

Climate Bonds Taxonomy

SEPTEMBER 2021

Introduction

Institutional investors are increasingly indicating their support for action to address climate change. However, there are too few tools to help ensure that their investments are in credible, robust activities and are making a significant impact, particularly for debt based investments. The market needs independent, science-driven guidance on which assets and activities are consistent with a rapid transition to a low-carbon economy.

The Climate Bonds Taxonomy identifies the assets, activities and projects needed to deliver a low carbon economy. Consistent with the 2 goals of the Paris Agreement. It has been developed based on the latest climate science including research from the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA), and has benefited from the input of hundreds of technical experts from around the world. It can be used by any entity looking to identify which assets and activities, and associated financial instruments, are compatible with a trajectory to net zero by 2050.





First released in 2013, the Climate Bonds Taxonomy is regularly updated based on the latest climate science, emergence of new technologies and sector specific Criteria.

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Using this document

A traffic light system has been adopted to indicate whether identified assets and projects are considered to be automatically compatible with a 1.5°C degree decarbonisation trajectory. Green Light is automatically compatible. Orange Light is potentially compatible, depending on whether more specific criteria are met. Red Light is incompatible. A Grey circle is used to indicate where further work is required to determine which traffic light colour is appropriate for a specific sub-set of assets or activities.

















Automatically compatible	
Compatible if compliant with screening indicator	
Not compatible	
More work required	

The Taxonomy is the foundation used by the Climate Bonds Initiative to screen bonds to determine whether assets or projects underlying an investment are eligible for green or climate finance. Where detailed analysis of a sector has been undertaken and specific eligibility Criteria have been developed, bonds in that sector can be Climate Bonds Certified. This is indicated via a blue 'Climate Bonds Certification tick'. Where detailed sector based Criteria for Certification are still under development, this is indicated by a yellow circle. In this case, bonds in this sector cannot yet be certified under the Climate Bonds Standard.

Certification Criteria Approved	
Criteria under development	

Energy










ELECTRICITY & HEAT PRODUCTION

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable
SOLAR 	Generation facilities (power & heat)	Photovoltaic generation facilities (onshore)	●	Facilities shall have no more than 15% of electricity generated from non-renewable sources	
		Concentrated solar power facilities (onshore)	●		
	Supply chain facilities	Manufacturing facilities wholly dedicated to onshore solar energy development such as PV cells & components, CSP dishes, troughs & components etc	●		
		Dedicated storage, distribution, installation, wholesale and retail	●		
	Infrastructure	Dedicated transmission infrastructure	●		
		Dedicated supporting infrastructure including inverters, transformers, energy storage systems and control systems	●		
WIND 	Generation facilities (power & heat)	Onshore wind farms	●		
	Supply chain facilities	Manufacturing facilities wholly dedicated to onshore wind energy development such as wind turbines	●		
		Dedicated storage, distribution, installation, wholesale and retail	●		
	Infrastructure	Dedicated transmission infrastructure	●		
		Dedicated supporting infrastructure	●		
GEOHERMAL 	Generation facilities (power & heat)	Electricity generation facilities	●	Direct emissions less than 100gCO ₂ /kWh	
		Direct heat application such as Geothermal Heat Pump (GHP)	●		
	Supply chain facilities	Manufacturing facilities wholly dedicated to geothermal energy developments such as geothermal turbines	●		
		Dedicated storage, distribution, installation, wholesale and retail	●		
	Infrastructure	Dedicated transmission infrastructure	●		
		Dedicated supporting infrastructure	●		

