



Green Revenues Classification System 2.0

December 2020



Green Revenues Classification System [GRCS]

Overview

FTSE Russell’s Green Revenues data model measures the green revenue exposure of more than 16,000 securities across 48 developed and emerging markets based on FTSE Russell’s Green Revenues Classification System — a comprehensive taxonomy for green products and services covering 10 subsectors, 64 subsectors and 133 micro sectors. When a company’s activity is identified to have any green revenues, it is mapped to one or more micro sectors and then aggregated at the company level.

The GRCS was created in 2013 to help investors and financial markets to better identify companies with products and services contributing to the transition to a green economy, track their performance and facilitate the construction of financial products that seek exposure to such companies. The latest iteration of the classification system, GRCS 2.0 was launched in 2020. It takes a broad, bottom-up view of the green economy, capturing products and services across the whole value chain. These products and services are analyzed based on their impact on climate change mitigation and adaptation, water, resource use, pollution, and agricultural efficiency, which are well aligned with the EU’s environmental objectives.

Sectors and subsectors

ENERGY GENERATION [EG] 19 Bio Fuels Cogeneration Clean Fossil Fuels Geothermal Hydro Nuclear Ocean & Tidal Solar Waste to Energy Wind	ENERGY MANAGEMENT AND EFFICIENCY [EM] 13 Buildings & Property (Integrated) Controls Energy Management Logistics & Support Industrial Processes IT Processes Lighting Power Storage Smart & Efficient Grids Sustainable Property Operator	ENERGY EQUIPMENT [EQ] 22 Bio Fuels Cogeneration Equipment Clean Fossil Fuels Fuel Cells Geothermal Hydro Nuclear Ocean & Tidal Solar Waste to Energy Wind	ENVIRONMENTAL RESOURCES [ER] 11 Advanced & Light Materials Key Raw Minerals & Metals Recyclable Products & Materials	ENVIRONMENTAL SUPPORT SERVICES [ES] 5 Environmental Consultancies Finance & Investment Smart City Design & Engineering
FOOD & AGRICULTURE [FA] 17 Agriculture Aquaculture Land Erosion Logistics Food Safety, Efficient Processing & Sustainable Packaging Sustainable Plantations	TRANSPORT EQUIPMENT [TE] 12 Aviation Railways Road Vehicles Shipping	TRANSPORT SOLUTIONS [TS] 9 Railways Operator Road Vehicles Video Conferencing	WATER INFRASTRUCTURE & TECHNOLOGY [WI] 10 Advanced Irrigation Systems & Devices Desalination Flood Control Meteorological Solutions Natural Disaster Response Water Infrastructure Water Treatment Water Utilities	WASTE & POLLUTION CONTROL [WP] 15 Cleaner Power Decontamination Services & Devices Environmental Testing & Gas Sensing Particles & Emission Reduction Devices Recycling Equipment Recycling Services Waste Management
10 SECTORS	64 SUBSECTORS	133 MICRO SECTORS		

Definitions of GRCS sectors, subsectors and micro sectors

Sector EG Energy Generation		Revenue generating activities from the generation of power from renewable and alternative energy sources.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Bio Fuels	Bio Fuels (General)	TIER 3	EG.01.0	Revenue generating activities related specifically to the operation and supply of power generation facilities that utilizes non-fossilized organic material, with the exception of peat.
	Bio Gas	TIER 2	EG.01.1	Revenue generating activities related specifically to the operation and supply of power generation facilities that utilizes gas generated through the active decomposition of organic matter, typically during landfill processes.
	Bio Mass (Grown)	TIER 3	EG.01.2	Revenue generating activities related specifically to the operation and supply of electricity from power generation facilities that utilizes crops grown as a fuel source.
	Bio Mass (Waste)	TIER 2	EG.01.3	Revenue generating activities related specifically to the operation and supply of electricity from power generation facilities that utilizes organic byproducts of the agricultural and other systems.
Cogeneration	Cogeneration (General)	TIER 2	EG.02.0	Revenue generating activities related specifically to the operation and supply of power generation where the waste heat is utilized for large-scale heating and/or cooling purposes.
	Cogeneration (Biomass)	TIER 1	EG.02.1	Revenue generating activities related specifically to the operation and supply of power generation where primary source is biomass-based, and where the waste heat is utilized for large-scale heating and/or cooling purposes.
	Cogeneration (Renewable)	TIER 1	EG.02.2	Revenue generating activities related specifically to the operation and supply of power generation where primary source is renewables-based, and where the waste heat is utilized for large-scale heating and/or cooling purposes.
	Cogeneration (Gas)	TIER 2	EG.02.3	Revenue generating activities related specifically to the operation and supply of power generation where the primary source is natural gas, but where the waste heat is utilized for large-scale heating and/or cooling purposes.
Clean fossil Fuels	Fossil Fuels (General)	---	EG.03.0	Revenue generating activities related specifically to the operation and supply of power generation that utilizes fossilized organic material. Only clean fossil fuels (EG.03.01) are considered green revenues.

