Classification (taxonomy) of green projects eligible for financing through green bonds and green loans

Decree of the Government of the Republic of Kazakhstan dated December 31, 2021 No. 996

Level 1: Category	Level 2: Sector	Level 2: Sub-sector	GCEA2 code	Examples	Threshold
1. Renewable energy	1.1 Wind	1.1.1 Energy generation facilities	35.11.4	Wind electricity generation facilities, wind pumps, wind turbines	No limit
	1.2 Solar	1.2.1 Power generation facilities (PV & CSP)	35.11.5	Onshore Centralised and distributed solar power facilities, including concentrated solar power (CSP) plants, solar photovoltaic (PV) power, distributed solar PV station	No limit
		1.2.2 Small-scale distributed solar systems	35.11.5	Small-scale portable solar home systems, mini grid and other types of stand alone systems to power small communities	No limit
		1.2.3 Solar thermal application facilities	35.11.5	Facilities for application and generation of solar thermal energy, including solar water heating and other thermal applications of solar power in all sectors	No limit
	1.3 Geothermal	1.3.1 Power and heat generation facilities	28.92.1 35.11.9	Facilities for electricity generation and thermal applications of geothermal power in all sectors, geothermal heat pumps for space and centralized heating	No limit
	1.4 Hydro-power	1.4.1 Small-scale hydroelectric power generation facilities (up to 10 MW)	35.11.2	Hydroelectric power plants with installations located in one hydroelectric complex, with a total capacity not more than ten megawatts	No limit
		1.4.2 Medium hydroelectric power generation facilities (up to 100 MW)	35.11.2	Hydroelectric power plants with a total installed capacity of 10 to 100 megawatts (MW), hydroelectric power plant with a pump	The conclusion of the environmental impact assessment on the admissibility of the project, or the conclusion of the screening of the impact of the planned activity on the absence of the need for a mandatory environmental impact assessment (EIA), or the conclusion of the EIA on the admissibility of the project
	1.5 Others	1.5.1 Other heat generation facilities	35.11.9	Heat pumps using soil, water, and air gradients	No limit
	1.6 Bioenergy	1.6.1 Bio-energy product facilities	38.21.0, 72.11.0	Facilities for producing biofuel, biomass, biogas and other bioenergy products including fuel preparation process facilities, pre-treatment facilities and bio-refinery facilities, gaseous, liquid and solid (forest) biofuel manufacturing facilities (including anaerobic digestion plants). Equipment for the processing of sludge after wastewater treatment	Minimum share of waste-50% or 300 grams CO2/kWh. Also for large plants-compliance with the requirements of BAT directory (BREF)1 for large combustion plants, 2017, for the combustion of solid biomass and/or peat in terms of waste management, material use, meeting SO2, NOx and CO emission thresholds
		1.6.2 Heat & power generation	38.21.0	Power and heat generation facilities; heating facilitites; biomass and biogas power stations, biomass CHP station; improved biomass stove; use of agricultural and forest waste, wastage from crops for electrification	Minimum share of waste-50% or 300 grams CO2/kWh. Also for large plants-compliance with the requirements of BAT directory (BREF) for large combustion plants, 2017, for the combustion of solid biomass and/or peat in terms of waste management, material use, meeting SO2, NOx and CO emission thresholds
	1.7 Supply chain and supporting infrastructure for renewable energy	1.7.1 Manufacturing of renewable energy equipment	28.11.2, 28.12.0, 28.13.1, 28.13.2, 28.14.0	Plants for the production or assembly of wind turbines, hydro and geothermal turbines, photovoltaic cells and components, solar collectors (so-called plates or dishes), gutters and components, geothermal pumps. Manufacturing of products, key components, equipment and automation technology for the following renewable energy applications: •Geothermal energy • Hygroenergy • Concentrated solar power (CSP) • Solar photovoltaic energy(PV) • Wind energy • Green hydrogen	No limit
		1.7.2 Transmission lines and supporting infrastructure for renewable energy systems	26.11.0, 27.11.0, 27.12.0 27.20.0 33.14.1 35.13.0 42.22.0	New, expanded and improved transmission systems (lines, substations),storage systems (battery, mechanical, pumped storage) and new information and communication technology (smart-grid and mini-grid) for scaling up the utility of renewable energy; dedicated transmission lines; large and small scale storage; smart grid; heat and electricity meters and sensors; at and electricity meters and sensors; transformers; voltage regulators; switchgears; ways for transportation environmentally friendly technologies; green hydrogen storage systems	No limit
		1.7.3 Renewable energy storage systems	27.20.0, 27.90.9	Batteries, capacitors, compressed air storage and flywheels; arge scale energy storage facilities, and manufacture facilities dedicated to any of the above	No limit
	1.8 Hydrogen production	1.8.1 Green hydrogen production	20.11.0	Installations for the production of hydrogen using renewable energy ("green" hydrogen)	The minimum direct CO2 emissions from hydrogen production are 5.8 tonnes CO2e / tonne of hydrogen; electricity consumption in the production of hydrogen by electrolysis is no more than 58 MW * h / tonne of hydrogen; the average specific emissions from the production of electricity used in the production of hydrogen do not exceed 100 grams of CO2e / kW * h.
