

Appendix 1: Make Significant Contribution and Do No Significant Harm criteria for the Manufacturing sector

Draft v.1 Note: writing in Green refers to draft Kenyan legislation which is to be confirmed; and writing in red requires further research.

1.1. Manufacturing of low carbon and resource efficiency technologies

KeSIC code: No specific KeSIC code

Description of economic activity

Manufacturing of products, key components, and machinery that are essential for eligible renewable energy technologies, Manufacture of eligible low carbon transport vehicles, fleets and vessels, Manufacture of eligible energy efficiency equipment, Manufacture of other low carbon technologies that result in substantial GHG emission reductions in other sectors of the economy (including private households)

Make Significant Contribution Criteria

A) Climate Change Mitigation

Objective

The manufacture of low carbon technologies that result in substantial GHG emission reductions in other sectors of the economy (including private households) provided that product related emissions are at least the level of best available techniques i.e. a factory that produces electric cars, but burns coal is not eligible.

Metrics and Thresholds

1. Manufacture of products, key components and machinery that are essential for eligible renewable energy technologies (Geothermal Power, Hydropower, Concentrated Solar Power (CSP), Solar Photovoltaic (PV), Solar thermal energy for district heat production, Wind energy, Ocean energy, bioenergy technologies that meet the conversion efficiency requirements and green hydrogen and hydrogen electrolysis installation¹)

¹ Hydrogen electrolysis installation will be part of the taxonomy if it shows a considerable level of green electricity consumption and shows a pathway towards an increased share of green electricity over the years to come

2. Manufacture of low carbon transport vehicles and their respective key components, fleets and vessels meeting the following criteria is eligible:

Passenger cars, light commercial vehicles, Category M₁ and N₁:

- Until 31 December 2025: vehicles with tailpipe emission intensity of max 50 g CO₂/km (WLTP). This also includes zero tailpipe emission vehicles (e.g. electric, hydrogen).
- From 1 January 2026 onwards: only vehicles with emission intensity of 0g CO₂/km (WLTP).

For category L vehicles:

- Zero tailpipe emission vehicles (incl. hydrogen, fuel cell, electric).
- Heavy Duty Vehicles: N₂ and N₃ vehicles:
- Zero direct emission heavy-duty vehicles that emits less than 1g CO₂/kWh (or 1g CO₂/km for certain N₂ vehicles);
 - low-emission heavy-duty vehicles with specific direct CO₂ emissions of less than 50% of the reference CO₂ emissions of all vehicles in the same subgroup.

Rail Fleets:

- Zero direct emissions trains

Urban, suburban and interurban passenger land transport fleets

- Zero direct emissions land transport fleets (e.g. light rail transit, metro, tram, trolleybus, bus and rail)

Water transport

- Zero direct emissions waterborne vessels
- until 31 December 2025, are hybrid vessels using at least 50% of zero direct (tailpipe) CO₂ emission fuel mass or plug-in power for their normal operation, calculated using the International Maritime Organization (IMO) Energy Efficiency Design Index (EEDI);

3. Manufacture of the following products (with thresholds where appropriate) for energy efficient equipment for buildings and their key components is eligible:

- Installation of Building Management Systems (BMS)
- High efficiency windows (U-value better than 1.0 W/m²K)
- High efficiency doors (U-value better than 1.2 W/m²K)
- Insulation products with low thermal conductivity (λ lower or equal to 0.045 W/mK), external cladding with U-value at or lower than 0.5 W/m²K and roofing systems with U-value at or lower than 0.3 W/m²K)
- Hot water fittings (e.g. taps, showers) that are rated in the top class of the Water Efficiency Labelling and Standards (WELS) scheme.

