

»»» Paris-aligned sector guidelines of KfW Group

Version 05/2024

1. Paris-aligned sector guidelines of KfW Group

The following sector guidelines aim at supporting the global transformation process towards greenhouse gas neutrality. They apply to KfW Group's new financing activities in the sectors addressed on the following pages and thereby define concrete requirements for the respective investments' climate-friendliness.

The sector guidelines involve minimum requirements that are aligned with the Paris Climate Agreement and are gradually incorporated into KfW's established financing modalities.

For KfW Group's new financing activities, the sector guidelines apply from the date they enter into force. They do not apply to financing projects whose preparation is already at an advanced stage at the time of publication of the respective sector guideline. In KfW's domestic promotional business the respective programme's specific requirements (e.g. as defined in the programme's information sheet) remain decisive. These requirements will gradually be reviewed for compatibility with the sector guidelines and, if necessary, will be adapted accordingly (particularly when introducing new programmes or extending existing programmes). Based on superior considerations, the Federal Government of Germany can commission the implementation of Paris-incompatible programmes.

With the Paris-aligned sector guidelines, KfW group is committed to the 1.5°C climate target. In line with this, KfW wants to assume responsibility for a climate-friendly transformation in Germany and worldwide. In 2022 KfW focused on further developing the sector guidelines which were first implemented in 2021 and revised them with regard to the 1.5°C climate target. The minimum requirements for the sector guidelines power generation, iron and steel production, automotive, aviation and buildings were derived using the International Energy Agency's (IEA) "Net Zero by 2050"-scenario. For the shipping sector, the steering mechanism combines the previous technology-based approach based on the IEA's Sustainable Development Scenario with steering the shipping portfolio to 1.5°C using real emissions data from the financed assets. Information from the Poseidon Principles framework is used for this purpose. A sector guideline for the oil and natural gas sector was added in December 2023, also derived from the "Net Zero by 2050" scenario.

2. Requirements on greenhouse gas intensive sectors

2.1 Automotive sector

The sector guideline for the automotive sector refers to production and research and development (R&D) of passenger cars and light commercial vehicles (< 3.5t) as well as suppliers and infrastructure (NACE Code 29.1, 29.2 and 29.3)¹. With focus on propulsion technologies, the sector guideline differentiates as followed:

- (i) Transformative propulsion technologies directly contribute to the greenhouse gas neutrality target. These include battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV).
- (ii) Transitional propulsion technologies are relevant but of steadily decreasing importance in driving the transition towards greenhouse gas neutrality. These include internal combustion engines (ICE), plug-in hybrid electric vehicles (PHEV) and hybrid electric vehicles (HEV).

The sector guideline increases the proportion of KfW Group's financing activities in transformative propulsion technologies and limits the financing activities in transitional propulsion technologies. KfW Group controls the quota for the transitional proportion of total financing volume, ensuring that it will be met.

Scope of application

The following types of financing activities are steered by the sector guideline:

- New financing activities for propulsion-relevant parts of the automotive production (includes suppliers producing components for transformative or transitional propulsion-technologies; limiting quota for transitional drive technologies).
- Research and development in transformative and transitional technologies in the vehicle segment < 3.5t.

The following types of financing activities are **not** steered by the sector guideline:

- New financing for purchase of vehicles or fleets (as well as leasing).
- Production, research and development in the vehicle segment > 3.5t.
- Process steps unrelated to propulsion technology, i.a. pressing plant, shell construction, axles, supplier of automotive parts that are not propulsion-related (i.a. floors, seats, bumpers, mirrors), enameling lines, assembly lines, tests and quality checks, deliveries.
- Corporate Financing and other financing activities where the specific technologies are non-delimitable (e.g. intermediary-financing via financial institutions).
- Financing, unrelated to NACE Codes 29.1, 29.2 and 29.3, is not steered by the sector guideline for automotive (i.e. charging infrastructure², production of synthetic fuels and biofuels).

¹ As the sector guideline's requirements are focused on the powertrain, NACE Code 29.2 is only relevant for steering in case of a factory financing activity where the powertrain cannot be delineated.

