, the agricultural and/or forest biomass used for the production of the biogas or bioliquids complies with the criteria laid down in the relevant Section of the CGT 5. .		
Additional notes	Life-cycle GHG emissions are calculated based on project-specific data, where available, using ISO 14067:2018168 or ISO 14064-1:2018169. Quantified life-cycle GHG emissions are verified by an independent third party.		

Number and Activity Name	D1.9 Electricity generation from fossil gaseous fuels		
Scope of activity	Operation of electricity generation facilities that produce electricity using fossil gaseous fuels. This activity does not include electricity generation from the exclusive use of renewable non-fossil gaseous and liquid fuels and biogas and bio-liquid fuels		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: SAT has the same, equally stringent criteria imposing 100gCO2e/kWh GHG emissions threshold for all plants regardless of the year of obtaining construction permit, while the EU Taxonomy envisages some flexibility for facilities for which the construction permit is granted by 31 December 2030. China taxonomy does not impose quantitative GHG emissions threshold.		
Corresponding activities	China taxonomy: 3.2.3.1 Construction and Operation of Multi-energy Complementary Projects" 3.2.3.4 Construction and Operation of Distributed Energy Resources (Ders) Projects	EU taxonomy: 4.29. Electricity generation from fossil gaseous fuels	SAT: 1.12. Electricity generation from fossil gaseous fuels
Multi-jurisdiction CGT substantial contribution criteria	The activity meets the following criteria: • Life-cycle GHG emissions from the generation of electricity using fossil gaseous fuels are lower than 100gCO2e/kWh. • CCS is eligible as a lever for the activity to meet the GHG emissions threshold		
Additional notes	Life-cycle GHG emissions are calculated based on project-specific data, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.		

Number and Activity Name	D1.10 Storage of electricity		
Scope of activity	Construction and operation of facilities that store electricity and return it at a later time in the form of electricity. The activity includes pumped hydropower storage		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: EU and SAT criteria are equally stringent, both the EU taxonomy and SAT cross-reference criteria are related to the medium of storage (where applicable), whereas China taxonomy puts more emphasis on the intended outcomes of electricity storage and applies its national industrial standards.		
Corresponding activities	China taxonomy: 3.2.3.2 The Operation and Construction of Efficient Energy Storage Facilities 3.2.3.5 The Construction and Operation of Pumped-Storage Power	EU taxonomy: 4.10. Storage of electricity	SAT: 1.9 Storage of electricity
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	All activities within the scope are directly eligible with the exceptions noted below: Chemical energy storage: medium of storage (such as ammonia) complies with the criteria for Manufacture of the corresponding product specified in Section C Hydrogen electricity storage: hydrogen meets the screening criteria specified in section C		

Number and Activity Name	D1.11 Transmission and distribution of electricity		
Scope of activity	Operation of transmission systems that transport the electricity on the extra high-voltage and high-voltage interconnected system. Operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: While in the EU all GHG emissions threshold requirements are on the life-cycle basis, SAT criteria in selected case allow for the calculation of the GHG emissions intensity on the Product Carbon Footprint basis. Both taxonomies, unlike China taxonomy have quantitative thresholds that increase the level of ambition.		
Corresponding activities	China taxonomy: 3.1.1.2 Construction and Operation of Smart Grids 3.2.3.1 Construction and Operation of Multi-energy Complementary Projects 5.1.1.2 Operation and Upgrade of Urban Power Facility into Smart Power Facilities	EU taxonomy: 4.9. Transmission and distribution of electricity	SAT: 1.7. Transmission and distribution of electricity
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with one of the following criteria: (a) Construction and operation of direct connection, or expansion of existing direct connection, of low carbon electricity generation below the threshold of 100 g CO2e/kWh measured on a life cycle basis to a substation or network (b) The transmission and distribution infrastructure or equipment is in an electricity system that complies with the following criteria: 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; (c) The transmission and distribution infrastructure or equipment is in an electricity system that complies with the following criteria: 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;		

Number and Activity Name	D1.12 Transmission and distribution of renewable and low-carbon gases, including but not limited to low-carbon hydrogen and its derivatives such as ammonia		
Scope of activity	Conversion, repurposing or retrofit of gas networks for the transmission and distribution of renewable and low-carbon gases.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent Justification of the scenario selection: EU and SAT criteria are equally stringent. There is no corresponding China activity		
Corresponding activities	China taxonomy: Activity is not in the China taxonomy	EU taxonomy: 4.14. Transmission and distribution networks for renewable and low-carbon gases	SAT: 1.8. Transmission and distribution of renewable and low-carbon gases
Multi-jurisdiction CGT substantial contribution criteria	N/A	1. The activity consists in one of the following: • construction or operation of new transmission and distribution networks dedicated to hydrogen or other low-carbon gases; • conversion/repurposing of existing natural gas networks to 100% hydrogen; • retrofit of gas transmission and distribution networks that enables the integration of hydrogen and other low-carbon gases in the network, including any gas transmission or distribution network activity that enables the increase of the blend of hydrogen or other low carbon gasses in the gas system; 2. The activity includes leak detection and repair of existing gas pipelines and other network elements to reduce methane leakage.	

D2. Steam and air conditioning supply

Number and Activity Name	D2.1 District heating and cooling		
Scope of activity	Construction of urban centralized heating facilities using low-grade industrial waste heat sources or other clean heat sources; and energy-saving and environmentally friendly technological renovation activities of urban centralized heating boilers, heating pipe networks and other centralized heating facilities. Construction, refurbishment and operation of pipelines and associated infrastructure for distribution of heating and cooling, ending at the sub-station or heat exchanger.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: Only the EU Taxonomy has quantitative requirements, by setting thresholds the level of ambition of the EU taxonomy is higher than that of China taxonomy and SAT.		
Corresponding activities	China taxonomy: 5.1.1.1 Operation and upgrade of cleaning construction of urban central heating system	EU taxonomy: 4.15. District heating/cooling distribution	SAT: 1.13 District heating and cooling systems
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with one of the following criteria: (a) construction and operation of pipelines and associated infrastructure for distributing heating and cooling, that are using at least 50 % renewable energy, 50 % waste heat, 75 % cogenerated heat or 50 % of a combination of such energy and heat (b) refurbishment of pipelines and associated infrastructure for distributing heating and cooling, where the investment that makes the system use at least 50 % renewable energy, 50 % waste heat, 75 % cogenerated heat or 50 % of a combination of such energy and heat within a three-year period;		

Number and Activity Name	D2.2 Construction, installation and operation of heat pump facilities		
Scope of activity	Installation and operation of electric heat pumps.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: Only the EU Taxonomy has quantitative requirements, by setting a threshold the level of ambition of the EU taxonomy is higher than that of China taxonomy. There is no corresponding SAT activity.		
Corresponding activities	China taxonomy: 3.2.2.9 Construction and operation of heat pump facilities	EU taxonomy: 4.16. Installation and operation of electric heat pumps	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	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; (b) energy efficiency requirements laid down in the implementing regulations under Directive 2009/125/EC are met.		N/A

Number and Activity Name	D2.3 Production of heat/cool from solar thermal heating		
Scope of activity	Operation of facilities producing heat/cool from solar thermal heating technology.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: while both the EU and SAT taxonomies have explicit reference to the solar thermal heating, whilst criteria in China taxonomy have broader scope.		
Corresponding activities	China taxonomy: 5.1.1.1 Operation and upgrade of cleaning construction of urban central heating systems 3.2.3.4 Construction and operation of distributed energy resources (Ders) projects	EU taxonomy: 4.21. Production of heat/cool from solar thermal heating	SAT: 1.1. Electricity generation using solar PV and CSP (including electricity, heat, cool)
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	D2.4 Cogeneration of heat/cool and power from solar energy		
Scope of activity	Construction and operation of facilities co-generating electricity and heat/cool from solar energy.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: while both the EU and SAT taxonomies have explicit reference production of heat/cool using solar thermal heating, whilst criteria in China taxonomy have broader scope.		
Corresponding activities	China taxonomy: 5.1.1.1 Operation and upgrade of cleaning construction of urban central heating systems 3.2.3.4 Construction and operation of distributed energy resources (Ders) projects	EU taxonomy: 4.17. Cogeneration of heat/cool and power from solar energy	SAT: 1.1. Electricity generation using solar PV and CSP (including electricity, heat, cool)
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	D2.5 Cogeneration of heat/cool and power from geothermal energy (Production of heat/cool from geothermal energy)		
Scope of activity	Construction and operation of facilities co-generating heat/cool and power from geothermal energy.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: Both the EU taxonomy and SAT entail quantitative threshold for GHG emissions intensity which is absent from the requirements in China taxonomy		
Corresponding activities	China taxonomy: 5.1.1.1 Operation and upgrade of cleaning construction of urban central heating systems 3.2.3.4 Construction and operation of distributed energy resources (Ders) projects	EU taxonomy: 4.18. Cogeneration of heat/cool and power from geothermal energy	SAT: 1.4. Electricity generation from geothermal energy
Multi-jurisdiction CGT substantial contribution criteria	Life cycle emissions from the combined generation of heat/cool and power from geothermal energy are lower than 100gCO2e/kWh.		
Additional notes	Life-cycle GHG emission savings are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.		