	Clean fossil Fuels	TIER 1	EG.03.1	Revenue generating activities related specifically to the operation and supply of power generation that utilizes fossilized organic material, where chimney emissions are zero (or practically so), for instance through Carbon Capture & Storage.
Geothermal	Geothermal	TIER 1	EG.04.0	Activities related specifically to the operation and supply of power generation that utilizes energy produced by the internal heat of the earth, excluding small-scale heat pump systems.
Hydro	Hydro (General)	TIER 2	EG.05.0	Revenue generating activities related specifically to the operation and supply of power generation that utilizes the energy produced by flowing fresh water.
	Large Hydro	TIER 2	EG.05.1	Revenue generating activities related specifically to the operation and supply of power generation that utilizes the energy produced by flowing fresh water, where the power generation capacity of the system is greater than 10MW.
	Small Hydro	TIER 1	EG.05.2	Revenue generating activities related specifically to the operation and supply of power generation that utilizes the energy produced by flowing fresh water, where the power generation capacity of the system is less than 10MW.
Nuclear	Nuclear (General)	TIER 3	EG.06.0	Revenue generating activities related specifically to the operation and supply of power generation that harnesses the energy present within atomic nuclei or their components.
Ocean & Tidal	Ocean & Tidal (General)	TIER 1	EG.07.0	Revenue generating activities related specifically to the operation and supply of power generation that utilizes the energy produced by harnessing the power of wave, tidal or other ocean and marine current forces.
Solar	Solar (General)	TIER 1	EG.08.0	Revenue generating activities related specifically to the operation and supply of power generation that harnesses the power of solar radiation, such as solar photovoltaic or concentrated solar systems but excluding solar thermal heating systems.
Waste to Energy	Waste to Energy (General)	TIER 1	EG.09.0	Revenue generating activities related specifically to the operation and supply of power generation that utilizes the energy derived from the incineration of municipal waste, or from a fuel source derived thereof. Otherwise known as Energy from Waste.
Wind	Wind (General)	TIER 1	EG.10.0	Revenue generating activities related specifically to the operation and supply of power generation that harnesses the power of movements or currents in the air.

Sector EM		Energy Management & Efficiency			Revenue generating activities from products and services enabling more efficient methods of energy usage and management.
Sub-Sector	Micro-sector	Green Tier	Code	Description	
Buildings & Property (Integrated)	Buildings & Property (Integrated) (General)	TIER 1	EM.01.0	Revenue generating activities related specifically to the design, development, manufacture or installation of energy and other resource efficient products and services for use in residential, commercial and municipal buildings. Products include those that contribute to international certification standards such as LEED and BREEAM and can include entire buildings.	
Controls	Controls (General)	TIER 2	EM.02.0	Revenue generating activities related specifically to the design, development, manufacture or installation of efficient energy manipulation and optimization systems. Activities include efficient semiconductor controllers and microgrid controllers.	
Energy Management Logistics & Support	Energy Management Logistics & Support (General)	TIER 2	EM.03.0	Revenue generating activities related to the design, development, manufacture or installation of energy management or efficiency products or services that are directly related to the other core products but do not by themselves lead to increased efficiencies.	

