



**FTSE**  
ENVIRONMENTAL MARKETS  
CLASSIFICATION SYSTEM

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# INTRODUCTION

The FTSE Environmental Markets Classification System (EMCS) is a comprehensive global classification system for environmental markets. Environmental market companies are defined as providing products and services that deliver solutions to environmental challenges, and include environmental technology, also sometimes referred to as “clean tech”.

A potential barrier to investment in this area in the past has been the difficulty in defining this market and understanding its investment characteristics. This classification system aims to enable investors globally to clearly identify and measure investment opportunities in environmental markets.

The global investment community now has a company classification system with sufficient levels of granularity and precision to define this growing area and assist in the design of investment products.



# WORKING ALONGSIDE ICB

The EMCS is independent of the industry standard ICB (Industry Classification Benchmark). It provides an alternative method for classification of companies that operate in environmental markets and is for use in conjunction with ICB, rather than as a replacement for it.

ICB includes some environmental market categories such as Alternative Energy (0580), Renewable Energy Equipment (0583), Alternative Fuels (0587), and Alternative Electricity (7537). However, because it is still early in the growth and development of environmental markets the number and size of publicly limited companies is relatively small. This means that whilst ICB provides for a few widely recognised categories it does not cater for others, such as solar power or transport energy efficiency, which are present in the EMCS.



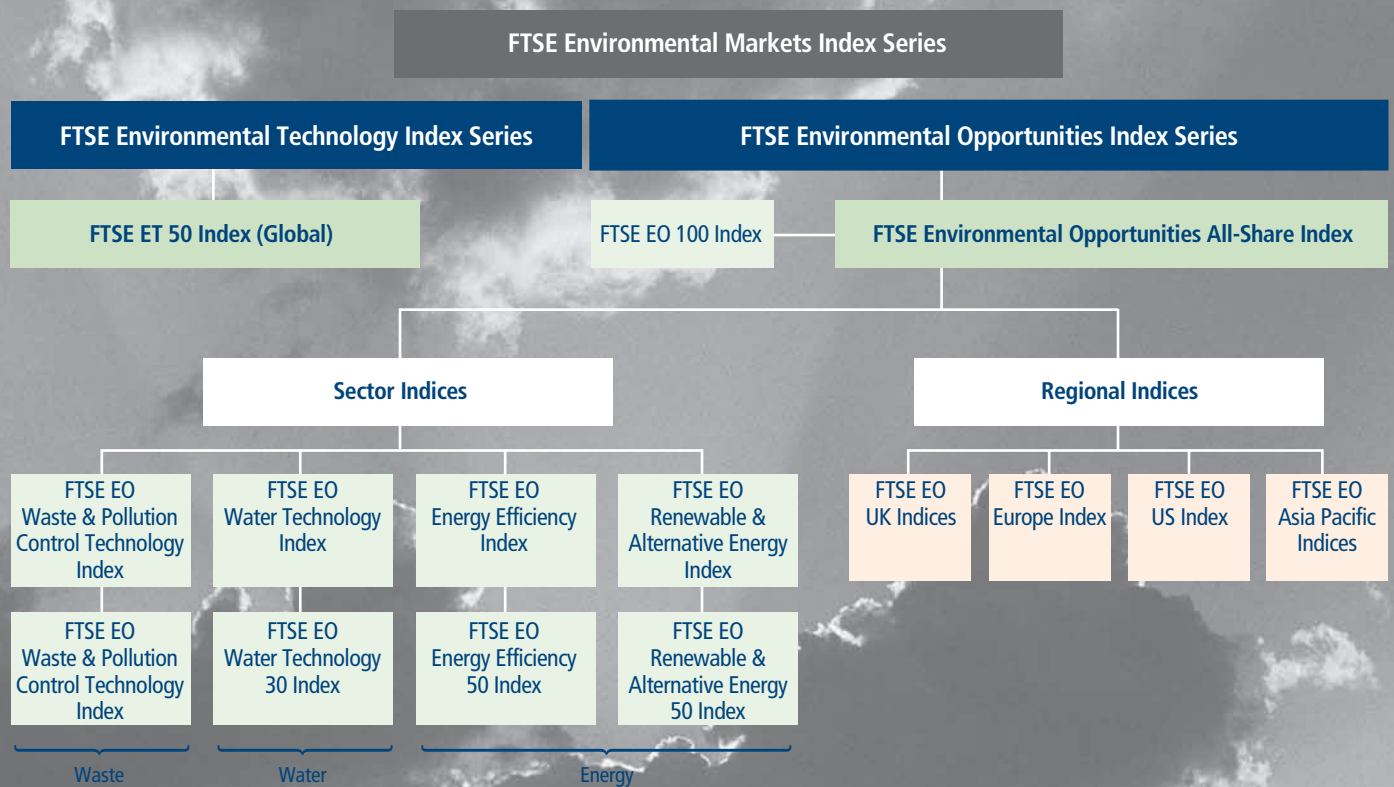
# CLASSIFICATION STRUCTURE

The EMCS is a detailed and comprehensive structure for analysis, facilitating the comparison of companies across two levels; sector and subsector, and across national boundaries.