- Household appliances (e.g. washing machines, dishwashers) rated in the top available class according to Kenyan Energy Efficiency Labelling
- High efficiency lighting appliances rated in the highest energy efficiency class that is in the energy efficiency label (or higher classes) according to Kenyan Energy Efficiency Labelling
- Presence and daylight controls for lighting systems
- Highly efficient space heating and domestic hot water systems rated in the highest energy efficiency class significantly populated in the energy efficiency label (or higher classes) according to Kenyan African Energy Efficiency Labelling
- Highly efficient cooling and ventilation systems rated in the highest energy efficiency class significantly populated in the energy efficiency label or higher classes according to Kenyan African Energy Efficiency Labelling
- Heat pumps compliant with the criteria for heat pumps given in the energy section of the taxonomy
- Façade and roofing elements with a solar shading or solar control function, including those that support the growing of vegetation
- Energy-efficient building automation and control systems for commercial buildings.
- Zoned thermostats and devices for the smart monitoring of the main electricity loads for residential buildings, and sensing equipment, e.g. motion control.

Products for heat metering and thermostatic controls for individual homes connected to district heating systems and individual flats connected to central heating systems serving a whole building.

4. The manufacture of low carbon technologies and their key components that result in substantial GHG emission reductions in other sectors of the economy (including private households) is eligible if they demonstrate substantial higher net GHG emission reductions compared to the best performing alternative technology/ product/ solution available on the market on the basis of a recognised/standardised cradle-to-cradle carbon footprint assessment (e.g. ISO 14067, 14040, Environmental Product Declaration (EPD) or Product Environmental Footprint (PEF)) validated by a third party.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to other environmental objectives from the manufacture of low carbon technologies is associated with:

The (potential) use of toxic substances and generation of toxic wastes (both at the manufacturing stage as well as at other stages of the product/equipment lifecycle); and
The potential for polluting emissions to air, water and soil from the manufacturing process

A) Climate Change Mitigation

For adaptation projects

GHG Emissions from manufacturing economic activities that are either (1) proven to be aligned with an internationally recognised method for determining low carbon transition pathway or (2) that are at or lower than the average global emissions (based on emission performance standard determined by internationally recognised data) for that economic activity.

The purpose of this approach is to ensure that there is a strong signal to the manufacturing sector to ambitiously improve energy efficiency and reduce emissions.

B) Climate Change Adaptation

Generic DNSH criteria section 8.3.1.

C) Sustainable use of water and marine resources

Generic DNSH criteria section 8.3.2.

D) Ecosystem protection and restoration

Generic DNSH criteria section 8.3.3.

E) Pollution prevention

Compliance with the Environment Management and Coordination (Air quality) REGULATIONS (2014), Environment Management and Coordination (Toxic and Hazardous Industrial Chemicals and Materials Management) Regulations 2018, and Environment Management and Coordination (Waste Management) Regulations 2006, and Occupational Safety and Health Act, 2007

F) Sustainable resource use and circularity

The activity assesses availability of and, where feasible, adopts techniques that support:

- a) reuse and use of secondary raw materials and re-used components in products manufactured;
- b) design for high durability, recyclability, easy disassembly and adaptability of products manufactured;
- c) waste management that prioritises recycling over disposal, in the manufacturing process

1.2. Manufacture of cement

KeSIC code: 2394

Description of economic activity

Manufacture of cement.

Make Significant Contribution Criteria

A) Climate Change Mitigation

Objective

The manufacturing of cement is associated with significant CO₂ emissions. Minimising process emissions through energy efficiency improvements and switch to alternative fuels and electricity with lower emissions than grid electricity promoting the reduction of the clinker to cement ration and the use of alternative clinkers and binders can contribute to the mitigation objective.

Mitigation measures should be incorporated into a single investment plan within a determined time frame (5 or 10 years) that outlines how each of the measures in combination with others will in combination enable the activity to meet the threshold defined below actions.

Metrics and thresholds

The activity manufactures one of the following:

- a) grey cement clinker where the specific GHG emissions are lower than 0,722 tCO₂e per tonne of grey cement clinker;
- b) cement from grey clinker or alternative hydraulic binder, where the specific GHG emissions from the clinker and cement or alternative binder production are lower than 0,469 tCO₂e per tonne of cement or alternative binder manufactured.