Sector EM Energy Management & Efficiency		Revenue generating activities from products and services enabling more efficient methods of energy usage and management.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Industrial Processes	Industrial Processes (General)	TIER 1	EM.04.0	Revenue generating activities related specifically to the design, development, manufacture or installation of energy and other resource efficient products and services for use in industrial applications. These include products and core components which improve energy profiles, and products or systems which reduce energy and other resource usage within processes.
IT Processes	IT Processes (General)	TIER 2	EM.05.0	Revenue generating activities related specifically to the design, development, manufacture or installation of energy efficient information technology products and services.
	Cloud Computing (General)	TIER 2	EM.05.1	Revenue generating activities related specifically to the design, development, manufacture or installation of cloud computing products and services. These include infrastructure and underlying platforms but not pure software. General data centers are not included.
	Efficient IT (General)	TIER 1	EM.05.2	Revenue generating activities related specifically to the design, development, manufacture or installation of highly energy efficient IT equipment and electronics.
Lighting	Lighting (General)	TIER 1	EM.06.0	Revenue generating activities related specifically to the design, development, manufacture or installation of energy efficient lighting.
Power Storage	Power Storage (General)	TIER 1	EM.07.0	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of products that store energy at a grid or building level.
	Power Storage (Battery)	TIER 1	EM.07.1	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of products that store electrical energy at a grid or building level. Also include lithium-ion and other advanced batteries and their components unless specifically designed for consumer products.
	Power Storage (Pumped Hydro)	TIER 1	EM.07.2	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of products and facilities that store potential energy at grid level through the utilisation of electricity at times of low demand to pump water to an upper reservoir.
Smart & Efficient Grids	Smart & Efficient Grids (General)	TIER 1	EM.08.0	Revenue generating activities related specifically to the design, development, manufacture or installation of equipment and services that enhance the efficiency of operation of the electrical power network. This includes advanced meters, distributed generation, "smart grid" technologies, high efficiency power generation, transmission and distribution technologies.
Sustainable Property Operator	Sustainable Property Operator (General)	TIER 2	EM.09.0	Revenue generating activities related specifically to the operation of sustainable buildings.

Sector EQ Energy Equipment		Revenue generating activities from the renewable and alternative energy value chain, excluding power generation activities.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Bio Fuels	Bio Fuels (General)	TIER 3	EQ.01.0	Revenue generating activities related specifically to the development, processing, production and distribution of bio-derived fuels for transport, heat and electrical power generation. Bio-derived fuels include bioethanol, biodiesel, and 'advanced' biofuels such as cellulosic ethanol. Excluded are blends combining bio and conventional fuels.

Sector EQ Energy Equipment		Revenue generating activities from the renewable and alternative energy value chain, excluding power generation activities.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
	Bio Fuel (1st & 2 nd Generation)	TIER 3	EQ.01.1	Revenue generating activities related specifically to the development, processing, production and distribution of bio-derived fuels predominantly for transport. These include 1st Generation Biofuels that use food stock (such as corn) and 2nd Generation uses other biomass types such as woodcuttings or waste products from food stock (such as sugarcane bagasse).
	Bio Fuel (3rd Generation)	TIER 3	EQ.01.2	Revenue generating activities related specifically to the development, processing, production and distribution of bio-derived fuels for transport, heat and electrical power generation. These include 3rd Generation uses specially-engineered non-food items such as algae.
	Bio Gas	TIER 2	EQ.01.3	Revenue generating activities related specifically to the development, processing, production and distribution of bio-derived gas generated through the active decomposition of organic matter, typically during landfill processes.
	Bio Mass (grown)	TIER 3	EQ.01.4	Revenue generating activities related specifically to the development, processing, production and distribution of bio-derived fuels typically for heat and/or electrical power generation using crops grown as a fuel source.
	Bio Mass (waste)	TIER 2	EQ.01.5	Revenue generating activities related specifically to the development, processing, production and distribution of bio-derived fuels typically for heat and/or electrical power generation using organic byproducts of the agricultural and other systems.
Cogeneration Equipment	Cogeneration Equipment (General)	TIER 2	EQ.02.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment for power generation where the waste heat is utilized for large-scale heating and/or cooling purposes.
	Cogeneration (Biomass)	TIER 1	EQ.02.1	Revenue generating activities related specifically to the development, processing, production and distribution of equipment for power generation where primary source is biomass-based, and where the waste heat is utilized for large-scale heating and/or cooling purposes.
	Cogeneration (Renewable)	TIER 1	EQ.02.2	Revenue generating activities related specifically to the development, processing, production and distribution of equipment for power generation where primary source is renewables-based, and where the waste heat is utilized for large-scale heating and/or cooling purposes. This excludes activities where biomass is the primary energy source.
	Cogeneration (Gas)	TIER 2	EQ.02.3	Revenue generating activities related specifically to the development, processing, production and distribution of equipment for power generation where primary source is natural gas, and where the waste heat is utilized for large-scale heating and/or cooling purposes.
Clean fossil Fuels	Fossil Fuels (General)	—	EQ.03.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment for power generation using fossilized organic material. Only activities related to carbon capture & storage (EQ.03.1) are considered green revenues.
	Carbon Capture & Storage	TIER 1	EQ.03.1	Revenue generating activities related specifically to the development, processing, production and distribution of equipment for capturing carbon dioxide produced through power generation for long-term storage.
Fuel Cells	Fuel Cells	TIER 2	EQ.04.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment for power generation through fuel cells, which are primary cells that consume fuel continuously and converts its chemical energy directly into electrical energy.