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Energy



ELECTRICITY & HEAT PRODUCTION

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable	
BIO-ENERGY 	Facilities producing biofuel, biomass, biogas including fuel preparation process facilities, pretreatment facilities and biorefinery facilities (if ≥50% biomass based products produced for energy use)	Facilities producing liquid biofuel, solid and gaseous biomass for heating and cogeneration	●	(i) 80% GHG emission reduction compared to fossil fuel baseline AND (ii) Biofuel must be sourced from a sustainable feedstock (the only timber feedstock allowed is waste wood)		
		Facilities producing liquid biofuel, solid and gaseous biomass for electricity production	●			
		Facilities producing biofuel for transport	●			
	Generation facilities (power, heat & cooling)	Electricity generation facilities such as biomass power station	●	(i) Emissions of electricity generated must be lower than 100gCO ₂ /kWh AND (ii) Biofuel must be sourced from a sustainable feedstock (the only timber feedstock allowed is waste wood)		
		Heating facilities	●		(ii) Emissions of biomass or biofuel used must be 80% lower than fossil fuel baseline and the energy efficiency achieved must be at least 80% AND (ii) Biofuel must be sourced from a sustainable feedstock (the only timber feedstock allowed is waste wood)	
		Cooling facilities	●			
		Combined Heat & Power facilities	●			
	Supply chain facilities	Manufacturing facilities wholly dedicated to bioenergy development	●			
		Dedicated storage, distribution, installation and wholesale and retail	●			
		Blending facilities	●			
	Infrastructure	Dedicated transmission infrastructure	●			
		Dedicated supporting infrastructure	●			

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Energy



ELECTRICITY & HEAT PRODUCTION

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable	
HYDROPOWER 	Generation facilities	Run of river	●	In operation before 2020 power density > 5W/m ² ; or GHG emissions intensity of electricity generated < 100gCO ₂ e/kWh. Commencing operation in 2020 or after: power density >10W/m ² ; or GHG emissions intensity <50g CO ₂ e/kWh AND Must perform an assessment, based on recognised best practice guidelines, of environmental and social risks and incorporate measures to address risks Only for pumped storage: facility will not be charged with carbon intensive energy OR facility is contributing to a grid which has at least 20% share of intermittent renewables	●	
		Impoundment	●		●	
		Pumped storage	●		●	
	Supply chain facilities	Manufacturing facilities wholly dedicated to hydropower development such as hydro turbines and components	●		●	
		Dedicated storage, distribution, installation and wholesale and retail	●		●	
	Infrastructure	Dedicated transmission infrastructure	●		●	
		Dedicated supporting infrastructure	●		●	
	MARINE RENEWABLES 	Generation facilities (power, heat & cooling)	Offshore wind farms	●	Fossil fuel back up can only be used for restart capability and monitoring, operating or resilience measures in the event of no power in the system	●
			Offshore solar farms	●		●
Tidal and wave energy generation facilities			●	●		
Other marine electricity generation facilities using ocean thermals, salinity, gradients, etc			●	●		
Heating or cooling facilities using ocean thermals			●	Must achieve an 80% reduction in gCO ₂ e/kWh compared to fossil fuel alternative		●
Supply chain facilities		Manufacturing facilities wholly dedicated to marine renewable energy development such as wind turbines and platforms, vertical and horizontal axis turbines, in-stream generators, etc	●		●	
		Dedicated storage, distribution, installation and wholesale and retail	●		●	

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Energy








ELECTRICITY & HEAT PRODUCTION

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable
MARINE RENEWABLES	Infrastructure	Dedicated transmission infrastructure	●		
		Dedicated supporting facilities, such as transmission terminus and transformers, grid connections, dedicated facilities for supporting vessels, equipment storage and onshore assembly	●		
FOSSIL FUELS	Generation facilities	Coal or oil power without carbon capture and storage (CCS)	●		
		Coal or oil with carbon capture & storage (CCS)	●	CCS must capture 100% of GHG emissions	
		Coal or oil powered combine heat and power (CHP)	●		
		Waste heat recovery from coal or oil fuelled power generation	●		
		Gas power without carbon capture & storage (CCS)	●		
		Gas power with carbon capture & storage (CCS)	●		
		Gas powered combine heat and power (CHP)	●		
		Waste heat recovery from gas fuelled power generation	●		
	Mining and extraction	Coal mining or oil extraction, refining, processing or production and associated supply chain infrastructure	●		
Gas extraction, refining, processing or production and associated supply chain infrastructure		●			
NUCLEAR	Generation facilities	Power plants	●		
		Dedicated supporting infrastructure	●		
	Mining facilities	Uranium mining	●		
OTHER	Generation facilities (heat)	Heat pumps using soil or air gradients	●		
	Advanced alternative fuel power plants	Alternative fuel power plants	●		
		Supporting infrastructure	●		