Number and Activity Name	D2.6 Cogeneration of heat/cool and power from renewable non-fossil gaseous and liquid fuels (Production of heat/cool from renewable non-fossil gaseous and liquid fuels)		
Scope of activity	Construction and operation of combined heat/cool and power generation facilities using gaseous and liquid fuels of renewable origin.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: EU taxonomy entails quantitative threshold for GHG emissions intensity There is no corresponding SAT activity.		
Corresponding activities	China taxonomy: 5.1.1.1 Operation and upgrade of cleaning construction of urban central heating systems 3.2.3.4 Construction and operation of distributed energy resources (Ders) projects	EU taxonomy: 4.19. Cogeneration of heat/cool and power from renewable non-fossil gaseous and liquid fuels	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with all of the following criteria: **1.** Life-cycle GHG emissions from the co-generation of heat/cool and power are lower than 100gCO2e per 1 kWh of energy output to the co-generation. **2.** In addition, if facilities incorporate any abatement (e.g, carbon capture or decarbonized fuels) a. 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 substantial contribution criteria set out in: Section X1 and Annex 1.1. **3.** The activity meets either of the following criteria: (a) at construction, measurement equipment for monitoring of physical emissions, such as methane leakage is installed or a leak detection and repair program is introduced; (b) at operation, physical measurement of methane emissions are reported and leak is eliminated. **4.** Where the activity blends renewable gaseous or liquid fuels with biogas or		N/A

	bioliquids, the agricultural biomass used for the production of the biogas or bioliquids complies with the criteria laid down in Section D1.6.	
Additional notes	Life-cycle GHG emission savings are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.	

Number and Activity Name	D2.7 Cogeneration of heat/cool and power from bioenergy (Production of heat/cool from bioenergy)		
Scope of activity	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		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: Most of the criteria in all of the taxonomies are qualitative and refer either to national or regional regulations or guidelines as well as standards. As it is currently challenging to compare stringency of the substantial contribution criteria across taxonomies, it is more practical to map the common requirements of the presented criteria.		
Corresponding activities	China taxonomy: 5.1.1.1 Operation and upgrade of cleaning construction of urban central heating systems 3.2.3.4 Construction and operation of distributed energy resources (Ders) projects	EU taxonomy: 4.20. Cogeneration of heat/cool and power from bioenergy 4.24. Production of heat/cool from bioenergy	SAT: 1.5. Electricity generation from bioenergy power
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	Common requirements across analysed taxonomies: 1) Biofuels, bioliquids and biomass fuels produced from waste and residues derived not from forestry but from agricultural land shall be taken into account only (i) where operators have monitoring or management plans in place in order to address the impacts on soil quality and soil carbon; (ii) when not made from raw material obtained from land with a high biodiversity value (iii) when not made from raw material obtained from land with high-carbon stock, ; (iv) when not made from raw material obtained from land that was peatland , unless evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil. 2) Biofuels, bioliquids and biomass fuels produced from forest biomass aim to minimize the risk of using forest biomass derived from unsustainable production 3) Biofuels, bioliquids and biomass fuels produced from forest biomass can be considered only if management systems are in place at forest sourcing area level to ensure that carbon stocks and sinks levels in the forest are maintained, or strengthened over the long term.		

	4) Biofuels, bioliquids and biomass fuels produced from waste and residues, other than agricultural, aquaculture, fisheries and forestry residues, including municipal waste, are only required to fulfill the emission intensity criteria in point (5). 5) Emission intensity measured during the life cycle of the power plant is less than 100gCO2e/kWh or greenhouse gas emission savings from the use of biomass are at least 80 %.

Number and Activity Name	D2.8 Production of heat/cool using waste heat		
Scope of activity	Construction and operation of facilities that produce heat/cool using waste heat.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: EU and SAT have exactly the same criteria. China taxonomy covers a broader scope. it includes produce heat/energy not only using waste heat, but also using clean energy sources such as electricity and natural gas to replace loose coal and decentralized coal-fired boilers to meet the requirements of clean heating ,and energy-saving and environmental protection technological transformation of central heating facilities in cities and towns		
Corresponding activities	China taxonomy: 5.1.1.1 Operation and upgrade of cleaning construction of urban central heating systems 1.1.2.3 Utilization of residual heat and pressure projects	EU taxonomy: 4.25. Production of heat/cool using waste heat	SAT: 1.14. Production of heat or cool from waste heat
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

E: Water supply; sewerage, waste management and remediation activities

ISIC Mapping

ISIC Section	ISIC Division	Common Ground Taxonomy category
E. Water supply; sewerage, waste management and remediation activities	37. Sewerage 42 - Civil Engineering 38. Waste collection, treatment and disposal activities; materials recovery	E1. Sewage sludge and waste water treatment E2. Waste collection, treatment and recycling
F - Construction	42 - Civil Engineering 36 - Water collection, treatment and supply 42 - Civil Engineering	E3. Water collection, treatment and recycling

E1. Sewage sludge and waste water treatment

Number and Activity Name	E1.1 Sewage sludge treatment – anaerobic digestion		
Scope of activity	Construction and operation of facilities for the treatment of sewage sludge by anaerobic digestion with the resulting production and utilisation of biogas or chemicals.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: • EU and SAT taxonomies explicitly reference qualitative criteria for the treatment of sewage sludge by anaerobic digestion, but SAT additionally refers to qualitative criteria for disposal of digestate produced by anaerobic digestion. • In China Taxonomy, there is no specific mention to standards or thresholds with regards to sewage sludge treatment.		
Corresponding activities	China taxonomy: 1.5.3.3 The Integrated Utilization of Sludge from Urban Sewage Treatment Plant	EU taxonomy: 5.6 Anaerobic digestion of sewage sludge	SAT: 8.3. Biowaste treatment: anaerobic digestion
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with all of the following criteria: 1. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility. 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 produced digestate from anaerobic digestion of sewage sludge will be further processed and not disposed directly in landfills. Incineration is also fine because it allows energy recovery, and after incineration this gets converted to ash which can be landfilled.		

Number and Activity Name	E1.2 Construction, extension and operation of waste water collection and treatment		
Scope of activity	Construction, extension and operation of centralised waste water systems including collection (sewer network) and treatment. The activity excludes energy requirements associated with pumping of sewage via Deep Tunnel Sewerage System (DTSS) to the wastewater treatment plant.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: EU and SAT are equally stringent and explicitly provide quantitative thresholds with regards to energy consumption and distribution loss or leakage level. China taxonomy refers to relevant national standard. Currently, it is not possible to assess the stringency and compare the criteria in EU and SAT with the standards referred in China.		
Corresponding activities	China taxonomy: 2.1.2.2 Centralized Treatment of Sewage Water in Industrial-Intensive Zones	EU taxonomy: 5.3 Construction, extension and operation of waste water collection and treatment	SAT: 9.6 Construction, extension and operation of wastewater collection and treatment
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	Energy efficiency are common thresholds in practice. While China refers to its national green industry standards, EU and SAT have similar criteria as below: 1. The net energy consumption of the waste water treatment plant equals to or is lower than: a) 35 kWh per population equivalent (p.e.) per annum for treatment plant capacity below 10 000 p.e.; b) 25 kWh per population equivalent (p.e.) per annum for treatment plant capacity between 10 000 and 100 000 p.e.; c) 20 kWh per population equivalent (p.e.) per annum for treatment plant capacity above 100 000 p.e. Net energy consumption of the operation of the waste water treatment plant may take into account measures decreasing energy consumption relating 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). 2. For the construction and extension of a waste water treatment plant or a waste water 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.		

Number and Activity Name	E1.3 Renewal of waste water collection and treatment		
Scope of activity	Renewal of centralised waste water systems including collection (sewer network) and treatment. It implies no material change related to the load or volume of flow collected or treated in the waste water system.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: EU and SAT taxonomies explicitly provide quantitative thresholds with regards to energy consumption. China taxonomy refers to relevant national standard. Currently, it is not possible to assess the stringency and compare the criteria in EU and Singapore with the standards referred in China.		
Corresponding activities	China taxonomy: 2.1.2.2 Centralized Treatment of Sewage Water in Industrial-Intensive Zones	EU taxonomy: 5.4 Renewal of waste water collection and treatment	SAT: 9.7 Renewal of wastewater collection and treatment
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	China refers to national standards, and EU and Singapore commonly refer to quantitative thresholds with regards to reduction in energy consumption. SAT focuses on defining specific thresholds for net energy consumption of the wastewater treatment plant based on the treatment plant capacity. EU Taxonomy focuses on defining the specific percentage threshold, by which the average energy consumption should be decreased compared to own baseline performance averaged over three years, demonstrated on an annual basis.		
Additional notes	SAT's amber criteria refer to 20% threshold for reduction in net energy consumption, which is similar to EU taxonomy criteria. In the CGT comparison exercise, only the Green criteria of SAT of each activity is considered for comparison with the criteria of EU and China taxonomy. The Green criteria of SAT refers to a specific threshold for energy consumption and EU taxonomy criteria refer to a percentage threshold for energy consumption reduction based on a baseline. It is not possible currently to assess the stringency between the approach used to define energy consumption related threshold in the activities of each taxonomy.		