	2.1 Improving energy efficiency in existing and newly created industrial facilities	2.1.1 Energy efficient equipment and technology improvement	25.21.0 25.30.0 27.11.0 28.11.2 28.15.2 33.20.0 35.30.2 43.22.0	Industrial energy-efficiency improvements through the installation of more efficient equipment, changes in processes and management, reduction of heat losses and/or utilization of residual heat and pressure. energy efficiency measures based on energy audit report, energy-efficient motors, VFD drives for compressors, pumps and fan systems , high energy-efficient boilers	Minimum energy consumption reduction of 20% from baseline (before -project implementation)
		2.1.2 Installation of CHP equipment / co- or tri-generation equipment	35.11.1 35.30.5	Installation and operation of co-generation and combined-cycle plants that generate electricity in addition to providing heating; CHP plant, combined-cycle power plants	Minimum energy consumption reduction of 20% from baseline (before project implementation)
		2.1.3 Energy efficiency in energy generation, transmission and distribution systems	27.11.00	Upgrading transmission lines or building new substations and / or distribution systems to reduce energy consumption and / or technical losses, including increasing grid stability / reliability; smart grids; high voltage networks	Minimum reduction of electricity losses by 20% compared to the baseline (before the project implementation) 1
		2.1.4. Central heating	25.21.0 33.11.2	Modernization of district heating systems using small (distributed) generation stations or other technologies. Small (distributed) generation station	Minimum energy consumption reduction of 20% from baseline (before project implementation)

2. Energy efficiency	2.2 Energy efficiency improvements in the utility sector and public services	2.2.1 Energy-efficient lighting or equipment	43.21.9	Energy-efficiency improvement in utilities and public services through the installation of more efficient lighting or equipment; LED street lighting system, lighting improvements of commercial, retail, wholesale, office buildings and other non-industry facilities.	Reduction of energy costs by 45%
		2.2.2 Energy efficient products (end user)	27.51.1 27.51.2 27.90.9 (for manufacturers), any GCEA code (for legal entities buyers),for physical persons (GCEA codes are not applicable)	Production or purchase and use of more energy efficient products; energy-saving refrigerators, washing machines, heaters and other electrical energy-consuming devices (in accordance with the increased class of product labeling)	Highest energy efficiency class for a product type, including energy labeling according to national or international standards, as well as the international energy efficiency rating of consumer products Energy Star
		2.2.3 Energy conservation services	33.20.0	Energy conservation services for energy end-users, including industries, buildings, and transport systems, including energy audit, energy audits of energy service companies, contract energy management	In accordance with ST RK ISO 50001 "Energy management systems. Requirements and guidance for use" or internationally recognized similar standards
	2.3 Energy efficient buildings, constructions and installations	2.3.1 Energy efficient building construction	33.20.0 41.10.0 41.20.1 41.20.2 41.20.3 41.20.4 43.29.8 43.32.0	ENERGY: Use of energy efficient architectural designs, appliances and equipment, as well as construction technologies that reduce energy consumption in buildings	Presence of the following green building ratings: LEED, EDGE, BREEAM, DGNB, and / or Energy Efficiency Label (High Energy Efficiency Class))
		2.3.2 Improving efficiency in existing commercial, public, residential and industrial buildings	33.20.0 41.10.0 41.20.1 41.20.2 41.20.3 41.20.4 43.29.8 43.32.0 36.00.0 37.00.0	ENERGY: lighting, appliances and equipment, heating/cooling systems, architectural or construction changes that enable reduction of energy consumption WATER: plumbing fittings, rainwater recirculation / collection systems, changes in building construction that enable reduction of water consumption	