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Energy






Transmission, distribution & storage

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable
TRANSMISSION & DISTRIBUTION 	Infrastructure	Construction, upgrading or operation of: <ul style="list-style-type: none"> Overhead lines (conductors and insulators) and pylons Transformers, reactors and substations Underground cables Circuit breakers and switchgear Sub-stations, buildings, fences and busbars Fuses, circuit breakers, disconnectors, reactors, capacitors, transformers, voltage regulators and switchgear 	●	a. Is a dedicated connection to a power production plant eligible under one of the Climate Bonds sector criteria (e.g. Solar) b. Is a dedicated connection to a power production plant operating under the low carbon power threshold (100g CO ₂ /kWh) c. The infrastructure is located on a system with a grid factor at or below 100g CO ₂ /kWh d. The infrastructure is located on a system for which at least 67% of its added generation capacity in the last 5 years falls below the low carbon power threshold	
		Interconnectors between transmission systems	●	One of the two systems is on a pathway to decarbonisation as defined above c. and d.	
		Installation of T&D transformers	●	Correspond to or comply with the Tier 2 (2021) requirements from EU Regulation 548/2014 on the eco-design of small, medium and large power transformers and, for medium power transformers with highest voltage for equipment not exceeding 36 kV, with AAAO level requirements on no-load losses set out in standard EN 50588- 1, or equivalent	
		Equipment and infrastructure where the main objective is an increase of the generation or use of renewable electricity generation	●		
		Equipment to increase the controllability and observability of the electricity system and enable the development and integration of renewable energy sources. This includes:	●		
		Sensors and measurement tools (including meteorological sensors for forecasting renewable production)	●		

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Energy

Transmission, distribution & storage

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable
		Communication and control (including advanced software and control rooms, automation of substations or feeders, and voltage control capabilities to adapt to more decentralised renewable infeed)	●		
		Equipment to carry information to users for remotely acting on consumption	●		
		Equipment to allow for exchange of renewable electricity between users	●		
STORAGE	Infrastructure	Batteries, capacitors, compressed air storage and flywheels	●	a. Is a dedicated connection to a power production plant eligible under one of the Climate Bonds sector criteria (e.g. Solar) b. Is a dedicated connection to a power production plant operating under the low carbon power threshold (100g CO ₂ /kWh) c. The infrastructure is located on a system with a grid factor at or below 100g CO ₂ /kWh d. The infrastructure is located on a system for which at least 67% of its added generation capacity in the last 5 years falls below the low carbon power threshold	
		Large scale energy storage facilities			
		Manufacture facilities dedicated to any of the above	●		

Transport

Passenger, freight & supporting infrastructure

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable
PRIVATE PASSENGER TRANSPORT 	Vehicles	Electric passenger & freight vehicles	●		
		Hydrogen passenger & freight vehicles	●		
		Other passenger vehicles, e.g. hybrid vehicles	●	Vehicle meets universal gCO ₂ /p-km (passenger per kilometre) threshold	
	Supply chain facilities	Dedicated manufacturing facilities for vehicles and key components, such as batteries, being used in eligible vehicles	●		
	Infrastructure	Dedicated charging and alternative fuel infrastructure (when separate from fossil fuel filling stations and garages)	●		
		New roads, road bridges, road upgrades, parking facilities, fossil fuel filling stations, etc	●		
PUBLIC PASSENGER TRANSPORT 	Trains	Rolling stock and vehicles for electrified public transport, such as electrified rail, trams, trolleybuses and cable cars	●		
		Fossil fuel or hybrid vehicles or rolling stock	●	Passenger transport system meets universal gCO ₂ /p-km (passenger-kilometre) threshold	
		Biofuel vehicles	●		
	Buses	Buses with no direct emissions (electric or hydrogen)	●		
		Fossil fuel or hybrid vehicles	●	Vehicle meets universal gCO ₂ /p-km (passenger-kilometre) threshold	
		Biofuel vehicles	●		
	Supply chain facilities	Dedicated manufacturing facilities for rolling stock, buses or key components such as batteries, being used in eligible vehicles	●		
	Infrastructure	Dedicated infrastructure for electrified public transport	●		
		Dedicated product or supporting infrastructure for fossil fuel or hybrid vehicles or rolling stock	●	Eligible if the transport mode supported is eligible according to one of the above	
		Dedicated charging and alternative fuel infrastructure (when separate from fossil fuel filling stations and garages)	●		
Passenger cars and commercial vehicles	Biofuel vehicles	●			