E2. Waste collection, treatment and recycling

Number and Activity Name	E2.1 Collection and transport of non-hazardous waste in source segregated fractions		
Scope of activity	Separate collection and transport of non-hazardous waste in single or comingled fractions aimed at preparing for reuse or recycling. The activity includes collection of non-hazardous solid waste (i.e. garbage) within a local area, such as collection of waste from households and businesses by means of refuse bins, wheeled bins, containers etc may include mixed recoverable materials This activity also includes operation of waste transfer stations for non-hazardous waste.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: EU and SAT taxonomies explicitly mention qualitative criteria for collection and transport of non-hazardous waste. On the other hand, China taxonomy refers broadly to recycling of waste with references to national standards regarding construction and operation to recycling facilities. There is no specific mention to standards or thresholds with regards to collection and transport of non-hazardous waste.		
Corresponding activities	China taxonomy: 1.5.2.2 The Recycling of Waste and Discarded Resources 2.2.1.3 Recycling of Waste Agricultural Film 2.3.1.3 Recycling and Treatment of Packaging Waste 5.3.1.2 Construction and operation of garbage treatment facilities	EU taxonomy: 5.5 Collection and transport of non-hazardous waste in source segregated fractions	SAT: 8.1 Collection and transport of non-hazardous waste
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with the following criteria: 1. Collection and transportation of non-hazardous waste that is segregated at source or at an intermediate sorting facility that is intended for preparation for reuse or recycling operations, and 2. Includes waste collection containers, transfer stations, transportation vehicles and other related infrastructure.		

Number and Activity Name	E2.2 Recycling non-hazardous waste		
Scope of activity	Construction and operation of facilities for the sorting and processing of separately collected non-hazardous waste streams into secondary raw materials involving mechanical reprocessing, except for backfilling purposes.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: EU and SAT taxonomies explicitly reference quantitative criteria for the recycling of hazardous waste, and SAT's criteria is currently valid until 2030 with intention to tighten thresholds in future iterations. In China Taxonomy, there is specific mention to national standards with regards to construction and operation of recycling facilities. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU, China and SAT.		
Corresponding activities	China taxonomy: 1.5.2.2 The Recycling of Waste and Discarded Resources 1.5.3.1 The Integrated Utilization of Domestic Waste 5.3.1.2 Construction and operation of garbage treatment facilities	EU taxonomy: 5.9 Material recovery from non-hazardous waste	SAT: 8.6 Material recovery facilities
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	EU and Singapore share the common criteria as below, but China refers to national standards The activity converts at least 50 %, in terms of weight, of the processed separately collected non-hazardous waste into secondary raw materials that are suitable for the substitution of virgin materials in production processes.		

Number and Activity Name	E2.3 Composting of domestic and agricultural bio-waste		
Scope of activity	Construction and operation of dedicated facilities for the treatment of separately collected bio- waste through composting (aerobic digestion) with the resulting production and utilisation of compost.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: • EU and SAT taxonomies reference the same qualitative criteria for the composting of biowaste, but the SAT explicitly references avoidance of improper mixing or aeration to avoid methane leakage and ensure efficient operations. • In China Taxonomy, there is no specific mention to standards or thresholds with regards to composting of biowaste.		
Corresponding activities	China taxonomy: 1.5.3.1 Comprehensive Utilization of Urban and Rural Household Waste 1.5.3.2 Recycling and utilization of agricultural waste resources	EU taxonomy: 5.8 Composting of bio-waste	SAT: 8.2 Biowaste treatment: composting of biowaste
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with all of the following criteria: 1. The bio-waste that is composted is source segregated and collected separately. 2. The compost produced is used as fertiliser or soil improver and meets national rules on fertilisers or soil improvers for agricultural use. 3. Ensure efficient operations to avoid methane leakage (e.g., avoid improper aeration or mixing).		

Number and Activity Name	E2.4 Utilization/ treatment of domestic waste – anaerobic digestion		
Scope of activity	Construction and operation of dedicated facilities for the treatment of separately collected bio-waste through anaerobic digestion with the resulting production and utilisation of biogas and digestate and/or chemicals.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2- EU criteria are the most stringent Justification of the scenario selection: • EU and SAT taxonomies explicitly reference qualitative criteria for the treatment of domestic bio-waste by anaerobic digestion, but EU additionally provides quantitative criteria for the share of food and feed crops used as input feedstock. • In China Taxonomy, there is no specific mention to standards or thresholds with regards to domestic bio-waste treatment.		
Corresponding activities	China taxonomy: 1.5.3.1 Comprehensive utilization of urban and rural household waste	EU taxonomy: 5.7 Anaerobic digestion of bio-waste	SAT: 8.3 Biowaste treatment: anaerobic digestion
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with all of the following criteria: 1. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility. 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 fertiliser or soil improver, either directly or after composting or any other treatment. 5. 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.		

Number and Activity Name	E2.5 Recycling of agricultural waste		
Scope of activity	Construction and operation of resource utilization facilities for agricultural wastes such as crop stalks, livestock and poultry manure, tail vegetables, and primary processing residues of agricultural products. For example, of construction and operation of crop straw biomass fuel facilities, livestock and poultry manure biogas facilities and other related facilities.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – SAT criteria are the most stringent Justification of the scenario selection: • EU and SAT taxonomies reference the same qualitative criteria for the composting of biowaste, but the SAT explicitly references avoidance of improper mixing or aeration to avoid methane leakage and ensure efficient operations. • In China Taxonomy, there is no specific mention to standards or thresholds with regards to recycling of agricultural waste.		
Corresponding activities	China taxonomy: 1.5.3.2 Recycling and utilization of agricultural waste resources	EU taxonomy: 5.8 Composting of bio-waste	SAT: 8.2 Biowaste treatment: composting of biowaste
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with all of the following criteria: 1. The bio-waste that is composted is source segregated and collected separately. 2. The compost produced is used as fertiliser or soil improver. 3. Ensure efficient operations to avoid methane leakage (e.g., avoid improper aeration or mixing).		

Number and Activity Name	E2.6 Landfill gas capture and utilisation		
Scope of activity	Installation and operation of infrastructure for landfill gas capture and utilisation 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.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3-EU and SAT criteria are equally stringent Justification of the scenario selection: EU and SAT taxonomies explicitly reference the same qualitative criteria for landfill gas capture and utilisation. There is no corresponding China activity.		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU taxonomy: 5.10. Landfill gas capture and utilisation	SAT: 8.5 Landfill gas capture and utilisation
Multi-jurisdiction CGT substantial contribution criteria	N/A	The activity complies with all of the following criteria: 1. The landfill cell where gas capture is implemented is permanently closed and will not receive waste, and 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, and 3. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility.	

E3. Water collection, treatment and recycling

Number and Activity Name	**E3.1 Construction, extension and operation of water collection, treatment systems (abstraction and treatment systems)**		
Scope of activity	Construction, extension and operation of water collection, treatment and supply systems.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The EU and SAT have the same criteria and explicitly provide quantitative thresholds with regards to energy consumption. China taxonomy refers to relevant national standard. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU, China and SAT.		
Corresponding activities	China taxonomy: 2.4.1.1 The Improvement of Water Saving and Water Use Efficiency in Production	EU taxonomy: 5.1 Construction, extension and operation of water collection, treatment and supply systems	SAT: 9.1 Construction, extension and operation of new water collection and treatment systems(abstraction and treatment systems)
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	EU and Singapore share the common criteria as below, but China refers to national standards The net average energy consumption for abstraction and treatment equals to or is lower than 0.5 kWh/m3 of water produced for supply. Net energy consumption may consider measures that decrease energy consumption, such as source control (pollutant load inputs), and, as appropriate, onsite or offsite energy generation (such as hydraulic, solar and wind energy).		