Sector EQ Energy Equipment		Revenue generating activities from the renewable and alternative energy value chain, excluding power generation activities.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Geothermal	Geothermal	TIER 1	EQ.05.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that utilizes energy produced by the internal heat of the earth, excluding small-scale heat pump systems.
Hydro	Hydro (General)	TIER 2	EQ.06.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that harnesses the energy produced by flowing fresh water.
	Large Hydro	TIER 2	EQ.06.1	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that harnesses the energy produced by flowing fresh water, where the power generation capacity of the system is greater than 10MW. This includes dam construction.
	Small Hydro	TIER 1	EQ.06.2	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that harnesses the energy produced by flowing fresh water, where the power generation capacity of the system is less than 10MW.
Nuclear	Nuclear (General)	TIER 3	EQ.07.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that harnesses the energy present within atomic nuclei or their components.
Ocean & Tidal	Ocean & Tidal (General)	TIER 1	EQ.08.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that harnesses the power of wave, tidal or other ocean and marine current forces.
Solar	Solar (General)	TIER 1	EQ.09.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that harnesses the power of solar radiation, such as solar photovoltaic or concentrated solar systems but excluding solar thermal heating systems.
Waste to Energy	Waste to Energy (General)	TIER 1	EQ.10.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that utilizes the energy derived from the incineration of municipal waste, or from a fuel source derived thereof.
Wind	Wind (General)	TIER 1	EQ.11.0	Revenue generating activities related specifically to the development, processing, production and distribution of equipment and plants engaged in the supply of power generation that harnesses the power of movements or currents in the air.

Sector ER Environmental Resources		Revenue generating activities from production, processing and sale of key and advanced materials which specifically enable the minimization of negative environmental impacts and improve the efficiency of natural resource use.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Advanced & Light Materials	Advanced & Light Materials (General)	TIER 1	ER.01.0	Revenue generating activities related specifically to the design, development or manufacture of materials that during their manufacture or through their use allow for considerable increases in the efficiency of resource usage.

Sector ER Environmental Resources		Revenue generating activities from production, processing and sale of key and advanced materials which specifically enable the minimization of negative environmental impacts and improve the efficiency of natural resource use.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Key Raw Minerals & Metals	Key Raw Minerals & Metals (General)	TIER 3	ER.02.0	Revenue generating activities related specifically to the mining, processing, handling or owning of raw materials fundamental to the transition to a green economy.
	Cobalt	TIER 3	ER.02.1	Revenue generating activities related specifically to the mining, processing, handling or owning of cobalt, a key input into advanced batteries.
	Lithium	TIER 3	ER.02.2	Revenue generating activities related specifically to the mining, processing, handling or owning of lithium, a key input into advanced batteries.
	Platinum & Platinum-Group Metals (PGM)	TIER 3	ER.02.3	Revenue generating activities related specifically to the mining, processing, handling or owning of the Platinum Group Metals (PGMs), a key input into pollution control systems.
	Rare Earths	TIER 3	ER.02.4	Revenue generating activities related specifically to the mining, processing, handling or owning of Rare Earth Metals, a key input into super-strength magnets for the renewable energy and advanced vehicles industries.
	Silica	TIER 3	ER.02.5	Revenue generating activities related specifically to the mining, processing, handling or owning of silica, a key raw material for the solar photovoltaic industry.
	Uranium	TIER 3	ER.02.6	Revenue generating activities related specifically to the mining, processing, handling or owning of uranium, a key raw material for the nuclear power industry.
Recyclable Products & Materials	Recyclable Products & Materials (General)	TIER 1	ER.03.0	Revenue generating activities related specifically to products and materials that are explicitly designed with disassembling and repurposing abilities or that biodegrade rapidly at the end of their useful life.
	Recyclable Materials	TIER 1	ER.03.1	Revenue generating activities related specifically to materials that have been created to allow for repurposing or are able to be or to biodegrade rapidly at the end of their useful life.
	Recyclable & Reusable Products	TIER 1	ER.03.2	Revenue generating activities related specifically to products that have been created to allow for multiple re-use, disassembling and repurposing or are able to biodegrade rapidly at the end of their useful life.

Sector ES Environmental Support Service		Revenue generating activities from environmental support services relating to consulting, investment or urban design that enable or indirectly contribute to green activities resulting in a large breadth of environmental utility.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Environmental Consultancies	Environmental Consultancies (General)	TIER 2	ES.01.0	Revenue generating activities related specifically to companies that provide advice and/or support regarding environmental issues and strategies.
Finance & Investment	Finance & Investment (General)	TIER 2	ES.02.0	Revenue generating activities related specifically to tradable environmentally based credits and to investment vehicles that specialize in environmental themes.
	Carbon Credits trading	TIER 2	ES.02.1	Revenue generating activities related specifically to tradable environmentally based credits or certificates, such as RECs, TRCs or carbon credits.