Where CO₂ that would otherwise be emitted from the manufacturing process is captured for the purpose of underground storage, the CO₂ is transported and stored underground, in accordance with the technical screening criteria set out in activities “Transport of CO₂” and “Underground storage of CO₂”.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to other environmental objectives from cement manufacturing is associated with:

- Polluting emissions to air associated to the consumption of fossil fuels and calcinations reaction in the cement kiln;
- Water consumption at production facilities located in water-stressed areas;

- Potential for soil and groundwater contamination associated with the handling and storage of (hazardous) wastes used as fuel substitute ('secondary' fuels) in the cement production process;

A) Climate Change Mitigation

For adaptation projects

Greenhouse gas emissions from the cement production processes are:

- a. for grey cement clinker, lower than 0.816 tCO₂e per tonne of grey cement clinker;
- b. for cement or alternative hydraulic binder, from grey clinker, lower than 0.530 tCO₂e per tonne of cement or alternative binder manufactured.

B) Climate Change Adaptation

Generic DNSH criteria section 8.3.1.

C) Sustainable use of water and marine resources

Generic DNSH criteria section 8.3.2.

D) Ecosystem protection and restoration

Generic DNSH criteria section 8.3.3.

E) Pollution prevention

Ensure emissions to air and water are based on the application of the Best Practicable Environmental Option (BPEO) principle informed by the Best Available Technology/Technique (BAT) approach in alignment with Environment Management and Coordination (Air Quality) Regulations (2014), Environment Management and Coordination (Toxic and Hazardous Industrial Chemicals and Materials Management) Regulations 2018, and Environment Management and Coordination (Waste Management) Regulations 2006, and Environment Management and Coordination (Water Quality) Regulations, 2006

For manufacture of cement employing hazardous wastes as alternative fuels, measures are in place to ensure the safe handling of waste.

F) Sustainable resource use and circularity

N/A

1.3. Manufacture of aluminium

KeSIC code: 2420

Description of economic activity

Manufacture of Aluminium

Make Significant Contribution Criteria

A) Climate Change Mitigation

Objective

The manufacturing of aluminium is a highly energy intensive process. The CO₂ emissions related to the production of aluminium are primarily scope 2 emissions as defined by the Greenhouse Gas Protocol (i.e. from the generation of the electricity used). Aluminium manufacturing should rely on low carbon electricity and reduced direct emissions.

Furthermore, all aluminium recycling is eligible due to significantly lower emissions than primary production.

Mitigation measures should be incorporated into a single investment plan within a determined time frame (5 or 10 years) that outlines how each of the measures in combination with others will in combination enable the activity to meet the threshold defined below actions.

Metrics and Thresholds

The activity manufactures one of the following:

- a. primary aluminium where the economic activity complies with two of the following criteria until 2025 and with all of the following criteria after 2025:
 - i. the GHG emissions do not exceed 1.484 tCO₂ per ton of aluminium manufactured ;
 - ii. the average carbon intensity for the indirect GHG emissions does not exceed 100g CO₂e/kWh;
 - iii. the electricity consumption for the manufacturing process does not exceed 15.5 MWh/t Al.
- b. secondary aluminium.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to other environmental objectives from the manufacture of aluminium is associated with:

- The potential for significant air emission impacts: perfluorocarbons, fluoride gases, polycyclic aromatic hydrocarbons (PAHs), and particulate matter (e.g. unused cryolite). Hydrogen fluorides can be toxic to vegetation;

- The toxic, corrosive and reactive nature of waste generated by the used linings (cathodes) from the electrolytic cells (known as spent pot lining (SPL)). Dissolved fluorides and cyanides from the SPL material can create significant environmental impacts including groundwater contamination and pollution of local watercourses;
- The ability (or lacking thereof) of aluminium manufacturing plants to incorporate aluminium scrap (including scrap from their own manufacturing processes) in the production process; and
- The potential to impact ecosystems as a result of the land footprint of the site and from polluting emissions

A) Climate Change Mitigation

The activity manufactures one of the following:

- a. primary aluminium where the economic activity complies with two of the following criteria until 2025 and with all of the following criteria 137 after 2025:
 - i. the GHG emissions do not exceed 1.604 tCO₂ per ton of aluminium manufactured ;
 - ii. the indirect GHG emissions do not exceed 270g CO₂e/kWh;
 - iii. the electricity consumption for the manufacturing process does not exceed 15.5 MWh/t Al;
- b. secondary aluminium.