Number and Activity Name	E3.2 Renewal of water collection, treatment and supply systems (abstraction and treatment systems)		
Scope of activity	Renewal of water collection, treatment and supply systems including renewals to water collection, treatment and distribution infrastructures for domestic and industrial needs. It implies no material changes to the volume of flow collected, treated or supplied.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: EU and SAT taxonomies explicitly provide quantitative thresholds with regards to energy consumption. China taxonomy refers to relevant national standard. Currently, it is not possible to assess the stringency and compare the criteria in EU and Singapore with the standards referred in China.		
Corresponding activities	China taxonomy: 2.4.1.1 The Improvement of Water Saving and Water Use Efficiency in Production	EU taxonomy: 5.2 Renewal of water collection, treatment and supply systems	SAT: 9.2 Renewal of water collection, treatment and supply systems (abstraction and treatment systems)
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	China refers to national standards, and EU and Singapore commonly refer to quantitative thresholds with regards to reduction in energy consumption. SAT focuses on defining specific thresholds for net energy consumption of the water treatment plant. EU Taxonomy focuses on defining the specific percentage threshold, by which the net average energy consumption of the water treatment system should be decreased compared to own baseline performance averaged for three years.		
Additional notes	SAT's amber criteria refer to 20% threshold for the increase in energy efficiency, which is similar to EU taxonomy criteria. In the CGT comparison exercise, only the Green criteria of SAT of each activity is considered for comparison with the criteria of EU and China taxonomy. The Green criteria of SAT refers to a specific threshold for energy consumption and EU taxonomy criteria refer to a percentage threshold for energy consumption reduction based on a baseline. It is not possible currently to assess the stringency between the approach used to define energy consumption related threshold in the activities of each taxonomy.		

Number and Activity Name	E3.3 Construction, extension and operation of water collection, treatment and supply systems (distribution networks)		
Scope of activity	Construction, extension and operation of water collection, treatment and supply systems.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: SAT explicitly provide a specific distribution loss threshold and EU provide quantitative thresholds for leakage level using the Infrastructure Leakage Index (ILI) rating method or in accordance with EU legislation. China taxonomy refers to relevant national standard. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU, China and SAT.		
Corresponding activities	China taxonomy: 2.4.1.1 The Improvement of Water Saving and Water Use Efficiency in Production	EU taxonomy: 5.1 Construction, extension and operation of water collection, treatment and supply systems	SAT: 9.3. Construction, extension and operation of water collection, treatment and supply systems (distribution networks)
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	China refers to national standards, and EU and Singapore commonly refer to thresholds with regards to reduction in distribution loss or leakage level. SAT focuses on defining specific thresholds for distribution loss for the segment of the network. EU Taxonomy focuses on leakage level based threshold which is established either using Infrastructure Leakage Index (ILI) rating method or in accordance with the relevant EU legislation.		
Additional notes	SAT's amber criteria refer to 20% threshold for the distribution loss, but the EU taxonomy criteria refers to 20% reduction of leakage level compared to a baseline averaged over three years, calculated using the Infrastructure Leakage Index (ILI) rating method and an ILI of 1.5, or in accordance with EU legislation. Also, In the CGT comparison exercise, only the Green criteria of SAT of each activity is considered for comparison with the criteria of EU and China taxonomy. Nonetheless, it is not possible currently to assess the stringency between the threshold for distribution loss in SAT and threshold for leakage level in EU as the approach for defining the threshold in EU and SAT is not equivalent.		

Number and Activity Name	E3.4 Renewal of water collection, treatment and supply systems (distribution networks)		
Scope of activity	Renewal of water collection, treatment and supply systems including renewals to water collection, treatment and distribution infrastructures for domestic and industrial needs. It implies no material changes to the volume of flow collected, treated or supplied.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: SAT explicitly provide a specific distribution loss threshold and EU provide quantitative thresholds for leakage level using the Infrastructure Leakage Index (ILI) rating method or in accordance with EU legislation. China taxonomy refers to relevant national standard. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU, China and SAT.		
Corresponding activities	China taxonomy: 2.4.1.1 The Improvement of Water Saving and Water Use Efficiency in Production	EU taxonomy: 5.2 Renewal of water collection, treatment and supply systems	SAT: 9.4 Renewal of water collection, treatment, and supply systems (distribution networks)
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	China refers to national standards, and EU and Singapore commonly refer to thresholds with regards to reduction in distribution loss or leakage level. SAT focuses on defining specific thresholds for distribution loss for the segment of the network. EU Taxonomy focuses on leakage level based threshold which is established either using Infrastructure Leakage Index (ILI) rating method or in accordance with the relevant EU legislation.		
Additional notes	SAT's amber criteria refer to 20% threshold for the leakage level, similar to EU taxonomy. In the CGT comparison exercise, only the Green criteria of SAT of each activity is considered for comparison with the criteria of EU and China taxonomy. It is not possible currently to assess the stringency between the threshold for distribution loss in SAT Green criteria and threshold for leakage level in EU as the approach for defining the threshold in EU and SAT is not equivalent.		

F: Construction

ISIC Mapping

ISIC Section	ISIC Division	Common Ground Taxonomy category
F, Construction	41. Construction of building 42. Civil engineering 43. Specialized construction activities	F1. Construction and renovation of buildings F2. Construction of transport infrastructure F3. Electrical, plumbing and other construction installation activities

F1. Construction and renovation of buildings

Number and Activity Name	F1.1 Construction of new buildings		
Scope of activity	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.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies. Justification of the scenario selection: Both the EU taxonomy and China's regulation on Net Zero Energy Building (NZEB) requires life cycle GHG calculation and disclosure, and the taxonomy activity specifically refers to the reduction of Primary Energy Demand (PED), lower than the threshold set for NZEB requirements. For residential buildings, the calculation and disclosure are made for a representative set of dwelling/apartment types. On the other hand, SAT specifies relevant certifications to ascertain energy performance. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU, China and SAT.		
Corresponding activities	China taxonomy: 5.2.1.1 Construction of ultra-low energy consumption buildings 5.2.1.2 Green buildings	EU taxonomy: 7.1 Construction of new buildings	SAT: 3.1. Construction of new buildings
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	The criteria across the taxonomies refer to relevant national or international certifications/ standards, to ascertain energy performance.		

Number and Activity Name	F1.2 Renovation of existing buildings		
Scope of activity	Energy-saving renovation of existing buildings and energy-use systems of buildings		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: In EU, the threshold for reduction of Primary Energy Demand (PED) is defined. On the other hand, SAT and China specify relevant certifications to ascertain energy performance. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU, China and SAT.		
Corresponding activities	China taxonomy: 5.2.1.5 Energy conservation and environmental-friendly renovation of existing buildings	EU taxonomy: 7.2 Renovation of existing buildings	SAT: 3.3. Renovation of existing buildings
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	The criteria across the taxonomies refer to relevant national or international certifications/ standards, to ascertain energy performance.		
Additional notes	SAT's amber criteria refer to 30% reduction in PED, which is similar EU taxonomy criteria. The classification of the PED reduction criteria as Amber criteria in SAT is based on preference of certification related criteria for Singapore context. Additionally, only the Green criteria of each activity in SAT is considered for the CGT comparison exercise. Also, it would not be possible currently to assess the stringency between Green Mark Certification or relevant international standards (SAT Green criteria) and 30% reduction in PED (EU taxonomy criteria).		

Number and Activity Name	F1.3 Acquisition and ownership of buildings		
Scope of activity	Energy-saving renovation of existing buildings and energy-use systems of buildings		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: In EU and SAT, the threshold for reduction of Primary Energy Demand (PED) and the certification for energy performance is defined. China specifies relevant certifications to ascertain energy performance. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU, China and SAT.		
Corresponding activities	China taxonomy: 5.2.1.1 Construction of ultra-low energy consumption buildings 5.2.1.2 Green buildings	EU taxonomy: 7.7 Acquisition and ownership of buildings	SAT: 3.4. Acquisition or ownership of buildings
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		
Common requirements across analysed taxonomies	The criteria across the taxonomies refer to relevant national or international certifications/ standards, to ascertain energy performance.		

F2. Construction of transport infrastructure

Number and Activity Name	**F2.1 Infrastructure enabling low-carbon road transport**		
Scope of activity	Construction, modernisation, 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.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China. Justification of the scenario selection: The criteria in EU and SAT are equally stringent. Both EU and SAT activities define the criteria for infrastructure that is not dedicated to transport or storage of fossil fuels. But the corresponding activities in China include infrastructure dedicated to transport of fossil fuels, and thus are less stringent.		
Corresponding activities	China taxonomy: 3.2.2.8 Construction and operation of hydrogen energy utilization facilities 5.5.4.1 Construction and operation of charging, battery replacement, hydrogen refuelling and Gas refuelling Facilities. 5.5.1.3 The Construction and Operation of Smart Transportation 5.5.1.5 The Construction and Operation of Public Transportation System in Urban and Rural Areas	EU taxonomy: 6.15 Infrastructure enabling low-carbon road transport and public transport	SAT: 2.5 Low carbon transport infrastructure
Multi-jurisdiction CGT substantial contribution criteria	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 fuelling stations or electric road systems (ERS). b) all other solutions related to optimising and/or providing the necessary electrical capacity to support the deployment and operation of EV charging solutions. c) the infrastructure and installations are dedicated to transhipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transhipment of goods. d) the infrastructure and installations are dedicated to urban and suburban public passenger transport, including associated signalling systems for metro, tram and rail systems. In all instances, the infrastructure is not dedicated to the transport or storage of fossil fuels.		