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Transport









Passenger, freight & supporting infrastructure

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable
PUBLIC PASSENGER TRANSPORT	Infrastructure	Public walking and cycling infrastructure and cycling schemes	●		
		Bus rapid transit systems	●		
ROAD FREIGHT	Lorries and trucks	Vehicles with no direct emissions (electric or hydrogen)	●		
		All other types of lorries or trucks (e.g. biofuel-powered or hybrid trucks)	●		
FREIGHT RAIL 	Trains	Rolling stock for electrified freight rail	●	Fossil fuel freight must not be more than 25% of the freight transported (in tonne/km)	
		Rolling stock for non-electrified freight rail	●	(i) Fossil fuel freight must not be more than 25% of the freight transported (in tonne/km) (ii) Transport meets universal gCO ₂ /t-km (tonne-kilometre) threshold	
	Infrastructure	All infrastructure for electrified freight rail	●		
		All infrastructure for non-electrified freight rail	●	Eligible if the associated rail is eligible	
CROSS CUTTING		ICT that improves asset utilisation, flow and modal shift, regardless of transport mode (public transport information, car-sharing schemes, smart cards, road charging systems, etc)	●	Must deliver substantial GHG emissions savings on either a passenger/km or a tonne/km basis	
		Intermodal freight facilities	●		
		Terminals to improve journey times	●		
		Smart freight logistics	●		
		Multi-modal logistics hubs	●		
		Integration of transport and urban development planning	●		
AVIATION	Aircraft	Passenger aircraft	●	Use of low GHG fuel (e.g. solar, electric, high % of bio-fuel), delivering substantial reduction in gCO ₂ e/passenger or tonne/km	
		Cargo aircraft	●		
	Infrastructure	Dedicated manufacture	●		
		Supporting infrastructure	●		
		Supporting buildings	●	See <i>Buildings</i> (pg.11)	

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Transport

Passenger, freight & supporting infrastructure

	Asset type	Asset specifics	Paris Agreement compliant	Screening indicator	Certifiable
SHIPPING 	Vessels	Cargo ships	●	Use of low GHG fuel (e.g. hydrogen, ammonia, electric, high % of biofuel), delivering required emissions intensity thresholds gCO ₂ e/tonne/km	
		Zero emissions vessels	●	Use of low GHG fuel (e.g. hydrogen, ammonia, electric, high % of biofuel), delivering required emissions intensity thresholds gCO ₂ e/tonne/km	
		Passenger ships e.g. cruise ships or ferries	●	Use of low GHG fuel (e.g. hydrogen, ammonia, electric, high % of biofuel), delivering required emissions intensity thresholds gCO ₂ e/passenger/km	
		Oil tankers or other ships solely transporting coal or oil	●		
	Infrastructure	Supporting infrastructure, e.g. ports or manufacture	●		
MISCELLANEOUS VEHICLES	Vehicles	Zero direct emissions miscellaneous vehicles such as waste collection vehicles or construction vehicles	●		
	Supply chain facilities	Dedicated manufacturing facilities for vehicles and key components, such as batteries, being used in eligible vehicles	●		
	Infrastructure	Dedicated charging and alternative fuel infrastructure (when separate from fossil fuel filling stations and garages)	●		