B) Climate Change Adaptation

Generic DNSH criteria section 8.3.1.

C) Sustainable use of water and marine resources

Generic DNSH criteria section 8.3.2.

D) Ecosystem protection and restoration

Generic DNSH criteria section 8.3.3.

E) Pollution prevention

Emissions to air (e.g. sulphur dioxide - SO₂, nitrogen oxide - NO_x, particulate matter, Total Organic Carbon (TOC), dioxins, mercury (Hg), hydrogen chloride (HCL), hydrogen fluoride (HF), Total Fluoride, and (PFCs) polyfluorinated hydrocarbons (PFCs)) are based on the application of the Best Practicable Environmental Option (BPEO) principle informed by the Best Available Technology/Technique (BAT) approach and are in alignment with The Environment Management And Co-Ordination (Air Quality) Regulations (2014), Environment Management and Coordination (Toxic and Hazardous Industrial Chemicals and Materials Management) Regulations 2018, and Environmental Management And Co-Ordination (Waste Management) Regulations 2006, And Environmental Management And Co-Ordination (Water Quality) Regulations, 2006. No significant cross-media effects occur.

F) Sustainable resource use and circularity

N/A

1.4. Manufacture of iron, steel and ferroalloys

KeSIC code: 2410

Description of economic activity

Manufacture of Iron, Steel and Ferroalloys

Make Significant Contribution Criteria

A) Climate Change Mitigation

Objective

Manufacturing of iron and steel at the level of performance achieved by best performing plants is considered to make a substantial contribution to climate change mitigation. Furthermore, secondary production of steel (i.e. using scrap steel) is considered due to significantly lower emissions than primary steel production.

Mitigation measures should be incorporated into a single investment plan within a determined time frame (5 or 10 years) that outlines how each of the measures in combination with others will in combination enable the activity to meet the threshold defined below actions

Metrics and thresholds

The activity manufactures one of the following:

a) iron and steel with GHG emissions lower than the following values applied to the different manufacturing process steps:

i. hot metal = 1.331 tCO₂e/t product; ii. sintered ore = 0.163 tCO₂e/t product;
iii. coke (excluding lignite coke) = 0.144 tCO₂e/t product; iv. iron casting = 0.299 tCO₂e/t product;

v. electric Arc Furnace (EAF) high alloy steel = 0.266 tCO₂e/t product;

vi. electric Arc Furnace (EAF) carbon steel = 0.209 tCO₂e/t product.

b) steel in electric arc furnaces (EAFs) producing EAF carbon steel or EAF high alloy steel, and where the steel scrap input relative to product output is not lower than:

i. 70 % for the production of high alloy steel; ii. 90 % for the production of carbon steel.

Where CO₂ emitted from the manufacturing process is captured, the CO₂ is transported and stored underground, in accordance with the technical screening criteria set out in “Transport of CO₂” and “Underground storage of CO₂”.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to other environmental objectives from iron and steel production is associated with:

- Emissions to air from coke-making and smelting operations, especially particulate matter (dust), oxides of nitrogen, sulphur dioxide, carbon monoxide, chlorides,

fluorides, volatile organic compounds, polycyclic aromatic hydrocarbons (PAHs), polychlorinated dibenzo- dioxins/furans, and heavy metals;

- Emissions to water of hydrocarbons and suspended solids;
- Water consumption for quenching and cooling operations in water stressed areas;
- The potential to impact local ecosystems and biodiversity due to the polluting emissions (if not properly mitigated) and due to the large land footprint of the operations and associated ancillary activities; and
- Wastes and by products from the coking and smelting operations including, tar and benzole

A) Climate Change Mitigation

For adaptation projects

The activity manufactures one of the following:

c) iron and steel with GHG emissions lower than the following values applied to the different manufacturing process steps:

- i. hot metal = 1.443 tCO₂e/t product;
 - ii. sintered ore = 0.242 tCO₂e/t product;
 - iii. coke (excluding lignite coke) = 0.237 tCO₂e/t product;
 - iv. iron casting = 0.390 tCO₂e/t product;
 - v. electric Arc Furnace (EAF) high alloy steel = 0.360 tCO₂e/t product;
 - vi. electric Arc Furnace (EAF) carbon steel = 0.276 tCO₂e/t product.
- d) steel in electric arc furnaces (EAFs) producing EAF carbon steel or EAF high alloy steel, and where the steel scrap input relative to product is:
- i. 70 % for the production of high alloy steel;
 - ii. 90 % for the production of carbon steel

B) Climate Change Adaptation

Generic DNSH criteria section 8.3.1.

C) Sustainable use of water and marine resources

Generic DNSH criteria section 8.3.2.

D) Ecosystem protection and restoration

Generic DNSH criteria section 8.3.3.

E) Pollution prevention

Generic DNSH criteria section 8.3.4.

F) Sustainable resource use and circularity

N/A

1.5. Manufacture of hydrogen

KeSIC code: 2011

Description of economic activity

Manufacture of hydrogen

Make Significant Contribution Criteria

A) Climate Change Mitigation Objective

Metrics and thresholds

The activity complies with the life-cycle GHG emissions savings requirement of 73.4% for hydrogen [resulting in 3tCO₂eq/tH₂] and 70% for hydrogen-based synthetic fuels relative to a fossil fuel comparator of 94g CO₂e/MJ.

Life cycle GHG emissions savings are calculated using the methodology referred to in ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emission savings are verified by an independent third party.

Where the CO₂ emitted from the manufacturing process is captured, the CO₂ is transported and stored underground, in accordance with the technical screening criteria set out in activities “Transport of CO₂” and “Underground storage of CO₂”.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to other environmental objectives from the manufacture of hydrogen is, in practical terms, inseparable from the potential for significant harm created by the hydrocarbon refining activity more generally and is associated with:

- Polluting emissions to air (in the case of hydrogen production via electrolysis, there is an indirect environmental impact associated with the generation of electricity);
- Water used for cooling might lead to local resource depletion, dependent of the local scarcity of water resources; and
- The generation of wastes (e.g. spent catalysts and by-products of the various physical and chemical treatment processes used in purifying the hydrogen produced via hydrocarbon processing).

A) Climate Change Mitigation

For adaptation projects

The activity complies with the life cycle GHG emissions savings requirement of 70 % relative to a fossil fuel comparator of 94g CO₂e/MJ

Life cycle GHG emissions savings are calculated using the methodology referred to in ISO 14067:2018 or ISO 14064-1:2018.

Quantified life-cycle GHG emission savings are verified by an independent third party.

B) Climate Change Adaptation

Generic DNSH criteria section 8.3.1.

C) Sustainable use of water and marine resources

Generic DNSH criteria section 8.3.2.

D) Ecosystem protection and restoration

Generic DNSH criteria section 8.3.3.

E) Pollution prevention

Generic DNSH criteria section 8.3.4.

F) Sustainable resource use and circularity

N/A

1.6. Manufacture of inorganic basic chemicals

KeSIC code: 2011

Description of economic activity

- Manufacture of carbon black
- Manufacture of disodium carbonate (soda ash)
- Manufacture of chlorine

Make Significant Contribution Criteria

A) Climate Change Mitigation

Objective

Reducing the emissions from the manufacturing of carbon black and soda ash and improving energy efficiency and switching to low carbon electricity⁵² in the manufacturing of chlorine can positively contribute to the climate change mitigation objective.

Mitigation measures should be incorporated into a single investment plan within a determined time frame (5 or 10 years) that outlines how each of the measures in combination with others will in combination enable the activity to meet the threshold defined below actions

Metrics and thresholds

For carbon black

GHG emissions from the carbon black production processes are lower than 1.141 tCO₂e per tonne of product.

For disodium carbonate

GHG emissions from the disodium carbonate production processes are lower than 0.789 tCO₂e per tonne of product.