	Sustainable Investment Funds	TIER 2	ES.02.2	Revenue generating activities related specifically to investment vehicles that specialize in environmental themes.
Smart City Design & Engineering	Smart City Design & Engineering (General)	TIER 2	ES.03.0	Revenue generating activities related specifically to the design, development, manufacture or installation of products and services that allow cities to use IT and communication technologies to operate at a significantly higher resource efficiency level.

Sector FA Food & Agriculture		Revenue generating activities from products that improve yield, productivity and sustainability in agriculture, silviculture, aquaculture and food production or distribution, whilst minimizing negative environmental impacts.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Agriculture	Agriculture (General)	TIER 3	FA.01.0	Revenue generating activities specifically designed to improve yield, productivity and sustainability in agriculture, silviculture, aquaculture and food production or distribution, whilst minimizing negative environmental impacts, or that help with adaptation to long term issues of climate change.
	GM Agriculture	TIER 3	FA.01.1	Revenue generating activities related specifically to the design, development or manufacture of advanced seeds in which the genetic material (DNA) has been altered in a way that does not occur naturally by mating and/or natural recombination.
	Machinery	TIER 1	FA.01.2	Revenue generating activities related specifically to the design, development or manufacture of agricultural machinery that demonstrate exceptionally high levels of operational efficiencies.
	Meat & Dairy Alternatives	TIER 1	FA.01.3	Revenue generating activities related specifically to the design, development or manufacture of advanced or modern foods that aim to replicate either animal meat or dairy products.
	Non GM Advanced Seeds	TIER 2	FA.01.4	Revenue generating activities related specifically to the design, development or manufacture of advanced seeds in which the genetic material (DNA) has been altered in a way that occurs naturally by mating and/or natural recombination.
	Organic & Low-Impact Farming	TIER 1	FA.01.5	Revenue generating activities related specifically to the food producers and distributors of food that meets national organic standards. Typically, these are those that use natural pesticides and fertilizers, no antibiotics or genetically modified ingredients, and that encourages wildlife.
Aquaculture	Aquaculture (General)	TIER 3	FA.02.0	Revenue generating activities related specifically to the design, development or manufacture of fish farming equipment, or those who operate fish farms.
	Aquaculture (Conventional)	TIER 3	FA.02.1	Revenue generating activities related specifically to the design, development or manufacture of standard fish farming equipment, or those who operate fish farms that do not meet feed inputs, antibiotic use and transparency levels as defined by the ASC.
	Aquaculture (Sustainable)	TIER 1	FA.02.2	Revenue generating activities related specifically to the design, development or manufacture of fish farming equipment that is designed to significantly reduce the impact the industry has on the environment, or those who operate fish farms where feed inputs, antibiotic use and transparency levels are meet as defined by the ASC.
Land Erosion	Land Erosion (General)	TIER 1	FA.03.0	Revenue generating activities related specifically to the design, development, manufacture or installation or application of products or services that reduce the degradation and movement of the upper layer of soil, particularly in areas exposed to natural disasters or those that have erosion-related soil quality issues.
Logistics	Logistics (General)	TIER 1	FA.04.0	Revenue generating activities related specifically to the operation of efficient logistics systems and infrastructure in areas of high food wastage in the transportation stage of production.

Sector FA Food & Agriculture		Revenue generating activities from products that improve yield, productivity and sustainability in agriculture, silviculture, aquaculture and food production or distribution, whilst minimizing negative environmental impacts.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Food Safety, Efficient Processing & Sustainable Packaging	Food Safety, Efficient Processing & Sustainable Packaging (General)	TIER 3	FA.05.0	Revenue generating activities related specifically to the design, development, manufacture, installation or application of products or services that raise food safety standard, test or monitor food, or packaging technologies that extend shelf life and reduce waste.
	Food Safety, Efficient Processing & Sustainable Packaging (no single use plastic)	TIER 1	FA.05.1	Revenue generating activities related specifically to the design, development, manufacture, installation or application of products or services that raise food safety standard, test or monitor food, or packaging technologies that extend shelf life and reduce waste where no single-use plastic material is used in the product.
	Food Safety, Efficient Processing & Sustainable Packaging (with single use plastic)	TIER 3	FA.05.2	Revenue generating activities related specifically to the design, development, manufacture, installation or application of products or services that raise food safety standard, test or monitor food, or packaging technologies that extend shelf life and reduce waste where single-use plastic material is used in the product.
Sustainable Plantations	Sustainable Plantations (General)	TIER 2	FA.06.0	Revenue generating activities related specifically to the cultivation of forests and oil palms to verifiable international standards and protocols, which maintain or improve the long-term productivity of timberlands and plantations while enhancing the efficiency of input resources used.
	Sustainable Forestry	TIER 2	FA.06.1	Revenue generating activities related specifically to the cultivation of timber and lumber to verifiable international standards and protocols, which maintain or improve the long-term productivity of timberlands and plantations while enhancing the efficiency of input resources used.
	Sustainable Palm Oil	TIER 2	FA.06.2	Revenue generating activities related specifically to the cultivation of oil palms to verifiable international standards and protocols, which maintain or improve the long-term productivity of plantations while enhancing the efficiency of input resources used.