Number and Activity Name	F2.2 Infrastructure enabling low carbon water transport		
Scope of activity	Construction, modernisation, 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.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China. Justification of the scenario selection: The criteria in EU and SAT are equally stringent. Both EU and SAT activities define the criteria for infrastructure that is not dedicated to transport or storage of fossil fuels. But the corresponding activities in China include infrastructure dedicated to transport of fossil fuels, and thus are less stringent.		
Corresponding activities	China taxonomy: 5.5.3.1 Construction of power supply facilities at ports, docks and airport bridges	EU taxonomy: 6.16 Infrastructure enabling low carbon water transport	SAT: 2.5. Low carbon transport infrastructure
Multi-jurisdiction CGT substantial contribution criteria	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 refuelling. b) the infrastructure is dedicated to the provision of shore-side electrical power to vessels at berth. c) the infrastructure is dedicated to the performance of the port's own operations with zero direct (tailpipe) CO2 emissions. d) the infrastructure and installations are dedicated to transhipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transhipment of goods. In all instances, the infrastructure is not dedicated to the transport or storage of fossil fuels.		

Number and Activity Name	F2.3 Low carbon airport infrastructure		
Scope of activity	Construction, modernisation, 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.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China. Justification of the scenario selection: The criteria in EU and SAT are equally stringent. Both EU and SAT activities define the criteria for infrastructure that is not dedicated to transport or storage of fossil fuels. But the corresponding activities in China include infrastructure dedicated to transport of fossil fuels, and thus are less stringent.		
Corresponding activities	China taxonomy: 5.5.3.1 Construction of power supply facilities at ports, docks and airport bridges	EU taxonomy: 6.17 Low carbon airport infrastructure	SAT: 2.5. Low carbon transport infrastructure
Multi-jurisdiction CGT substantial contribution criteria	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 refuelling. b) the infrastructure is dedicated to the provision of fixed electrical ground power and preconditioned air to stationary aircrafts, as well as electrical charging and hydrogen refueling for aircraft and ground handling vehicles and equipment at the airport; c) the infrastructure is dedicated to the zero direct emissions performance of the airport's own operations including but not limited to: electric charging points, electricity grid upgrades, hydrogen refueling stations, resource circularity, renewable energy, optimise energy and systems efficiency to reduce emissions from airport's own operations. d) Air traffic management infrastructure / processes / activities dedicated to enable zero-emission aviation. In all instances, the infrastructure is not dedicated to the transport or storage of fossil fuels.		

Number and Activity Name	F2.4 Infrastructure for electric rail transport		
Scope of activity	Construction, modernisation, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems including the provision of architectural services, engineering services, drafting services, building inspection services and surveying and mapping services and the like as well as the performance of physical, chemical and other analytical testing of all types of materials and products.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The criteria in EU and SAT are equally stringent. The corresponding activities in China are more broadly defined and make specific references to Chinese national standards. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU, China and SAT.		
Corresponding activities	China taxonomy: 5.5.2.1 Construction and operation of rail freight transport and the environmental-friendly transformation of railways 5.5.1.5 Construction and operation of public transportation system in urban and rural areas	EU taxonomy: 6.14 Infrastructure for rail transport	SAT: 2.5. Low carbon transport infrastructure
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		
Common requirements across analysed taxonomies	EU and Singapore share the common criteria as below, but China refers to national standards The activity complies with one or more of the following criteria: a) For electrified trackside infrastructure and associated subsystems: infrastructure, installations and related facilities, energy, on-board control-command and signalling, and trackside control-command and signalling subsystems. b) For 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 signalling, and trackside control-command and signalling subsystems. c) The infrastructure and installations that principally facilitate trans-shipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods. d) Infrastructure, installations and related facilities that principally facilitate the transfer of passengers from rail to rail or from other modes to rail. In all instances, the infrastructure is not dedicated to the transport or storage of fossil fuels.		

Number and Activity Name	F2.5 Infrastructure for personal mobility, cycle logistics		
Scope of activity	Construction, modernisation, maintenance and operation of infrastructure for personal mobility, including the construction of roads, motorways bridges and tunnels and other infrastructure that are dedicated to pedestrians and bicycles, with or without electric assist.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 1 – alignment across taxonomies Justification of the scenario selection: The criteria in EU, China and SAT are equally stringent and correspond to infrastructure for cycles, pedestrians, and slow-mode vehicles, which would be automatically eligible.		
Corresponding activities	China taxonomy: 5.5.1.4 Construction and operation of slow mode transportation system	EU taxonomy: 6.13 Infrastructure for personal mobility, cycle logistics	SAT: 2.5. Low carbon transport infrastructure
Multi-jurisdiction CGT substantial contribution criteria	The infrastructure that is constructed and operated is dedicated to personal mobility or cycle logistics: pavements, bike lanes and pedestrian zones, electrical charging and hydrogen refuelling installations for personal mobility devices.		
Additional notes	Hydrogen vehicles for personal mobility are not eligible in China taxonomy due to lack of matured industry safety and quality standards.		

F3. Electrical, plumbing and other construction installation activities

Number and Activity Name	F3.1 Green lighting upgrades		
Scope of activity	Energy-saving technology upgrading of high-efficient lighting product		
Scenario analysis for Multi-jurisdiction CGT	Scenario 1 – alignment across taxonomies Justification of the scenario selection: The criteria in EU, China and SAT are equally stringent and correspond to installation and replacement of energy efficient light sources, specifically LED.		
Corresponding activities	China taxonomy: 1.1.3.1 Renovation of Green Lighting	EU taxonomy: 7.3 Installation, maintenance and repair of energy efficiency equipment	SAT: 3.2 Installation, maintenance, repair of equipment
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	F3.2 Installation, maintenance and repair of renewable energy technologies in buildings		
Scope of activity	Installation, maintenance and repair of renewable energy technologies, on-site.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 1 – alignment across taxonomies Justification of the scenario selection: The criteria in EU, SAT and China are equivalent and define specific individual measures that can be installed on-site as technical building systems.		
Corresponding activities	China taxonomy: 5.2.1.3 The Application of Renewable Energy in Buildings	EU taxonomy: 7.6 Installation, maintenance and repair of renewable energy technologies	SAT: 3.2 Installation, maintenance, repair of equipment
Multi-jurisdiction CGT substantial contribution criteria	The activity consists of one of the following individual measures, if installed on-site as technical building systems: a) Installation of renewable energy equipment, renewable energy charging stations and regulation devices b) Design, installation, maintenance and repair of solar photovoltaic systems and the ancillary technical equipment; c) Installation, maintenance and repair of solar hot water panels and the ancillary technical equipment; d) Installation, maintenance, repair and upgrade of heat pumps contributing to the targets for renewable energy in heat and cool in relevant national regulation; e) Installation, maintenance and repair of wind turbines and the ancillary technical equipment; f) Installation, maintenance and repair of solar transpired collectors and the ancillary technical equipment; g) Installation, maintenance and repair of thermal or electric energy storage units and the ancillary technical equipment; h) Installation, maintenance and repair of high efficiency micro CHP (combined heat and power) plant; i) Installation, maintenance and repair of heat exchanger/recovery systems.		