For chlorine

Electricity consumption for electrolysis and chlorine treatment is equal or lower than 2.45 MWh per tonne of chlorine.

Average life-cycle GHG emissions of the electricity used for chlorine production is at or lower than 100 g CO₂e/kWh.

Life-cycle GHG emissions are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to other environmental objectives from the manufacture of carbon black, soda ash and chlorine is associated with:

The generation of process effluents (e.g. calcium chloride in aqueous solution), by products and wastes with the potential to pollute groundwater and surface water bodies as well as soils;

- Polluting emissions to air, especially volatile organic compounds (VOC) and dust;
- The use of water in water stressed areas for cooling purposes;
- Process water effluents which can contain oxidizing agents;
- The use of water in water stressed areas;
- The generation of wastes:
- Impacts on ecosystems and biodiversity from the disposal of wastes and by-products (primarily calcium carbonate, gypsum, sodium chloride and calcium chloride, although there can be trace amounts of toxic materials such as mercury, cadmium, arsenic and zinc depending on the source of the raw materials (e.g. limestone) for the production process) which create 'waste beds'.

Objective and consideration of regulatory/policy/international standards.

A) Climate Change Mitigation

For carbon black adaptation projects

Greenhouse gas emissions from the carbon black production processes are lower than 1.615 tCO₂e per tonne of product.

For disodium carbonate adaptation projects

Greenhouse gas emissions from the disodium carbonate production processes are lower than 0.866 tCO₂e per tonne of product.

For chlorine adaptation projects

Electricity consumption for electrolysis and chlorine treatment is equal or lower than 2,45 MWh per tonne of chlorine.

Average direct greenhouse gas emissions of the electricity used for chlorine production is at or lower than 270 g CO₂e/kWh.

B) Climate Change Adaptation

Generic DNSH criteria section 8.3.1.

C) Sustainable use of water and marine resources

Generic DNSH criteria section 8.3.2.

D) Ecosystem protection and restoration

Generic DNSH criteria section 8.3.3.

E) Pollution prevention

Generic DNSH criteria section 8.3.4.

F) Sustainable resource use and circularity

N/A.

1.7. Manufacture of organic basic chemicals

KeSIC code: 2021, 2022, 2023, 2029

Description of economic activity

Manufacture of:

High volume chemicals:

- acetylene
- ethylene
- propylene
- butadiene
- hydrogen

Aromatics:

- Mixed alkylbenzenes, mixed alkylnaphthalenes other than HS 2707 or 2902
- Cyclohexane
- Benzene
- Toluene
- o-Xylene
- p-Xylene
- m-Xylene and mixed xylene isomers
- Ethylbenzene
- Cumene
- Biphenyl, terphenyls, vinyltoluenes, other cyclic hydrocarbons excluding cyclanes, cyclenes, cycloterpenes, benzene, toluene, xylenes, styrene, ethylbenzene, cumene, naphthalene, anthracene
- Benzol (benzene), toluol (toluene) and xylol (xylenes)
- Naphthalene and other aromatic hydrocarbon mixtures (excluding benzole, toluole, xylol)
- Vinyl chloride
- Styrene
- Ethylene oxide
- Monoethylene glycol
- Adipic acid
- Organic chemicals, which fall under the following:
 - Saturated acyclic monocarboxylic acids and their derivatives
 - Unsaturated monocarboxylic, cyclanic, cyclenic or cycloterpenic acyclic polycarboxylic acids and their derivatives
 - Aromatic polycarboxylic and carboxylic acids with additional oxygen functions; and their derivatives, except salicylic acid and its salts

Make Significant Contribution Criteria

A) Climate Change Mitigation Objective

The manufacturing of organic basic chemicals is a highly carbon-intensive activity within the chemical industry. Reducing the emissions from the manufacturing activity itself can positively contribute to the mitigation objectives.