Sector TE Transport Equipment		Revenue generating activities from the provision of technologies, systems and services which minimize the environmental impacts and improve the efficiency of natural resource use associated with the transportation industry.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Aviation	Aviation (General)	TIER 2	TE.01.0	Revenue generating activities related specifically to the design, development or manufacture of advanced aircraft, or products or services that enable advances in the environmental impact of aviation above and beyond the improvements in fuel economy typically associated with new generations of aircraft.
Railways	Railways (General)	TIER 2	TE.02.0	Revenue generating activities related specifically to the design, development or manufacture of rolling stock or its key components.
	Railway (Infrastructure)	TIER 1	TE.02.1	Revenue generating activities related specifically to the design, construction or management of rolling stock and rail infrastructure. Activities include locomotives, rolling stock, railway infrastructure, systems and equipment (excluding infrastructure where the primary good transported is coal)
	Trains (Electric / Magnetic)	TIER 1	TE.02.2	Revenue generating activities related specifically to the design, development or manufacture of electrical or magnetically powered rolling stock and their key components.

Sector TE Transport Equipment		Revenue generating activities from the provision of technologies, systems and services which minimize the environmental impacts and improve the efficiency of natural resource use associated with the transportation industry.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
	Trains (General)	TIER 2	TE.02.3	Revenue generating activities related specifically to the design, development or manufacture of diesel-powered rolling stock, and their key components.
Road Vehicles	Road Vehicles (General)	TIER 1	TE.03.0	Revenue generating activities related specifically to the design, development or manufacture of low-impact and other advanced road vehicles and their key components.
	Advanced Vehicle Batteries	TIER 1	TE.03.1	Revenue generating activities related specifically to the design, development or manufacture of advanced batteries designed for road vehicles.
	Bikes and Bicycles	TIER 1	TE.03.2	Revenue generating activities related specifically to the design, development or manufacture of bicycles, and advanced electrified components.
	Bus and Coach Manufacturers	TIER 1	TE.03.3	Revenue generating activities related specifically to the design, development or manufacture of buses and coaches for public transportation.
	Electrified Road Vehicles & Devices (incl Hydrogen powered)	TIER 1	TE.03.4	Revenue generating activities related specifically to the design, development or manufacture of advanced road vehicles and their key components. These include hydrogen-powered, electric and hybrid vehicles, but exclude mild hybrids and gas-powered vehicles.
	Energy Use Reduction Devices	TIER 1	TE.03.5	Revenue generating activities related specifically to the design, development or manufacture of road vehicle devices that lead to considerable savings in fuel economy, such as Stop-Start systems.
Shipping	Shipping (General)	TIER 2	TE.04.0	Revenue generating activities related specifically to the design, development or manufacture of advanced ships and components that lead to considerable savings in fuel economy. This does not include shipping operators.

Sector TS Transport Solutions		Revenue generating activities from the operation of transportation solutions and services which minimize the environmental impacts and improve the efficiency of natural resource use associated with the transportation industry.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Railways Operator	Railways Operator (General)	TIER 2	TS.01.0	Revenue generating activities related specifically to the operation of rolling stock networks.
	General Railways	TIER 2	TS.01.1	Revenue generating activities related specifically to the operation of diesel-powered public transportation and railway freight networks (excluding those where the primary good transported is coal).
	Electrified Railways	TIER 1	TS.01.2	Revenue generating activities related specifically to the operation of electrified public transportation and railway freight networks (excluding those where the primary good transported is coal).
Road Vehicles	Road Vehicles (General)	TIER 3	TS.02.0	Revenue generating activities related specifically to the operation of sustainable road transportation services.
	Bike Sharing	TIER 1	TS.02.1	Revenue generating activities related specifically to the operation of city cycle hire schemes and other similar ultra-short-term individual transport vehicle schemes.
	Bus and Coach operators	TIER 3	TS.02.2	Revenue generating activities related specifically to the operation of bus and coach fleets.
	Car Clubs	TIER 2	TS.02.3	Revenue generating activities related specifically to the operation or management of fleets of self-drive road vehicles (typically in