3. Green buildings	3.1 Green buildings	3.1.1 Construction of new green buildings (commercial, public, industrial and residential)	33.20.0 41.10.0 41.20.1 41.20.2 41.20.3 41.20.4 43.29.8 43.32.0 36.00.0 37.00.0	ENERGY: Use of highly efficient architectural designs, energy efficiency appliances and equipment, and construction methods that reduce building's energy consumption, by exceeding existing standards and meeting high energy efficiency certification or rating schemes. WATER: The use of water-saving fixtures and fittings and construction techniques that reduce building water consumption by exceeding existing standards and meeting water-saving certifications or ratings schemes. MATERIALS: Use of construction material which minimizes the number of components that require high amount of energy to manufacture, such as steel or cement, or components that use recyclable / recycled materials.	Presence of the following green building ratings: LEED, EDGE, BREEAM, DGNB, energy rating labels such as the US Energy Star, and compliance with energy labeling schemes such as the Energy Performance Certifications used in the EU
	3.2 Associated systems and building materials	3.2.1 Production and application of systems, green building materials and products	23.14.0 23.31.0 23.32.0 23.65.0 23.99.2 23.99.3 33.20.0 41.10.0 41.20.1 41.20.2 41.20.3 41.20.4 43.29.8 43.32.0	Efficient and low carbon building systems (lighting, heating, air conditioning, lifts, escalators, metering, ground source heat pumps and etc.,) and low energy efficiency materials, organic wool insulation materials	Presence of the following green building ratings: LEED, EDGE, BREEAM, DGNB, and / or Energy Efficiency Label (High Energy Efficiency Class)
	3.3 Green infrastructure	3.3.1 Green infrasrtucture	42.11.1, 81.30.0	Multipurpose green areas (water retention, shading, recreation, biodiversity corridors, padded walking and cycling paths); flood protection (surge fences, pumping stations, dams, gates); street lighting; improvement of waste collection areas at buildings	Presence of the following green building ratings: LEED, EDGE, BREEAM, DGNB, and / or Energy Efficiency Label (High Energy Efficiency Class)
		3.3.2 Construction and modernization of private residential buildings and adjacent territories	35.11.5 35.22.0 36.00.0 37.00.0 38.11.0 38.21.0 38.32.3 41.20.1 43.21.1 43.21.9 43.22.0 43.29.1 43.29.8 43.31.0 43.32.0 43.33.0 43.34.0 43.91.0 43.99.9	Construction of new energy efficient and green houses. Modernization of existing houses; improvement of sanitary conditions (septic tank, waste disposal); electricity supply; the use of alternative fuels; using heat pumps or connecting to central heating; energy storage, rainwater harvesting; processing of gray and black water.	Reducing water consumption by at least 15%; the use of renewable energy sources; the minimum reduction in energy consumption is not less than 15%; energy efficiency labeling (high energy efficiency class) (if applicable)
		3.3.3 Self-contained and eco-sanitation toilet solutions for private houses, tourist camps and small businesses	37.00.0	Installation of self-contained and eco-sanitation toilets that contributes to soil pollution reduction. Composting toilets, container-based toilets, dry toilets, septic systems, urine-diverting dry toilet	100% of waste is utilized without damaging ecosystems, water reuse
4. Pollution prevention & control	4.1 Air quality	4.1.1 Air purification from industrial pollution and urban air pollution, recirculation equipment	28.11.2 28.13.1 28.13.2 33.12.2 43.29.8	Treatment facilities for industrial air pollution and urban air pollution, exhaust gases; equipment for reducing industrial waste; air recirculation equipment; desulfurization and denitrification, use of filter bags, exhaust gas burners	Air emissions are within the BAT-AELs set in BREFs, including under the Industrial Emissions Directive (applicable to industrial pollution)
		4.1.2 Production and deployment of clean heating appliances for households and small and medium-sized enterprises (SMEs)	27.52.0 28.21.1 43.33.0	Production, purchase and deployment of clean heating appliances to reduce air pollution. electric radiator (space heater), electric cartridge heater, night storage heater, electric floor heating, heat wall	Minimum 20% GHG emission reduction
		4.1.3 Carbon capture and storage	39.00.0	Devices and products for carbon capture and storage	Compliance with BAT directory (BREF) for emissions during storage under Integrated Pollution Prevention and Control, July 2006, in terms of waste management and material use

	4.2 Soil	4.2.1 Soil pollution reduction; remediation facilitites and infrastructure	01.11.1 to 01.30.0 28.30.4 39.00.0 43.12.3	Equipment and infrastructure that use technologies and products to restore soil from pollution and degradation, improve soil fertility; sustainable agriculture, transition to sustainable farming systems, including organic farming systems; application of phytomeliorative and mechanical methods of soil protection; application of zero and sparing technologies in tillage; cultivation of locally adapted crops and varieties; purification from man-made and anthropogenic pollution	No limit