² Charging infrastructure is seen as a transformative technology, support and funding for such projects is therefore unlimited.

Table 1: Requirements for transformative and transitional technologies in the automotive sector

Propulsion technologies	Commitments during period 1 01/01/2023-31/12/2024	Commitments during period 2 01/01/2025-31/12/2029	Commitments during period 3 01/01/2030-31/12/2034	Commitments during period 4 from 01/01/2035
Transformative propulsion technologies Promoting and challenging	<ul style="list-style-type: none"> ▪ Production plants for transformative propulsion technologies (BEV, FCEV) and their suppliers and associated infrastructure ▪ Battery production for passenger cars (no outdated technologies such as lead-acid/nickel-cadmium) ▪ Sustainable investments in propulsion technologies according to the EU taxonomy³ ▪ Research and development (R&D) in transformative propulsion technologies ▪ Replacement investments in transformative technologies ▪ GHG mitigation, energy efficiency and environmental protection measures in production ▪ Charging infrastructure (no quota imputation). 			
	<ul style="list-style-type: none"> ▪ Min. 83% of new commitment amounts for investment per business unit in above mentioned transformative propulsion technologies 	<ul style="list-style-type: none"> ▪ Min. 93% of new commitment amounts for investment per business unit in above mentioned transformative propulsion technologies 	<ul style="list-style-type: none"> ▪ Min. 95% of new commitment amounts for investment per business unit in above mentioned transformative propulsion technologies 	<ul style="list-style-type: none"> ▪ 100% of new commitment amounts for investment per business unit in above mentioned transformative propulsion technologies
Transitional propulsion technologies Restricting	<ul style="list-style-type: none"> ▪ Max. 17% of new commitment amounts for investment per business unit in transitional propulsion technologies (ICE, PHEV, HEV), their suppliers and replacement investments 	<ul style="list-style-type: none"> ▪ Max. 7% of new commitment amounts for investment per business unit in transitional propulsion technologies (PHEV), their suppliers and replacement investments 	<ul style="list-style-type: none"> ▪ Max. 5% of new commitment amounts for investment per business unit in transitional propulsion technologies (PHEV), their suppliers and replacement investments 	<ul style="list-style-type: none"> ▪ No new commitment amounts for investment per business unit in transitional propulsion technologies (ICE, PHEV, HEV), their suppliers and replacement investments

The following applies:

- No research and development (R&D) in transitional propulsion technologies.
- Commitments in GHG mitigation measures, energy efficiency measures, and environmental protection measures in production in transformative technologies are generally eligible for funding; in transitional technologies, they are eligible for funding provided they do not extend the technical lifetime. It may be assumed that the technical lifetime will not be extended if the measure relates to upgrades to existing facilities that will then continue to operate (i.e. not replacing an old plant with a new one). Such commitments are not taken into account in the quota calculation for transitional or transformative technologies, based on the total cumulative commitments per business unit in transitional and transformative technologies in each respective period.

Abbreviations:

- ICE: Internal combustion engine
- PHEV: Plug-In Hybrid Electric Vehicles
- BEV: Battery Electric Vehicles
- FCEV: Fuel Cell Electric Vehicles
- HEV: Hybrid electric vehicle

³ PHEVs are an exception to this. They are classified as transitional in this sector guideline. In the EU taxonomy, PHEVs are classified as sustainable until the end of 2024. According to the EU Taxonomy Regulation for Sustainable Investment (Regulation (EU) 2020/852). The EU taxonomy is regularly updated and further specified via delegated acts.

2.2 Iron and steel production sector

The sector guideline for iron and steel production (NACE 24.10, partially NACE 19.10) focuses on the Crude steel production technology. The guideline distinguishes between (i) transformative technologies, that directly contribute to greenhouse gas neutrality and (ii) transitional technologies, which are relevant for progress towards greenhouse gas neutrality but are of continuously declining importance. Therefore, the sector guideline will increase the proportion of financing activities in transformative technologies and limit the financing activities in transitional technologies. Technologies not listed in the sector guideline can also be classified as transitional, if they meet the high thresholds in regard to emissions (t CO₂) per t steel (crude steel).