Metrics and thresholds

GHG emissions from the organic basic chemicals production processes are lower than:

- a. for HVC: 0.693 tCO₂e/t of HVC;
- b. for aromatics: 0.0072 tCO₂e/t of aromatic;
- c. for vinyl chloride: 0.171 tCO₂e/t of vinyl chloride;
- d. for styrene: 0.419 tCO₂e/t of styrene;
- e. for ethylene oxide/ethylene glycols: 0.314 tCO₂e/t of ethylene oxide/glycol;
- f. for adipic acid: 0.32 tCO₂e /t of adipic acid.

Where the organic chemicals in scope are produced wholly or partially from renewable feedstock, the life-cycle GHG emissions of the manufactured chemical, manufactured wholly or partially from renewable feedstock, are lower than the life-cycle GHG emissions of the equivalent chemical manufactured from fossil fuel feedstock.

Life-cycle GHG emissions are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party. Food or feed crops are not used as bio-based feedstock for the manufacture of organic basic chemicals.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to the environment from the production of other organic chemicals is associated with:

- polluting emissions to air and water from the production process;
- vulnerable ecosystems might be damaged by the construction and/or operation of the production facilities;
- the use of water resources for production purposes (e.g. cooling water) in water stressed areas; and
- the generation of hazardous wastes

A) Climate Change Mitigation

For adaptation projects

GHG emissions from the organic chemicals production processes are lower than:

- a. for HVC: 0,851 tCO₂e/t of HVC;
- b. for aromatics: 0,03 tCO₂e/t of aromatic;

- c. for vinyl chloride: 0,268 tCO₂e/t of vinyl chloride;
- d. for styrene: 0,564 tCO₂e/t of styrene;
- e. for ethylene oxide/ethylene glycols: 0,489 tCO₂e/t of ethylene oxide/glycol;
- f. for adipic acid: 0,76 tCO₂e/t of adipic acid.
- g. Where the organic chemicals in scope are produced wholly or partially from renewable feedstock, the life-cycle GHG emissions of the manufactured chemical, manufactured wholly or partially from renewable feedstock, are lower than the life-cycle GHG emissions of the equivalent chemical manufactured from fossil fuel feedstock

B) Climate Change Adaptation

Generic DNSH criteria section 8.3.1.

C) Sustainable use of water and marine resources

Generic DNSH criteria section 8.3.2.

D) Ecosystem protection and restoration

Generic DNSH criteria section 8.3.3.

E) Pollution prevention

Generic DNSH criteria section 8.3.4.

F) Sustainable resource use and circularity

N/A

1.8. Manufacture of fertilisers and nitrogen compounds

KeSIC code: 2012

Description of economic activity

Manufacture of:

- Anhydrous ammonia
- Nitric acid

Make Significant Contribution Criteria

A) Climate Change Mitigation

Objective

The manufacturing of ammonia and nitric acid is highly carbon-intensive. Therefore, reducing the emissions from the manufacturing activity itself can positively contribute to the mitigation objective.

Mitigation measures should be incorporated into a single investment plan within a determined time frame (5 or 10 years) that outlines how each of the measures in combination with others will in combination enable the activity to meet the threshold defined below actions.

Metrics and thresholds

Ammonia is:

- a) produced from hydrogen that complies with the technical screening criteria set out in Manufacture of Hydrogen;
- b) recovered from wastewater.

GHG emissions from the manufacture of nitric acid are lower than 0,038 tCO₂e per tonne of nitric acid.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to the environment from the production of nitric acid or ammonia production is associated with:

- Polluting emissions to air (especially nitrogen oxides (NO_x), and ammonia (NH₃)) from the production process;
- Vulnerable ecosystems might be damaged by the construction and/or operation of the production facilities.
- The use of water resources for production purposes (especially for cooling processes) in water stressed areas; and
- The generation of hazardous wastes (e.g. spent catalyst material).

- A) Climate Change Mitigation
TBC
- B) Climate Change Adaptation
TBC
- C) Sustainable use of water and marine resources
TBC
- D) Ecosystem protection and restoration
TBC
- E) Pollution prevention
TBC
- F) Sustainable resource use and circularity
TBC

1.9. Manufacture of plastics in primary form

KeSIC code: 20131

Description of economic activity

Manufacture of plastics in primary form

Make Significant Contribution Criteria

A) Climate Change Mitigation

Objective

The manufacturing of plastics is associated with significant life cycle CO₂ emissions. There are many types of plastics which are used in the production of multiple end products. The Taxonomy seeks to avoid including manufacture of products that do not have a positive impact in mitigation. Disposable plastic products are highly energy inefficient and undermine efforts to contribute to mitigation.