5. Sustainable water and waste use	5.1 Sustainable water use and water conservation	5.1.1 Production, purchase and deployment of water saving, storage and distribution technologies and systems	01.61.2 36.00.0 37.00.0 42.21.2	Production, acquisition and installation of technologies and systems for water conservation, storage and distribution; technologies and equipment for drinking water treatment; groundwater reservoirs for collecting snowmelt or floods, as well as for regulating the water level in the river; use of mine and quarry water for industrial, agricultural, recreational or other uses; industrial water-saving technologies and measuring equipment; agricultural water-saving irrigation; rainwater collection systems; groundwater recharge systems; channels and distribution systems; stormwater management, water circulation systems	Reduction of consumption of fresh (natural) water not less than 40% for household and drinking needs, 30% for irrigation and 70% for industrial and technical needs
		5.1.2 Monitoring and early warning and response systems at water bodies	26.51.7 84.25.0	Monitoring, early warning systems for storms, droughts, floods or dam failures; processes for monitoring and measuring water quality or quantity; intelligent networks for water monitoring	SMART (self-monitoring, analysis and reporting technology), automated monitoring system
		5.1.3 Water treatment facilities (installations)	36.00.0	Equipment or infrastructure for water use; water treatment systems; desalination plants	Drinking water: The water must comply with the sanitary requirements / regulations in force at the time of the Taxonomy Threshold Assessment. Process water: water must comply with equipment certificates
		5.1.4 Wastewater treatment plants for further reuse	37.00.0	Wastewater treatment equipment; wastewater treatment plants; mine and quarry water treatment, sewerage / drainage networks with separation of storm water from other wastewater, systems for reuse and recirculation of domestic and industrial wastewater; closed loop use	Application of treated water for intended use for secondary water use
	5.2 Waste and wastewater	5.2.1 Equipment for collecting and sorting municipal waste	28.12.0, 28.22.2, 28.22.3 28.22.5, 28.22.9, 38.11.0	Equipment for collection and sorting of municipal waste, including receiving points for secondary raw materials	Municipal waste must be collected separately and secondary raw materials sent for recycling
		5.2.3 Disposal and recycling of waste, equipment for recovery, reuse and recycling of secondary raw materials	28.22.9 33.12.2 33.20.0 38.32.1 38.32.2 38.32.3	Creation of ecological infrastructure for the municipal solid waste, recycling and reuse infrastructure for the waste generated during the construction and repair of buildings, facilities and infrastructure facilities. Equipment for recovery of secondary raw materials (excluding incineration), reuse and recycling of secondary raw materials, including equipment for processing construction materials, scrap metal, plastics, glass, paper, electronics (excluding hazardous components), used tires	Recycling of collected secondary raw materials not less than 80%
		5.2.4 Facilities for collection, sorting, recovery, reuse, recycling and disposal of industrial and hazardous waste	28.22.9 28.95.0 28.96.0 33.20.0 38.12.0 38.22.0	Equipment for collection, sorting, recovery, reuse, recycling and disposal of industrial and hazardous waste	Compliance with BAT directory (BREF) for waste treatment in terms of waste management and by-products, especially hazardous industrial waste
		5.2.5 Construction and modernization of landfills and plants for the processing of waste prohibited for burial	38.21.0 38.22.0	Construction and modernization of landfills; construction of plants for the processing of waste prohibited for disposal	Compliance with the established requirements and norms of the Republic of Kazakhstan, in force at the time of the assessment of compliance with the Taxonomy threshold (until 2030)
		5.2.6 Equipment and machinery for composting of waste	28.15.2 28.22.3 28.22.9 38.21.0	Equipment and machinery for the production of compost from organic waste	The resulting compost is used to fertilize the soil. No plastic, glass and metal in the finished compost. Compost compliance with national standards for biofertilizers