The system defines environmental market companies and allocates each to the subsector whose definition most closely describes the nature of its business. There are currently six sectors, and 25 subsectors.

The coding for all sectors and subsectors begins with an "E" for Environmental Markets. This is followed by a number that signifies sector, then following a point "." a second number that signifies subsector. Please see the Appendix for how the coding structure is applied.

# FTSE ENVIRONMENTAL MARKETS FAMILY TREE





# ENVIRONMENTAL MARKETS SECTOR AND SUBSECTOR DEFINITIONS

## **Environmental Markets Definition**

Companies that provide products and services offering solutions to environmental problems, or that improve the efficiency of natural resource use.

These are categorised into the following sectors:

## E1.0 RENEWABLE & ALTERNATIVE ENERGY

Companies that provide products and services along the renewable and alternative energy value chain.

### E1.1 Wind power generation equipment

Companies that design, develop, manufacture, distribute or install wind turbine equipment and components, (including bearings, gearboxes, blades, and towers); and companies that supply specialist materials into the wind value chain.

### E1.2 Solar energy generation equipment

Companies that design, develop, manufacture, distribute or install solar photovoltaic or solar thermal equipment and components (including wafers, cells, and modules); and companies that supply specialist materials into the solar value-chain.

### E1.3 Other renewables equipment

Companies that design, develop, manufacture, distribute and/or install other renewable energy technologies (other than wind and solar power), including equipment for hydro, wave, tidal, fuel-cell, and geothermal energy generation.

### E1.4 Renewable energy developers and independent power producers (IPPs)

Companies involved in the development and operation of renewable energy power generation including the provision of power from sources such as wind, solar, geothermal, hydro, biomass, landfill gas, and waste incineration.

### E1.5 Biofuels

Companies involved in 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.

### E1.6 Diversified renewable and alternative energy

Diversified renewable & alternative energy companies with less than the business threshold derived from any one of these subsectors, but over the threshold when combined.

## E2.0 ENERGY EFFICIENCY

Companies that provide products and services enabling more efficient methods of energy usage.

### E2.1 Power network efficiency

Companies that design, develop, manufacture, distribute or install equipment and services which 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, and technologies for advanced energy storage and backup power.

### E2.2 Industrial energy efficiency

Companies that design, develop, manufacture, distribute or install energy efficient products and services for use in varied industrial markets. These include products and core components which improve energy profiles, and products or systems which reduce energy usage within processes.

### E2.3 Buildings energy efficiency

Companies that design, develop, manufacture, distribute or install energy efficient products and services for use in residential, commercial and municipal buildings. Products include integrated buildings control systems, insulation materials, energy efficient lighting, efficient heating, ventilation and air-conditioning equipment.

### E2.4 Transport energy efficiency

Companies that design, develop, manufacture, distribute or apply technology to deliver improved efficiency in the transport sector (including automotive, heavy duty, rail and aerospace). This includes higher efficiency conventional engine and powertrain technologies, and new vehicle technology (such as natural gas engines, hybrids and electric vehicles, including specialist batteries).

### E2.5 Diversified energy efficiency

Diversified energy efficiency companies with less than the business threshold derived from any one of these subsectors, but over the threshold when combined.

## E3.0 WATER INFRASTRUCTURE & TECHNOLOGIES

Companies that provide or operate technologies, infrastructure and services for the supply, management and treatment of water for industrial, residential, utility and agricultural users.

### E3.1 Water infrastructure

Companies that supply products (including specialty pipes, pumps, valves, actuators, hydrants and meters) and services that enhance water infrastructure systems. This includes companies engaged in the development and construction of water infrastructure or coastal defence projects.

### E3.2 Water treatment equipment

Companies that design, develop, manufacture, distribute and/or install technologies or facilities for the separation and purification of water to meet environmental standards. This includes membranes, ultra-violet, desalination, filtration, ion exchange, and biological treatment.

### E3.3 Water utilities

Companies that operate water treatment and supply infrastructure, providing potable water or wastewater and sewage services.

### E3.4 Diversified water infrastructure and technology

Diversified water infrastructure and technology companies with less than the business threshold derived from any one of these subsectors, but over the threshold when combined.

## E4.0 POLLUTION CONTROL

Companies that provide technologies to reduce and monitor the contamination of air and soil to address global, regional and local environmental problems.