Water

Supply management & wastewater treatment

	Asset type	Asset specifics	2 degree compliant	Screening indicator	Certifiable
WATER INFRASTRUCTURE 	Water monitoring	Smart networks, early warning systems for storms, droughts, floods or dam failure, water quality or quantity monitoring processes	●		●
	Water Storage	Rainwater harvesting systems, storm water management systems, water distribution systems, infiltration ponds, aquifer storage, groundwater recharge systems, sewer systems, pumps, sand dams	●	No net GHG emissions are expected, and the issuer discloses the justification for this decision with supporting documentation OR	●
	Water treatment	Drinking water treatment, water recycling systems, wastewater treatment facilities, manure and slurry treatment facilities Ecological retention system, current force reduction mechanisms	●	Negative net GHG emissions are expected, and the issuer has estimated and delivered the GHG mitigation impact that will be delivered over the operational lifetime of the project or asset	●
	Water distribution	Rainwater harvesting systems, gravity fed canal systems, pumped canal or water distribution systems, terracing systems, drip, flood and pivot irrigation systems	●		●
	Water desalination	Seawater desalination plants and brackish water desalination plants	●	The average carbon intensity of energy used to power the plant must be at or below 100g CO ₂ /kWh over the remaining lifetime of the asset	●
	Flood defences	Surge barriers, pumping stations, levees, gates	●		●
	Nature based solutions	Water storage from aquatic ecosystems, aquifer storage, snowpack runoff, groundwater recharge systems, riparian wetlands	●	No net GHG emissions are expected, and the issuer discloses the justification for this decision with supporting documentation OR Negative net GHG emissions are expected, and the issuer has estimated and delivered the GHG mitigation impact that will be delivered over the operational lifetime of the project or asset	●
		Flood defences by ecological retention, restoration of riparian wetlands, relocation of assets	●		●
		Drought defences by aquifer storage, recharge zone management, wetland management	●		●
		Water treatment by natural filtration systems, forest and fire management	●		●
		Stormwater management by permeable surfaces, erosion control systems, evapotranspiration systems	●		●
	Products	Water saving technologies	●		



Buildings

Commercial, residential & energy efficiency

	Asset type	Asset specifics	2 degree compliant	Screening indicator	Certifiable
BUILDINGS 	Commercial buildings	Including offices, hotels, retail buildings, public buildings, educational buildings, healthcare buildings etc.	●	An emissions footprint in the top 15% of emissions performance in the local market	
	Residential buildings	Private dwellings	●	OR	
		Multifamily residential buildings	●	A substantial reduction in gCO ₂ /m ² because of upgrade or retrofit	
	Other building types	Data centres	●	See ICT (pg. 16)	
		Stations and related buildings for eligible transport	●	See Transport (pg.7)	
		Industrial buildings	●	See Industry (pg.14)	
PRODUCTS AND SYSTEMS FOR BUILDING EFFICIENCY	Energy efficiency	Facilities dedicated to manufacturing energy efficient components	●	See Industry (pg.14)	
	Low carbon building materials	Low carbon and alternative building materials such as alternatives to cement and concrete	●		
Urban development					
BUILT ENVIRONMENT	Urban or semi-urban areas	Such as neighbourhood level works, upgrades and retrofits such as street lighting	●	The built environment or specific programme must improve its emissions performance (gCO ₂ /m ²) substantially	
URBAN PLANNING 	Infrastructure	District heating for residential and commercial applications	●	Fed primarily by renewable energy	
		Building, maintaining or upgrading utility tunnels for cables or pipelines	●	Significant resource and energy efficiency improvements	
	Other	Urban policies and regulations directed to climate change mitigation e.g. car-free areas	●	Significant impact on urban emissions	

Land use & marine resources


Agriculture, husbandry, aquaculture & seafood

	Asset type	Asset specifics	Paris Aligned compliant	Screening indicator	Certifiable
AGRICULTURE (INCLUDING MIXED USE PRODUCTIVE SYSTEMS) 	Crop and livestock production	Agricultural land used for the production of crops, agroforestry and silvopastoral systems, rearing livestock and interventions to enhance adaptation and resilience	●	Demonstration of significant carbon sequestration, reduction in emissions or compatibility with 'low carbon agriculture' targets AND/OR adaptation and resilience activities	●
		Livestock	●		●
		Agricultural production on peatland	●		
	Infrastructure	Machinery and equipment to manage and cultivate eligible land or livestock	●	Eligible if the agricultural production adheres with the above	●
		Associated management, information systems and other technologies	●		●
		Drip, flood and pivot irrigation systems	●		See <i>Water (pg.10)</i>
COMMERCIAL FORESTRY 	Forests & timber production	Plantations and natural forests	●	No conversion from natural landscape and health of the forest is well managed	●
		Timber production on peatland	●		
	Infrastructure	Machinery and equipment to manage and cultivate eligible forested land	●	Eligible if the forest and timber production adheres with the above	●
		Associated management, information systems and other technologies	●		●
	Pulp & paper	Production facilities incorporating efficient pulping process, bio-refineries, use of recyclates	●		●
NATURAL ECOSYSTEM PROTECTION & RESTORATION	Land	Land remediation and clean up	●	Habitat is appropriate for the location and is maintained in good health	●
		Natural ecosystem land (managed and unmanaged)	●		●
	Infrastructure	Machinery and equipment to manage eligible ecosystems	●	Eligible if the related land is in compliance with the above	●
		Associated management and information systems and other technologies	●		●