		5.2.7. Wastewater treatment plant	37.00.0	Wastewater collection, storage, treatment and disposal networks; sewage treatment plants; sludge treatment facilities; drinking water purification equipment; desalination plants; sewage treatment plant for manure and slurry	Emissions to air and water are within the BAT-AELs level of associated emissions, set in then BAT (BREF) for anaerobic waste treatment (if applicable)
	5.3 Resource conservation and recovery	5.3.1 Replacement of raw materials	39.00.0	Replacement of toxic raw materials with non-toxic ones	No limit
		5.3.2 Use of secondary raw materials for production	38.11.0 38.32.1 38.32.2 38.32.3	Replacement of natural resources with secondary raw materials, production using secondary raw materials	At least 30% of secondary raw materials in the product
6. Sustainable agriculture, land use, forestry, biodiversity conservation & eco tourism	6.1. Sustainable agriculture	6.1.1 Organic agriculture products (plant growing and animal husbandry) (except textile)	01.11.1 to 01.64.0	Production of agricultural, agricultural and fish organic products (including construction and operation of facilities), that meet clean production standards	1) relevant international, interstate or national standards for organic products, as well as labeling of purchased organic or green products; 2) environmental and quality standards for the use of pesticides, fertilizers, veterinary drugs, feed and food additives and animal hygiene; 3) sustainable farming practices such as waste management and water use efficiency, including rainwater use; 4) sustainable supply chain methods (for example, preventing food loss); production of organic products that have received an international, interstate or recognized national certificate
		6.1.2 Climate smart agriculture (=Sustainable pasture & livestock management)	01.41.0 to 01.64.0	Reduction in energy use and water use in traction, irrigation, and other agricultural or husbandry processes, and decrease in land use, ie. application of livestock standards to sustainably managed pasture land and to promote quality (high yield) based livestock production/management; efficient tillage (prevention from drought), aquaculture, herders/herding communities reducing their herd sizes and adopt more sustainable livestock production practices	Reduction of consumption of fresh (natural) water by at least 30%; reuse of water; the use of renewable energy sources; minimum reduction in energy consumption of at least 20%
	6.2 Sustainable forest management & conservation of	6.2.1 Afforestation and reforestation	02.10.0	Planting of forest crops; creation of forest plantations, including projects that meet the standards of REDD+, VERRA; creation of green zones around settlements	No limit
		6.2.2 Sustainable forest management	02.40.0 71.12.4 71.12.5	Projects that increase the carbon sequestration function of forests or reduce the impact of forestry activity through the relevant sustainable management practices of forest ecosystem, information systems and technologies	No limit

	biodiversity and ecosystems	6.2.3 Conservation of biodiversity and ecosystems	91.04.2 93.19.0	Projects for the conservation of biosphere through the protection and / or restoration of degraded ecosystems; creation and maintenance of an ecological functional area such as specific wildlife habitat, wetlands, peatlands, deserts	No limit
	6.3 Sustainable tourism	6.3.1 Products and services promoting eco-tourism development	41.10.0 to 43.99.9 64.19.1 64.19.2 64.19.3 64.19.9 64.20.0 64.92.2 64.92.9 64.99.1 84.13.0 85.10.0 to 85.60.9 88.99.0	Creation of conditions aimed at the development of eco-tourism, involvement of the local population (micro-credit programs, subsidies), eco-education, creation of infrastructure for eco-tourism	Compliance with the legislative norms of the Republic of Kazakhstan (on tourism activities), as well as the presence of a national, international, interstate ecological standards or ecolabel in the field of tourism services and environmentally friendly routes, including recognized ecolabels of a foreign state
		6.3.2 Sustainable hotel and camp management	55.10.1 55.10.2 55.10.3 55.10.4 55.20.0 55.30.1 55.30.2 55.90.1	Managing hotel and camp activities in accordance with national or international sustainable hospitality standards	Compliance with the national, international, interstate ecological standards or ecolabel in the field of accommodation services and ecological requirments for the hotels, hostels, or a recognized ecolabel of a foreign country for the hotel sector, for example, Leaf of Life, EU Eco-labeling, Nordic Swan, etc.