Sector TS Transport Solutions		Revenue generating activities from the operation of transportation solutions and services which minimize the environmental impacts and improve the efficiency of natural resource use associated with the transportation industry.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
				urban or residential locations) which members may rent, usually on an hourly or per minute basis.
	Ride Hailing	TIER 2	TS.02.4	Revenue generating activities related specifically to the operation of pre-booked taxi fleets, particularly those that offer ride-sharing services.
Video Conferencing	Video Conferencing (General)	TIER 2	TS.03.0	Revenue generating activities related specifically to the design, development, manufacture of video-based teleconference facilities designed for business purposes that allow participants to see as well as hear one another.

Sector WI Water Infrastructure & Technology		Revenue generating activities from technologies, infrastructure, products and services for the supply, management and treatment of water.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Advanced Irrigation Systems & Devices	Advanced Irrigation Systems & Devices (General)	TIER 1	WI.01.0	Revenue generating activities related specifically to the design, development, manufacture or installation of equipment that enables water to be applied efficiently in agricultural contexts.
Desalination	Desalination (General)	TIER 1	WI.02.0	Revenue generating activities related specifically to the design, development, manufacture, operation or installation of facilities that remove salt from marine and other saline waters for subsequent industrial, agricultural or residential use.
Flood Control	Flood Control (General)	TIER 2	WI.03.0	Revenue generating activities related specifically to the design, development, manufacture, operation or installation of products and services that prevent or reduce the impact of flood waters.
Meteorological Solutions	Meteorological Solutions (General)	TIER 1	WI.04.0	Revenue generating activities related specifically to the design, development, manufacture, operation or installation of products and services that enable accurate weather forecasting and climate predictions.
Natural Disaster Response	Natural Disaster Response (General)	TIER 2	WI.05.0	Revenue generating activities related specifically to the design, development, manufacture, operation or installation of products and services that help reduce the adverse impact on human life and property in the event of a natural disaster.
Water Infrastructure	Water Infrastructure (General)	TIER 1	WI.06.0	Revenue generating activities related specifically to the design, development, manufacture, operation or installation of products and services that enhance water infrastructure systems. This includes specialty pipes, pumps, valves, actuators, hydrants and meters activities and the development and construction of water infrastructure.
Water Treatment	Water Treatment (General)	TIER 2	WI.07.0	Revenue generating activities related specifically to the design, development, manufacture or installation of technologies or facilities for the separation and purification of water to meet environmental standards. This includes membranes, ultra-violet, desalination, filtration, ion exchange, biological treatment, chemical and environmental treatment.
	Water Treatment Chemicals	TIER 2	WI.07.1	Revenue generating activities related specifically to the design, development, manufacture or installation of chemicals produced for the separation and purification of water to meet environmental standards.
	Water Treatment Equipment	TIER 1	WI.07.2	Revenue generating activities related specifically to the design, development, manufacture or installation of equipment used for the

Sector WI Water Infrastructure & Technology		Revenue generating activities from technologies, infrastructure, products and services for the supply, management and treatment of water.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
				separation and purification of water to meet environmental standards. This does not include any chemicals.
Water Utilities	Water Utilities (General)	TIER 2	WI.08.0	Revenue generating activities related specifically to the operation of water treatment and supply infrastructure, providing potable water or wastewater and sewage services.

Sector WP Waste & Pollution Control		Revenue generating activities from products and services which reduce, monitor, or prevent the contamination of air, water and soil to address global, regional and local environmental issue and technologies, systems and services for waste management, reuse and recycling.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Cleaner Power	Cleaner Power (General)	TIER 2	WP.01.0	Revenue generating activities related specifically to facilitating the substitution of more polluting fuels by cleaner burning fuels in areas of chronic air pollution, in particular relating to the powering of industry.
Decontamination Services & Devices	Decontamination Services & Devices (General)	TIER 1	WP.02.0	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for the clean-up of air, soil or water pollution.
	Air Decontamination Services & Devices	TIER 1	WP.02.1	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for the clean-up of air pollution.
	Land & Soil Decontamination Services & Devices	TIER 1	WP.02.2	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for reduction, prevention or clean-up of land & soil pollution.
	Sea & Water Decontamination Services & Devices	TIER 1	WP.02.3	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for reduction, prevention or clean-up of marine, river and other water table pollution.
Environmental Testing & Gas Sensing	Environmental Testing & Gas Sensing (General)	TIER 2	WP.03.0	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for environmental analysis, monitoring and modelling, auditing, site evaluation and environmental impact assessments.
Particles & Emission Reduction Devices	Particles & Emission Reduction Devices (General)	TIER 1	WP.04.0	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for the clean-up of air pollution. Principal areas are the industrial and power generation sectors (such as smoke stack scrubbing technologies), and the transportation sector (such as particulate filters and catalytic converters).
	Industrial Pollution Reduction	TIER 1	WP.04.1	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for the prevention of air pollution associated to the industrial and power generation sectors (such as smoke stack scrubbing technologies).
	Transport Pollution Reduction	TIER 1	WP.04.2	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for the prevention of air pollution associated to the transportation sector (such as particulate filters and catalytic converters).