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Land use & marine resources

Agriculture, husbandry, aquaculture & seafood












	Asset type	Asset specifics	Paris Aligned compliant	Screening indicator	Certifiable
FISHERIES AND AQUACULTURE 	Fisheries	Wild fisheries and farmed fish	●	Must hold certification for sustainable management	
	Infrastructure	Machinery and equipment to manage and harvest in fisheries and fish farms e.g. fishing vessels	●	Eligible if the fishery or aquaculture operation adheres with the above	
		On shore and off shore fish processing and storage facilities connected to eligible fisheries and fish farms	●		
		Associated management, information systems and other technologies	●		
SUPPLY CHAIN ASSETS MANAGEMENT	Supply chain	Input supply systems for seed production, distribution and access	●	Facility is sustainable managed and certified as such	
		Primary processing and storage facilities for eligible agricultural produce	●	Eligible if agricultural produce complies with relevant Criteria	
		Primary processing and storage facilities for eligible forestry produce	●	Eligible if forest produce complies with relevant Criteria	
		Primary processing facilities and storage for eligible fisheries and aquaculture activities	●	Eligible if fish produce complies with relevant Criteria	

Industry

Industrial & energy intensive processes


	Asset type	Asset specifics	Paris Aligned compliant	Screening indicator	Certifiable
CEMENT 	Cement production facilities	Production facilities, incorporating dry processes, reduced clinker content	●		●
	STEEL 	Steel and iron production facilities	Production facilities and equipment, incorporating electric arc furnace, smelting reduction, efficient casting processes	●	
BASIC CHEMICALS 	Basic Chemical production	Production facilities incorporating lower carbon feedstocks and more efficient processes	●		●
	Other primary production and manufacturing facilities	Various	●		
FUEL PRODUCTION	Biofuel production facilities	<i>See Bioenergy (pg.3)</i>	●	<i>See Bioenergy (pg.3)</i>	●
	Hydrogen fuel production facilities		●		●
CLEAN UP	Carbon scrubber	Facilities and products for clean-up, such as treatment of exhaust gases from industrial plants	●		
		Products dedicated to clean-up or efficiency of fossil fuel energy	●		
	Carbon Capture & Storage (CCS)	Facilities and products dedicated to CCS	●	CCS has the ability to capture 100% of GHG emissions	
OTHER INDUSTRY & MANUFACTURING	Secondary processing & manufacturing	Various	●		
SUPPLY CHAIN 	Manufacturing facilities	Facilities dedicated to manufacturing key components for eligible facilities	●	Eligible if dedicated to an eligible asset type e.g. solar panel or wind turbine manufacture	
		Facilities dedicated to manufacturing energy efficient appliances and equipment e.g. fridges, cookers etc	●	Energy efficiency rating amongst top performers in the market	
	Other supply chain	Facilities dedicated to the storage, distribution or retail of eligible industrial or manufactured products	●	Eligible if dedicated to an eligible asset type e.g. all electric rail supply chain	