7. Clean transport	7.1 Low carbon vehicles	7.1.1 Low carbon vehicles purchase	any GCEA code (any type of company activity)	Low carbon vehicles purchase, including electric vehicles, hydrogen vehicles, hybrid vehicles	<90 grams CO2e / km
		7.1.2 Low carbon vehicles manufacturing supply chain facilities	27.20.0 27.90.9 29.10.2 29.31.0	Dedicated manufacturing facility for vehicles and key components; batteries used in the respective vehicles	<90 grams of CO2 / km
	7.2 Low carbon freight and cargo transportation	7.2.1 Low carbon freight and cargo transportation	30.20.0 49.20.0 49.41.0	Rolling stock for electrified and non-electrified rail freight	For road transport 100 grams CO2e / ton * km; for rail transport - 40 grams CO2e / ton * km
	7.3 Clean transport infrastructure	7.3.1 Public transport infrastructure	30.91.0 30.92.1 42.11.1 42.13.0 42.99.0 49.31.1 49.31.2 49.31.3 49.31.3 49.39.0 72.19.1	Public transport and transport infrastructure; bus rapid transit systems (BRT systems); public cycling infrastructure	For public transport 50 grams of CO2e / passenger - km; no restrictions for cycling infrastructure
		7.3.2 Low carbon transport infrastructure	42.11.1 to 42.13.0 42.99.0 45.20.2	Dedicated charging and alternative fuel infrastructure (when separate from fossil fuel filling stations and garages); Eco-fuel station, charging station/pile for EV cars, trolleybus, trambus, electric buses and associated infrastructure	No limit
		7.3.3 Low carbon transport planning	49.31.1 to 49.32.0	Integration of transport and urban development planning leading to a reduction in use of passenger cars; dense development; multiple land use; walking communities; transit connectivity; smart freight logistics	No limit
	7.4 Clean transportation ICT	7.4.1 ICT that improves asset utilisation, flow and modal shift, regardless of transport mode	62.02.1 62.02.2 62.03.1 62.03.2 62.09.1 to 63.99.9	Public transport information, car-sharing schemes, smart cards, road charging systems, etc	Availability of a certificate of compliance with the ST RK ISO / IEC 30134 series of standards "Information technology. Data processing centers. Key performance indicators ", ST RK ISO 14001" Environmental management systems. Requirements and guidance for use ", ST RK ISO 50001" Energy management systems. Requirements and guidance for use "

Notes:

1 In the absence of a national guide to the best available technologies (BAT), hereinafter reference should be made to the BREF

2 The codes of the General Classifier of Economic Activities (GCEA) corresponding to a specific subsector of activities and assets are provided in order to simplify the application of the Green Taxonomy by organizations whose activities provide for the classification of economic activities. It should be borne in mind that one GCEA code may contain many types of goods, services and works, not all of which are included in this Taxonomy, and also that compliance with the threshold values established in it, if any, is a condition for classifying projects as "green". The specified classification of GCEA is applicable to manufacturers of goods, works and services and does not apply to individuals and legal entities purchasing the relevant goods, works and services.