In this context, plastic manufacturing should be considered when at least 90% of the final plastic is not used for single use consumer products. This should be confirmed from science based research/studies etc.

Mitigation measures should be incorporated into a single investment plan within a determined time frame (5 or 10 years) that outlines how each of the measures in combination with others will in combination enable the activity to meet the threshold defined below actions.

Metrics and thresholds

The plastic in primary form is one of the following:

- a. fully manufactured by mechanical recycling of plastic waste;
- b. fully manufactured by chemical recycling of plastic waste and the life-cycle GHG emissions of the manufactured plastic, excluding any calculated benefit from the production of fuels, are lower than the life-cycle GHG emissions of the equivalent primary plastic manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.
- c. derived wholly or partially from renewable feedstock and its lifecycle GHG emissions are lower than the life-cycle GHG emissions of the equivalent plastics in primary form manufactured from fossil fuel feedstock. Life-cycle GHG emissions are calculated using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.

Food or feed crops are not used as bio-based feedstock for the manufacture of plastic in primary form.

B) Climate Change Adaptation

Generic screening criteria for activities Making a Substantial Contribution to climate change adaptation Section 8.2.

Do No Significant Harm Assessment

The main potential significant harm to the environment from the production of plastics in primary form is associated with:

- polluting emissions to air and water from the production process;
- vulnerable ecosystems might be damaged by the construction and/or operation of the production facilities;
- the use of water resources for production purposes (e.g. cooling water) in water stressed areas); and
- the generation of hazardous wastes.

A) Climate Change Mitigation

TBC

B) Climate Change Adaptation

TBC

C) Sustainable use of water and marine resources

TBC

D) Ecosystem protection and restoration

TBC

E) Pollution prevention

TBC

F) Sustainable resource use and circularity

TBC

1.10. Manufacture of batteries

KeSIC code: 2720

Description of economic activity

Manufacture of batteries

Make Significant Contribution Criteria

A) Climate Change Mitigation

The economic activity manufactures rechargeable batteries, battery packs and accumulators (and their respective components), including from secondary raw materials, that result in substantial GHG emission reductions in transport, stationary and off-grid energy storage and other industrial applications.

The economic activity recycles end-of-life batteries.

B) Climate Change Adaptation

N/A

Do No Significant Harm Assessment

A) Climate Change Mitigation

N/A

B) Climate Change Adaptation

N/A

C) Sustainable use of water and marine resources

Generic DNSH criteria section 8.3.2.

D) Ecosystem protection and restoration

Generic DNSH criteria section 8.3.3.

E) Pollution prevention

Generic DNSH criteria section 8.3.4.

Where applicable, vehicles do not contain lead, mercury, hexavalent chromium and cadmium.

F) Sustainable resource use and circularity

The activity assesses the availability of and, where feasible, adopts techniques that support:

(a) reuse and use of secondary raw materials and re-used components in products manufactured;

(b) design for high durability, recyclability, easy disassembly and adaptability of products manufactured;

(c) waste management that prioritises recycling over disposal, in the manufacturing process;

(d) information on and traceability of substances of concern throughout the life cycle of the manufactured products.

Activities eligible in the KGFT first edition but without technical screening criteria developed:

- 1.11. Manufacture of glass**
- 1.12. Manufacture of low carbon resources**
- 1.13. Pollution prevention and control**
- 1.14. Reuse, redistribution, refurbishment and recycling facilities**
- 1.15. Remanufacturing of electromechanical products**
- 1.16. Eco-efficient products and processes**
- 1.17. Manufacture of Paper**
- 1.18. Manufacture of Renewable Energy technologies**
- 1.19. Manufacture of equipment for the production of hydrogen and use of hydrogen**