Number and Activity Name	F3.3 Installation, maintenance and repair of energy efficiency equipment		
Scope of activity	Individual renovation measures consisting in installation, maintenance or repair of energy efficiency equipment.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The criteria in EU and SAT are equivalent and define specific individual measures, whereas the corresponding China activities are broadly defined and reference national standards. Currently, it is not possible to assess the stringency and compare the alignment with the relevant measures and standards referred in EU, SAT and China.		
Corresponding activities	China taxonomy: 5.2.1.5 Energy Conservation and Environmental-friendly Renovation of Existing Buildings 6.2.1.2 Energy Performance Contracting Services	EU taxonomy: 7.3 Installation, maintenance and repair of energy efficiency equipment	SAT: 3.2 Installation, maintenance, repair of equipment
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		
Common requirements across analysed taxonomies	EU and Singapore share the common criteria as below, but China refers to national standards The activity consists of one of the following individual measures provided that they comply with minimum requirements set for individual components and systems in the applicable national measures and, where applicable, are rated in the highest two populated classes of energy efficiency in accordance with national regulations: (a) addition of insulation to existing envelope components, such as external walls (including green walls), roofs (including green roofs), lofts, basements and ground floors (including measures to ensure air-tightness, measures to reduce the effects of thermal bridges and scaffolding) and products for the application of the insulation to the building envelope (including mechanical fixings and adhesive); (b) replacement of existing windows with new energy efficient windows; (c) replacement of existing external doors with new energy efficient doors; (d) installation and replacement of energy efficient light sources; (e) installation, replacement, maintenance and repair of heating, ventilation and air- conditioning (HVAC) and water heating systems, including equipment related to district heating services, with highly efficient technologies;		

Number and Activity Name	F3.4 Installation, maintenance and repair of charging stations for electric vehicles in buildings		
Scope of activity	Installation, maintenance and repair of charging stations for electric vehicles in buildings and parking spaces attached to buildings.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China. Justification of the scenario selection: The criteria in EU and SAT are equally stringent. Both EU and SAT activities define the criteria for installation, maintenance or repair of charging stations for electric vehicles. But the corresponding activity in China include infrastructure dedicated to LNG refuelling stations, and thus are less stringent.		
Corresponding activities	China taxonomy: 5.5.4.1 The Construction and Operation of Power Charging, Battery Replacement, Hydrogen Refuelling and LNG Refuelling Facilities	EU taxonomy: 7.4 Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	SAT: 3.2 Installation, maintenance, repair of equipment
Multi-jurisdiction CGT substantial contribution criteria	All activities within the scope are directly eligible		

Number and Activity Name	F3.5 Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings		
Scope of activity	Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: The criteria in EU and SAT are equivalent and define specific individual measures, whereas the corresponding China activities are broadly defined and reference national standards. It is challenging to assess the stringency and compare the alignment with the relevant measures and standards referred in EU, SAT and China.		
Corresponding activities	China taxonomy: 5.2.1.5 Energy Conservation and Environmental-friendly Renovation of Existing Buildings 6.2.1.2 Energy Performance Contracting Services 6.2.1.3 Power Demand-side Management Services 6.4.1.1 Building of Online Energy Monitoring System	EU taxonomy: 7.5 Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	SAT: 3.2 Installation, maintenance, repair of equipment
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies.		
Common requirements across analysed taxonomies	EU and Singapore share the common criteria as below, but China refers to national standards The activity consists in one of the following individual measures: a) installation, maintenance and repair of zoned thermostats, smart thermostat systems and sensing equipment, including. motion and day light control; b) installation, maintenance and repair of building automation and control systems, building energy management systems (BMS), lighting control systems and energy management systems (EMS); c) installation, maintenance and repair of smart meters for gas, heat, cool and electricity; d) installation, maintenance and repair of façade and roofing elements with a solar shading or solar control function, including those that support the growing of vegetation.		

H: Transportation and storage

ISIC mapping

ISIC Section	ISIC Division	Common Ground Taxonomy category
H. Transportation and storage	49. Land transport and transport via pipelines 50 - Water Transport 51 - Air Transport 52 - Warehousing And Support Activities For Transportation	H1. Land transport including railways H2. Water Transport H3. Air Transport H4. Warehousing And Support Activities For Transportation

H1. Land transport including railways

Number and Activity Name	H1.1 Construction and operation of public transportation system in urban and rural areas		
Scope of activity	Construction and operation of subways, light railways, tram and other urban rail transportation facilities; construction and operation of high-capacity public transportation facilities, such as BRT bus stations, lines and other facilities construction and operation; purchase of public transportation vehicles, etc.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 –SAT criteria are the most stringent. Justification of the scenario selection: EU and SAT focus on zero tailpipe CO2 emissions, but the EU has an interim alignment to EURO VI standard till 2025 for certain categories of vehicle. Considering corresponding China activity does not have specific criteria relating to zero tailpipe CO2 emissions, SAT criteria are the most stringent.		
Corresponding activities	China taxonomy: 5.5.1.5 Construction and operation of public transportation system in urban and rural areas	EU taxonomy: 6.3 Urban and suburban transport, road passenger transport	SAT: 2.3. Urban and suburban passenger land transport
Multi-jurisdiction CGT substantial contribution criteria	For scheduled passenger road transport, the activity complies with the following criteria: a) The activity provides urban or suburban passenger transport, and its direct (tailpipe) CO2 emissions are zero. For scheduled passenger urban suburban rail transport, the activity complies with one of the following criteria: a) The trains and passenger coaches have zero direct (tailpipe) CO2 emissions; the trains and passenger coaches 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 (bimode), or b) Direct (tailpipe) CO2 emissions of the vehicle are zero.		

Number and Activity Name	H1.2 Construction and operation of rail freight transport and upgrade of existing railways		
Scope of activity	Construction and operation of freight railway facilities such as freight railway routes, yards and stations, and special power substations; construction and operation of existing railway electrification, yards and stations and relevant energy-saving and environmental protection renovation projects.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China. Justification of the scenario selection: EU and SAT criteria are equally stringent, and focus specifically on trains and wagons having zero tailpipe CO2 emissions. The corresponding China activity requires railway yards and stations must meet the relevant provisions of the Green Railway Passenger Station Evaluation Standard (TB/T 10429), however, does not have specific criteria relating to zero tailpipe CO2 emissions		
Corresponding activities	China taxonomy: 5.5.2.1 Construction and operation of rail freight transport and upgrade of existing railways to energy-saving and environmentally friendly ones	EU taxonomy: 6.2 Freight rail transport	SAT: 2.1. Transport via railways
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with one or both of the following criteria: a) the trains and wagons have zero direct tailpipe CO2 emission; 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 (bimode). The trains and wagons are not dedicated to the transport of fossil fuels.		

Number and Activity Name	H1.3 Construction and operation of facilities for shared transport, including motorbikes, passenger cars and light commercial vehicles		
Scope of activity	Construction and operation of shared private transportation infrastructure, such as systems for public rental bicycles, online bicycle rental, online electric bicycle rental, online car rental, car sharing, parking facilities and equipment, and bicycle parking facilities		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 –SAT criteria are the most stringent. Justification of the scenario selection: EU and SAT focus on zero tailpipe CO2 emissions, but the EU has an interim alignment to EURO VI standard till 2025 for certain categories of vehicle. Considering corresponding China activity does not have specific criteria relating to zero tailpipe CO2 emissions, SAT criteria are the most stringent.		
Corresponding activities	China taxonomy: 5.5.1.6 Construction and operation of facilities for shared transport	EU taxonomy: 6.5 Transport by motorbikes, passenger cars and light commercial vehicles	SAT: 2.2. Other passenger land transport
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with the following criteria: • Direct (tailpipe) CO2 emissions of the vehicle are zero.		
Additional notes	Even if China scope is narrower than EU and SAT, China criteria has not specifically required zero direct emissions. Therefore, scenario 2 instead of scenario 4 is assigned.		

Number and Activity Name	H1.4 Passenger interurban rail transport		
Scope of activity	Purchase, financing, rental, leasing and operation of passenger transport using railway rolling stock on mainline networks, spread over an extensive geographic area, passenger transport by interurban railways and operation of sleeping cars or dining cars as an integrated operation of railway companies.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China. Justification of the scenario selection: EU and SAT criteria are equally stringent and focus specifically on trains and passenger coaches having zero tailpipe CO2 emissions. The corresponding China activity does not have specific criteria relating to zero tailpipe CO2 emissions.		
Corresponding activities	China taxonomy: 5.5.1.3 Construction and operation of smart transportation	EU taxonomy: 6.1 Passenger interurban rail transport	SAT: 2.1. Transport via railways
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with one of the following criteria: a) the trains and passenger coaches have zero direct (tailpipe) CO2 emissions; b) the trains and passenger coaches 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 (bimode).		

Number and Activity Name	H1.5 Construction and operation of personal mobility devices, cycle logistics		
Scope of activity	Construction, 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.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China. Justification of the scenario selection: EU and SAT criteria are equally stringent and focus specifically on personal mobility devices that are propelled from the physical activity of the user, or from a zero-emissions motor, or from a mix of both. The corresponding China activity is broadly defined and does not have specific criteria.		
Corresponding activities	China taxonomy: 5.5.1.4 Construction and operation of slow mode transportation system 5.5.1.6 Construction and operation of facilities for shared transport	EU taxonomy: 6.4 Operation of personal mobility devices, cycle logistics	SAT: 2.5. Low-carbon transport infrastructure 2.2. Other passenger land transport
Multi-jurisdiction CGT substantial contribution criteria	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. Pavements, bike lanes and pedestrian zones, parking provisions for active mobility modes, electrical charging and hydrogen refuelling installations for personal mobility devices.		