Sector WP Waste & Pollution Control		Revenue generating activities from products and services which reduce, monitor, or prevent the contamination of air, water and soil to address global, regional and local environmental issue and technologies, systems and services for waste management, reuse and recycling.		
Sub-Sector	Micro-sector	Green Tier	Code	Description
Recycling Equipment	Recycling Equipment (General)	TIER 1	WP.05.0	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment for the return of materials to a previous stage of a cyclic process.
Recycling Services	Recycling Services (General)	TIER 1	WP.06.0	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of services for the return of materials to a previous stage of a cyclic process.
Waste Management	Waste Management (General)	TIER 2	WP.07.0	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for the collection, management and treatment of waste.
	Hazardous Waste Management	TIER 1	WP.07.1	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for the processing and treatment of hazardous waste such as clinical waste, batteries, end of life vehicles, electronic equipment (e-waste) and radioactive waste.
	Organic Waste Process	TIER 1	WP.07.2	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for the processing and treatment of animal and plant-based waste.
	General Waste Management	TIER 2	WP.07.3	Revenue generating activities related specifically to the design, development, manufacture, installation or operation of equipment and services for general municipal and commercial waste management operations, typically including collection, processing and disposal (including landfill and incineration)

For more information about our indexes, please visit ftserussell.com.

© 2020 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) MTSNext Limited ("MTSNext"), (5) Mergent, Inc. ("Mergent"), (6) FTSE Fixed Income LLC ("FTSE FI"), (7) The Yield Book Inc ("YB") and (8) Beyond Ratings S.A.S. ("BR"). All rights reserved.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, MTSNext, Mergent, FTSE FI, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "MTS®", "FTSE4Good®", "ICB®", "Mergent®", "The Yield Book®", "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, MTSNext, FTSE Canada, Mergent, FTSE FI, YB or BR. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

All information is provided for information purposes only. All information and data contained in this publication is obtained by the LSE Group, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or of results to be obtained from the use of FTSE Russell products, including but not limited to indexes, data and analytics, or the fitness or suitability of the FTSE Russell products for any particular purpose to which they might be put. Any representation of historical data accessible through FTSE Russell products is provided for information purposes only and is not a reliable indicator of future performance.

No responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of the LSE Group is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing contained herein or accessible through FTSE Russell products, including statistical data and industry reports, should be taken as constituting financial or investment advice or a financial promotion.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of the LSE Group nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group data requires a licence from FTSE, Russell, FTSE Canada, MTSNext, Mergent, FTSE FI, YB, BR and/or their respective licensors.

About FTSE Russell

FTSE Russell is a leading global index provider creating and managing a wide range of indexes, data and analytic solutions to meet client needs across asset classes, style and strategies. Covering 98% of the investable market, FTSE Russell indexes offer a true picture of global markets, combined with the specialist knowledge gained from developing local benchmarks around the world.

FTSE Russell index expertise and products are used extensively by institutional and retail investors globally. For over 30 years, leading asset owners, asset managers, ETF providers and investment banks have chosen FTSE Russell indexes to benchmark their investment performance and create investment funds, ETFs, structured products and index-based derivatives. FTSE Russell indexes also provide clients with tools for asset allocation, investment strategy analysis and risk management.

A core set of universal principles guides FTSE Russell index design and management: a transparent rules-based methodology is informed by independent committees of leading market participants. FTSE Russell is focused on index innovation and customer partnership applying the highest industry standards and embracing the IOSCO Principles. FTSE Russell is wholly owned by London Stock Exchange Group.

For more information, visit ftserussell.com.

To learn more, visit ftserussell.com; email info@ftserussell.com; or call your regional Client Service Team office:

EMEA

+44 (0) 20 7866 1810

North America

+1 877 503 6437

Asia-Pacific

Hong Kong +852 2164 3333

Tokyo +81 3 4563 6346

Sydney +61 (0) 2 8823 3521