Waste and pollution control

Recycling, re-use & other waste managements					
	Asset type	Asset specifics	Paris Aligned compliant	Eligibility criteria	Certifiable
PREPARATION 	Facilities for collection, sorting and material recovery	Facilities and assets with high recovery rates of reusable or recyclable material	●	Made from 100% recycled and recyclable materials. Supports source segregation of waste	
		Collection of waste that is going to landfill	●	Collection vehicles must meet Transport Criteria	
WASTE STORAGE	Waste storage facilities	Storage and bulking facilities	●	Dedicated to eligible waste processing asset(s) downstream. Those downstream assets do not need to be certified but do need to meet the criteria for that asset type. All waste stored must be transferred to those assets	
		Collection vehicles	●	Must meet Transport Criteria	
RE-USE	Facilities for the re-use of materials	Facilities refurbishing or repairing products or cleaning components or products for reuse in their original function	●	The products are put back to their original use without any further pre-processing required. For WEEE, the product is covered by ecolabelling scheme and only those products meeting the three lowest energy use categories are eligible	
RECYCLING	Facilities for the recycling of materials	Facilities for recycling metals, plastics, glass (except aggregate) and paper	●	The secondary raw materials (such as steel, aluminum, glass, plastics) cease to be waste and are sold to be used as secondary raw materials	
BIOLOGICAL TREATMENT FACILITIES	Anaerobic digestion facilities	Facilities for the production of biogas from green waste	●	Total methane emissions $\leq 1285\text{g CH}_4/\text{tonne}$ of waste input. Woody waste must be segregated before or after processing and sent to an eligible EfW or composting plant. Monitoring, sampling and control of the following is carried out in accordance with PAS110 guidance. The solid and liquid products are not landfilled and replace non-waste materials in the market	
	Composting facilities	Facilities for the production of compost from residual waste	●	Zero measurable methane emissions. Monitoring, sampling and control is carried out in accordance with PAS100 guidance. The resulting product is not landfilled and replaces non-waste material in the market	
WASTE TO ENERGY	Waste to energy plants (e.g. incineration, gasification, pyrolysis and plasma)	Facilities for solid waste treatment with production of electricity or heat as a by-product	●	Only facilities outside the EU are potentially eligible. Plant efficiency $\geq 25\%$; AND Bottom ash recovery; AND $\geq 90\%$ recovery of metal from ash; AND Average carbon intensity of electricity and/ or heat over the life of the plant \leq waste management allowance; AND capacity of the plant does not exceed the calculated residual waste at any time in the plant's life	
LANDFILL	Landfill with gas capture	Projects to add gas capture to existing, closed landfill facilities	●	Biogas from closed landfill facilities. Gas capture $\geq 75\%$; AND gas used to generate electricity and input to the natural gas grid or used as vehicle fuel; AND the landfill is not accepting further waste (with the exception of restoration materials)	
	Landfill without gas capture		●		

Waste and pollution control

Recycling, re-use & other waste managements

	Asset type	Asset specifics	Paris Aligned compliant	Eligibility criteria	Certifiable
RADIOACTIVE WASTE MANAGEMENT	Nuclear waste treatment		●		
	Nuclear waste disposal		●		
WASTEWATER	Water treatment		●	See Water (pg.10)	

Information & communications technology

Networks, management & communication tools

	Asset type	Asset specifics	2 degree compliant	Climate compatible indicator	Certifiable
BROADBAND NETWORKS	Broadband networks	Fibre optic and cable networks	●		
	Supporting infrastructure	Such as internet exchange points	●		
IT SOLUTIONS	Connectivity	Teleconferencing and telecommuting software and service	●		
	Data hubs	Including data storage centres	●		
	Supporting infrastructure	Such as hardware and manufacture of hardware	●		
POWER MANAGEMENT	Infrastructure, software and hardware for remote power management	Remote solutions for appliance power management, and load-balancing of renewables	●		
	In situ power management	Including automatic switching, energy monitoring & data systems	●		

Revisions and updates to the Climate Bonds Taxonomy

The Climate Bonds Taxonomy is a working document. It will be revised and updated periodically as developments are made in the Climate Bonds Standard Sector Criteria and in international green bond policies. It will also be revised when low carbon trajectories from prominent research institutions are released and updated.

Climate Bonds Initiative has an active role in developing international green bond policy and keeps up-to-date with the latest climate science and low carbon development trajectories through its Technical Working Groups and through external engagement and research.

Updates will be announced on the Climate Bonds Blog.

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