Number and Activity Name	H1.6 Freight transport services by road		
Scope of activity	This activity includes all freight transport operations by road; logging haulage; stock haulage; refrigerated haulage; heavy haulage; bulk haulage, including haulage in tanker trucks; haulage of automobiles; transport of waste and waste materials, without collection or disposal. This activity also includes furniture removal; renting of trucks with driver; freight transport by man or animal-drawn vehicles.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 –SAT criteria are the most stringent. Justification of the scenario selection: EU and SAT focus on zero tailpipe CO2 emissions, but the EU has an exception for certain categories of vehicle. There is no corresponding China activity (Instead, China focuses on construction and operation of road infrastructure instead of freight service agencies).		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU taxonomy: 6.6 Freight transport services by road	SAT: 2.4 Freight transport by road
Multi-jurisdiction CGT substantial contribution criteria	N/A	The activity complies with the following criteria: a) Direct (tailpipe) CO2 emissions of the vehicle are zero. b) Vehicles are not dedicated to fossil fuel transport	

H2. Water transport

Number and Activity Name	H2.1 Inland water transport		
Scope of activity	This activity includes transport of passenger or freight via rivers, canals, lakes and other inland waterways, including inside harbours and ports. This activity also includes rental of pleasure boats with crew for inland water transport, and Construction and operation of facilities for the supply of electricity to port and shore-based ships		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 –SAT criteria are the most stringent. Justification of the scenario selection: EU and SAT focus on zero tailpipe CO2 emissions, but the EU has an interim target till 2025. There is no corresponding China activity.		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU taxonomy: 6.7 Inland passenger water transport 6.8 Inland freight water transport	SAT: 2.7. Inland water transport
Multi-jurisdiction CGT substantial contribution criteria	N/A	The activity complies with the following criteria: a) Vessels have zero direct (tailpipe) CO2 emissions.	

umber and Activity Name	H2.2 Sea and coastal water transport		
Scope of activity	This activity includes transport of passengers or freight overseas and coastal waters, whether scheduled or not; operation of excursion, cruise or sightseeing boats; operation of ferries, water taxis etc.; operation of harbour crafts; transport of freight overseas and coastal waters, whether scheduled or not; transport by towing or pushing of barges, oil rigs etc. This activity also includes rental of pleasure boats with crew for sea and coastal water transport.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 –SAT criteria are the most stringent. Justification of the scenario selection: EU and SAT focus on zero tailpipe CO2 emissions, but the EU has an interim target till 2025. There is no corresponding China activity.		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU taxonomy: 6.10 Sea and coastal freight water transport, vessels for port operations and auxiliary activities 6.11 Sea and coastal passenger water transport	SAT: 2.6. Sea and coastal water transport
Multi-jurisdiction CGT substantial contribution criteria	N/A	The activity complies with one of the following criteria: a) Vessel has zero direct tailpipe CO2 emissions; with an emphasis on tank-to-wake emissions and taking into account the IMO's guidelines on lifecycle analysis of fuels; or b) Vessel derives 100% of the energy used onboard from fuels or other energy carriers which achieve at least 80% greenhouse gas emission savings compared to their fossil fuel equivalent on a Tank-To-Wake basis; or c) Vessel has to comply with emission intensity thresholds set by CBI criteria throughout its economic life. And Vessels are not dedicated to the transport of fossil fuels. And If vessels are using biofuels these must: a) Meet the Taxonomy Green criteria for biofuels indicated in the Energy sector and b) Be recognised by the IMO as relevant and eligible fuels/energy carriers used for propulsion and operation of ships taking into account the IMO's Guidelines on the Lifecycle GHG Intensity of Marine Fuels (LCA Guidelines). c) The fleet type and size category median values in EEOI32 and AER33 for each decade starting from 2020 to 2050.	

H3. Air transport

Number and Activity Name	H3.1 Passenger and freight air transport		
Scope of activity	Purchase, financing and operation of aircraft including transport of passengers and goods.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 –SAT criteria are the most stringent. Justification of the scenario selection: EU and SAT focus on zero tailpipe CO2 emissions, but the EU has an interim target till 2025. There is no corresponding China activity.		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU taxonomy: 6.19 Passenger and freight air transport	SAT: 2.8. Air transport
Multi-jurisdiction CGT substantial contribution criteria	N/A	Once credible, science-based, and 1.5 degrees aligned pathway developed by ICAO becomes available, it will be reviewed for inclusion in the taxonomy. Pending this development, the activity complies with one of the following criteria: a) Performed using zero exhaust CO2 emission aircraft such as those powered by electricity or hydrogen meeting Taxonomy criteria (green) b) Aircrafts are not dedicated to fossil fuel transport.	

Number and Activity Name	H3.2 Leasing of aircraft		
Scope of activity	Renting and leasing of aircraft and aircraft parts and equipment		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 –SAT criteria are the most stringent. Justification of the scenario selection: EU and SAT focus on zero tailpipe CO2 emissions, but the EU has an interim target till 2025. There is no corresponding China activity.		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU taxonomy: 6.18 Leasing of aircraft	SAT: 2.8. Air transport
Multi-jurisdiction CGT substantial contribution criteria	N/A	Once credible, science-based, and 1.5 degrees aligned pathway developed by ICAO becomes available, it will be reviewed for inclusion in the taxonomy. Pending this development The activity complies with one of the following criteria: a) Performed using zero exhaust CO2 emission aircraft such as those powered by electricity or hydrogen meeting Taxonomy criteria (green) b) Aircrafts are not dedicated to fossil fuel transport.	

H4. Warehousing and support activities for transportation

Number and Activity Name	H4.1 Air transport ground handling operations		
Scope of activity	Manufacture, repair, maintenance, overhaul, retrofitting, design, repurposing and upgrade, purchase, financing, renting, leasing and operation of equipment and service activities incidental to air transportation (ground handling), including ground services activities at airports and cargo handling, including loading and unloading of goods from aircraft. The economic activity includes: (a) vehicles for aircraft marshalling and other services within the apron; (b) equipment for passenger boarding, including passenger shuttles, mobile steps; (c) equipment for baggage and freight handling including belt loaders, baggage tractors, airport pallet trucks lower deck loaders, main deck loaders; (d) equipment for catering including cool container dollies, excluding equipment with refrigeration units powered by an internal combustion engine; (e) maintenance equipment including maintenance stands and platforms; (f) pushback tugs; (g) de-icing equipment for aircraft and engine de-icing; (h) snow ploughs and other snow clearance and surface de-icing equipment; (i) non-autonomous taxiing.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent. Justification of the scenario selection: EU and SAT are equally stringent and focus on zero tailpipe CO2 emissions. There is no corresponding China activity.		
Corresponding activities	China taxonomy: Activity is not in China taxonomy	EU taxonomy: 6.20 Air transport ground handling operations	SAT: 2.8. Air transport 2.2. Other passenger land transport
Multi-jurisdiction CGT substantial contribution criteria	N/A	Ground handling vehicles' direct (tailpipe) CO2 emissions are zero. The propulsion of all ground handling devices and equipment comes from a zero-emissions motor.	

M: Professional, scientific and technical activities

ISIC Mapping

ISIC Section	ISIC Division	Common Ground Taxonomy category
M. Professional, scientific and technical activities	71. Architectural and Engineering Activities; Technical Testing and Analysis 72. Scientific Research and Development	M1. Professional, scientific and technical activities

M1. Professional, scientific and technical activities

Number and Activity Name	M1.1 Close to market research, development and innovation[12]		
Scope of activity	Research, applied research and experimental development of solutions, processes, technologies, and products dedicated to the reduction, avoidance or removal of GHG emissions (RD&I) for which the ability to reduce, remove or avoid GHG emissions in the target economic activities has at least been demonstrated in a relevant application context. This includes (1) technical services assessing potential commercial use of green resources and scaled construction of such projects which contributes to GHG reduction; (2) clean production audit services specifically referring to technical diagnosis of production process, energy consumption, etc, so as to identify potential improvement areas, propose improvement plans, and achieve better energy efficiency, less emissions and less resource inputs into production.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2 – EU criteria are the most stringent Justification of the scenario selection: The EU activity is classified as enabling activity and, for this reason, the substantial contribution criteria are associated with do no significant harm criteria. Whereas the Chinese Taxonomy differs in this and is linked to relevant environmental and green industry regulations and standards. In the EU Taxonomy, DNSH criteria are defined irrespective of the law, based on analyses of the environmental footprints of economic activities and targeted criteria/measures to mitigate the footprints identified. There is no corresponding SAT activity		
Corresponding activities	China taxonomy: 6.1.1.1 Green Industry Project Survey Services 6.1.1.2 Green Industry Project Design Services 6.1.1.4 Clean Production Audit Services	EU taxonomy: 9.2 Close to market research, development and innovation	SAT: Activity is not in SAT[13]

[12] The activity is integrated only to reflect the current thinking and the progress made around finding a common ground on the EU and Chinese Taxonomy criteria for RD&I. At this stage, the activity is not formally adopted as part of the CGT due to methodological incompatibilities.