### E4.1 Pollution control solutions

Companies that design, develop, manufacture, distribute or install equipment and services for reduction, prevention or clean-up of air or soil pollution. Pollutants include sulphur dioxide, nitrous oxide, mercury, particulates, carbon monoxide and carbon dioxide. 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). This also includes companies facilitating the substitution of more polluting fuels by cleaner burning fuels in areas of chronic air pollution.

### E4.2 Environmental testing and gas sensing

Companies that provide environmental testing, sensing, measuring and monitoring technologies and services, such as chromatography and mass spectrometry.

## E5.0 WASTE MANAGEMENT & TECHNOLOGIES

Companies that provide and/or operate technologies, systems and services for waste management, reuse and recycling.

### E5.1 Waste technology equipment

Companies that design, develop, manufacture, distribute and/or install waste technology equipment and system services that create value from the waste stream. Equipment includes sorters, reverse-vending machines, composters, anaerobic digesters, waste-to-energy systems, collection, registration and logistics systems and other materials processors.

### E5.2 Recycling and value added waste processing

Companies that are involved in the processing of waste to derive value. Operations include recycling (in particular metals, plastics, oils, paper and aggregates), composting, mechanical biological treatment, and energy recovery.

### E5.3 Hazardous waste management

Companies that are involved in the processing and treatment of hazardous waste such as clinical waste, batteries, end of life vehicles, electronic equipment (e-waste) and radioactive waste.

### E5.4 General waste management

Companies that are involved in general residential and commercial waste management operations, typically including collection, processing and disposal (including landfill).

### E5.5 Diversified waste and technology

Diversified waste management and technology companies with less than the business threshold derived from any one of these subsectors, but over the threshold when combined.

## E6.0 ENVIRONMENTAL SUPPORT SERVICES

Companies that provide environmental support services through consultancy, or trading services in environmental assets and securities. Furthermore, diversified environmental companies are also included in this sector.

### E6.1 Carbon and other environmental assets trading

Companies that derive investment returns from sourcing, creating and trading carbon credits and other environmental assets such as sulphur dioxide pollution permits.

### E6.2 Environmental Consultancies

Companies that provide advice and/or support regarding environmental issues and strategies, and in the development of projects and infrastructure (e.g. the building of renewable energy projects). Companies that manage and certify environmental performance and planning issues for new and existing construction, and engineering projects are included.

### E6.3 Diversified environmental

Diversified environmental companies with less than the 20% threshold derived from any one environmental sector, but over 20% when combined.

# OPERATING PROCEDURES AND RULES OF MANAGEMENT

## Use in the FTSE Environmental Markets Indices

The classification system is used as a basis for the creation of the FTSE Environmental Markets indices, which includes both the FTSE Environmental Opportunities (EO) and Environmental Technology (ET) families of indices. A key concept is that there must be at least one eligible company per subsector. If no companies operate in a particular subsector then that subsector will not be included in the system.

The way the classification system is used for the two index families (EO and ET) differ, as set out below;

- i. Environmental Opportunities. This series uses the full set of definitions set out in this document and requires companies to derive at least 20% of their business from these sectors.
- ii. Environmental Technology. This series uses the sector definitions described in this document with the following exceptions, which are not considered eligible;

- E3.3 (Water Utilities)
- E5.4 (General Waste Management)
- E6.3 (General Environmental)
- Hydro power (As referred to in E1.3 Other Renewables Equipment, and E1.4. Renewable Energy Developers and Independent Power Producers)

Additionally, there is the requirement for this series that companies derive at least 50% of their business from the eligible sectors.

## Analysis of companies

The nature of a company's business, and whether it passes the 50% or 20% threshold described afore, is normally determined through analysis of the following parameters:

- a) Environmental market revenues against total revenues
- b) Environmental market invested capital against total invested capital
- c) Environmental market EBITDA against total EBITDA

## Role of FTSE Environmental Markets Advisory Committee and the frequency of reviews

FTSE Group is responsible for maintaining the classification system.

The FTSE Environmental Markets Advisory Committee is responsible for the rules governing the classification system and for approving changes to the system. Reviews take place on an annual basis in December each year.

The reviews are normally the only time when sector and subsector definitions are modified, or new subsectors/sectors added. In exceptional circumstances there may be cases where there is a need for changes outside of this process. In these cases, the matter will normally be put before the full Committee for a decision, however if necessary, and to improve expediency, the Chairman is empowered to authorise changes on behalf of the Committee.

At the semi-annual index reviews in June and December company classifications will be reviewed and may be changed where there is sufficient evidence to do so.

## Referencing approach

Where an organisation makes use or refers to the classification system's sectors or subsectors they will be expected to fully reference and acknowledge the EMCS.

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