In the EU Taxonomy this activity is considered as enabling per the following definition:
An economic activity shall qualify as contributing substantially to one or more of the other environmental objectives by directly enabling other activities to make a substantial contribution to one or more of those objectives, provided that such economic activity:
a) does not lead to a lock-in of assets that undermine long-term environmental goals, considering the economic lifetime of those assets; and
b) has a substantial positive environmental impact, on the basis of life-cycle considerations.

[13] SAT specifically focuses on only CCS-related technologies – the overlap between SAT and China and EU taxonomies is too small to make a robust comparison..

Multi-jurisdiction CGT substantial contribution criteria	1. The activity researches, develops or provides innovation for technologies, products or other solutions that are dedicated to one or more economic activities for which the technical screening criteria have been set out in the CGT. 2. The results of the research, development and innovation enable one or more of those economic activities to meet the respective criteria for substantial contribution to climate change mitigation, while respecting the relevant criteria for doing no significant harm to other environmental objectives. 3. The economic activity aims at bringing to market a solution that is not yet in the market and is expected to have a better performance in terms of life-cycle GHG emissions than best commercially available technologies based on public or market information. The implementation of the technologies, products or other solutions being researched results in overall net GHG emissions reductions over their life cycle. 4. Where the researched, developed or innovated technology, product or other solution already enables an activity or several activities addressed in the CGT to meet the technical screening criteria specified in the applicable Section of the CGT, or where that technology, product or other solution already enables one or more economic activities considered as enabling or transitional to meet the requirements specified in points 5 and 6 respectively, the research, development and innovation activity focuses on the development of equally low- or lower-emission technologies, products or other solutions with new significant advantages, such as lower cost. 5. Where a research activity is dedicated to one or more economic activities considered as enabling activities in the CGT, the results of the research deliver innovative technologies, processes or products that allow those enabling activities and the activities that they ultimately enable to substantially reduce their GHG emissions or substantially improve their technological and economic feasibility in order to facilitate their scaling up. 6. Where a research activity is dedicated to one or more economic activities considered as transitional activities in the CGT, the technologies, products or other solutions researched enable the target activities to be carried out with substantially lower projected emissions compared to the technical screening criteria for substantial contribution to climate change mitigation set out in the CGT. 7. Where the researched, developed or innovated technology, product or other solution is at the stage of technology model or prototype demonstration in a relevant environment, life-cycle GHG emissions are	N/A

	evaluated in simplified form by the entity carrying out the research. The entity demonstrates one of the following, where applicable: a. a patent not older than 10 years associated with the technology, product or other solution, where information on its GHG emission reduction potential has been provided; b. a permit obtained from a competent authority for operating the demonstration site associated with the innovative technology, product or other solution for the duration of the demonstration project, where information on its GHG emission reduction potential has been provided. Where the researched, developed or innovated technology, product or other solution is at the stage of actual technology completed and qualified through test and demonstration, or beyond, ready, life-cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018(325) or ISO 14064-1:2018(326) and are verified by an independent third party.	
Explanation/ Comments	Due to the importance of facilitating R&D investments for the transition, both China and the EU would see the activity M1.1 “Close to Market Research, Development and Innovation” being integrated into the CGT. However, there is a clear overlap in the description and scope of the activity, whereas the substantial contribution criteria present some divergences. The EU Taxonomy classifies the activity of “Close to market research, development and innovation” as enabling and, for this reason, the substantial contribution criteria are associated with do no significant harm criteria. The Chinese Taxonomy differs in this and is linked to relevant environmental and green industry regulations and standards. In the EU Taxonomy, DNSH criteria are defined irrespective of the law, based on analyses of the environmental footprints of economic activities and targeted criteria/measures to mitigate the footprints identified. For the target economic activities, the green labelling scheme should incorporate technical criteria for all significant environmental impacts in the relevant context, in accordance with the applicable international and national environmental laws and green standards. In that context, the activity was integrated into the CGT to reflect the necessity to foster green R&D investments. Nevertheless, a well-defined common technical screening criteria is subject to further analysis and articulation in the future .	N/A

Number and Activity Name	M1.2 Professional services related to energy performance of certified green buildings		
Scope of activity	Professional services related to energy performance of certified green buildings. This includes technical consultancy services for energy performance contracting, energy saving assessment, energy audit, and promotion and certification of energy saving products, low carbon products, environmental labelling products and green building materials.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 4 – identifiable overlap; stringency of criteria is not comparable across taxonomies Justification of the scenario selection: EU and China taxonomies reference relevant national and regional standards or regulations. Currently, it is not possible to assess the stringency and compare the alignment with the relevant thresholds and standards referred in EU and China. There is no corresponding SAT activity.		
Corresponding activities	China taxonomy: 6.5.1.1 Promotion and Certification of Energy Saving Products 6.5.1.2 Promotion and Certification of Low-Carbon Products 6.5.1.4 Promotion and Certification of Environmental Labelling Products 6.5.1.8 Promotion and Certification of Green Building Materials 6.2.1.2 Energy Performance Contracting Services 6.3.1.1 Energy-Saving Assessment and Energy Audit	EU taxonomy: 9.2 Close to market research, development and innovation	SAT: Activity is not in SAT
Multi-jurisdiction CGT substantial contribution criteria	Activity meets criteria of at least one of the analysed taxonomies		N/A
Common requirements across analysed taxonomies	The activity consists in one of the following: 1. Technical consultations (energy consultations, energy simulations, project management, production of energy performance contracts, dedicated trainings) linked to the improvement of energy performance of certified green buildings; 2. Accredited energy audits and building performance assessments; 3. Energy management services; 4. Energy performance contracts; 5. Energy services provided by energy service companies (ESCOs) 6. Energy-saving technology improvement services related to the sharing of benefits from energy-saving, energy cost custody, energy-saving performance contract, and financial leasing; other consulting services related to consulting for the business models of energy management contracting, that meet the requirements of national standards. 7. Energy efficiency assessment of energy-using units, technical consulting services on energy-saving retrofit plan design and third-party energy audit, energy saving assessment, energy audit training, energy-saving assessment and energy audit-related services such as energy-saving report preparation services for fixed asset		N/A

	investment projects, that shall meet the requirements of relevant national standards Certification and promotion services for green building materials such as energy-saving glass, thin ceramic tiles, masonry materials and other green building materials that meet the requirements of national policies and specifications.	

X: Others

These areas do not fit easily within ISIC codes and are added here for completeness

Number and Activity Name	**X1. Underground permanent geological storage of CO2**		
Scope of activity	Permanent storage of captured CO2 in appropriate underground geological formations. This activity does not include nature based sequestration activities.		
Scenario analysis for Multi-jurisdiction CGT	Scenario 2- EU criteria are the most stringent Justification of the scenario selection: • EU and SAT taxonomies explicitly reference the same international standard for the operation of a permanent CO2 storage facility, but EU additionally provides quantitative criteria for the characterisation, assessment, exploration and operation of these facilities. • China taxonomy covers "construction and operation of emission reduction projects to capture, utilize, or store carbon dioxide emitted from the combustion of fossil energy and industrial processes" without specified quantitative criteria or standards.		
Corresponding activities	China taxonomy: 3.2.3.6 Construction and operation of carbon dioxide capture, utilization and storage (CCS) project	EU taxonomy: 5.12. Underground permanent geological storage of CO2	SAT: 6.3 Permanent sequestration of captured CO2
Multi-jurisdiction CGT substantial contribution criteria	The activity complies with all of the following criteria: 1. Characterisation and assessment of the potential storage complex and surrounding area, or exploration within the meaning of national standards and regulations is carried out in order to establish whether the geological formation is suitable for use as a CO2 storage site. 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; 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. 3. For the exploration and operation of storage sites , the activity complies with ISO 27914:2017 for geological storage of CO2 or relevant national standards and regulations.		

Number and Activity Name	X2. Hydrogen storage		
Scope of activity	Construction and operation of facilities that store hydrogen and return it at a later time		
Scenario analysis for Multi-jurisdiction CGT	Scenario 3 – EU and SAT criteria are equally stringent, and more than China Justification of the scenario selection: EU and SAT Taxonomies have more stringent criteria from the climate change mitigation perspective given the cross-reference to the criteria for manufacture of hydrogen, while criteria outlined in the Chinese taxonomy primarily refer to the design and safety requirements		
Corresponding activities	China taxonomy: 3.2.2.8 Construction and Operation of Hydrogen Energy Utilization Facilities3	EU taxonomy: 4.12. Storage of hydrogen	SAT: 1.10. Storage of hydrogen or its derivatives
Multi-jurisdiction CGT substantial contribution criteria	The activity is one of the following: (a) construction of hydrogen storage facilities; (b) conversion of existing underground gas storage facilities into storage facilities dedicated to hydrogen-storage; (c) operation of hydrogen storage facilities where the hydrogen stored in the facility meets the criteria for manufacture of hydrogen set out in hydrogen Manufacture in Section C.		