KfW Group controls the quota for the transitional proportion of total financing volume, ensuring that it will be met. For domestic promotional business, the transitional technologies listed below are generally excluded from funding.

Scope of application

The following types of financing activities are steered by the sector guideline:

- Financing for the Crude steel production technology.

The following types of financing activities are **not** steered by the sector guideline:

- Financing without a technologically definable object of financing is not controlled by the sector guideline. This also applies to financing to financial intermediaries if the object of financing cannot be technologically defined.
- General corporate financing for iron and steel producing companies

Table 2: Requirements for transformative and transitional technologies

Technologies	Description	New financing activities in the period from 01/01/2023 to 31/12/2025	New financing activities in the period from 01/01/2026
Transformative technologies	<p><u>New constructions:</u></p> <ul style="list-style-type: none"> ▪ Hydrogen or natural gas direct reduction (DRI)⁴ ▪ Smelting reduction (hydrogen based) ▪ BOF/DRI with CCS/ BECCU/S with certified biomass ▪ Electrolysis of Iron ▪ EAF (a) ▪ Recycling technologies to increase the recycling quota in steel production <p><u>Stock:</u></p> <ul style="list-style-type: none"> ▪ Relining of transformative technologies ▪ Retrofitting of transitional technologies with CCS/ BECCU/S <p><u>or alternatively:</u> In addition, all plants / technologies can be financed whose greenhouse gas intensity is less than or equal to 0,1 t CO₂ per t of crude steel</p>	Min. 95% of new commitment amounts for investment per business unit	100% of new commitment amounts for investment per business unit
Transitional technologies	<p>Relining and Retrofitting:</p> <ul style="list-style-type: none"> ▪ BOF without CCS / BECCU/S, or with and without CCU (a) ▪ Natural gas based DRI without CCS/ BECCU/S or with and without CCU (a) ▪ Coking plants (a) only with dry coke cooling processes (d) <p><u>or alternatively:</u> In addition, all financing for plants/technologies whose greenhouse gas intensity is greater than 0.1 t CO₂ per t crude steel and which are not classified as transformative technologies fall under the guideline.</p>	Max. 5% of new commitment amounts for investment per business unit	No new commitment per business unit

KfW financing for facilities associated with crude steel production technology (b), such as casters and rolling mills, as well as optimization measures (e) remain possible and are not taken into account in the calculation of the quotas mentioned above. However, the handling of associated facilities (b) and optimization measures (e) is handled differently depending on the country and the time of construction of the crude steel production plant.

Financing in associated facilities (b) and optimization measures (e) is allowed in the following cases:

⁴ If a DRI plant is to be operated predominantly with hydrogen from 2035 onwards on the basis of a plausible concept, a transitional operation with natural gas may still take place until then. Only in this case is a natural gas-based DRI plant to be counted among the transformative technologies.

Table 3: Permitted financing in associated facilities and optimization measures

	Developed countries	Developing and emerging countries (c)
Transformative technologies	<p><u>New constructions:</u></p> <ul style="list-style-type: none"> Permitted for associated facilities (b) <p><u>Stock:</u></p> <ul style="list-style-type: none"> Permitted for associated facilities (b) Permitted for optimization measures (e) 	
Transitional technologies	<p><u>New constructions:</u></p> <ul style="list-style-type: none"> Permitted for associated facilities (b) of crude steel production plants built until the end of 2025 <p><u>Stock:</u></p> <ul style="list-style-type: none"> Permitted for associated facilities (b) of crude steel production plants built until the end of 2025 Permitted for optimization measures (e) of crude steel production plants built until the end of 2025 	<p><u>New constructions:</u></p> <ul style="list-style-type: none"> Permitted for associated facilities (b) of crude steel production plants built until the end of 2029 <p><u>Stock:</u></p> <ul style="list-style-type: none"> Permitted for associated facilities (b) of crude steel production plants built until the end of 2029 Permitted for optimization measures (e) of crude steel production plants built until the end of 2029

References, explanations and abbreviations:

- (a) For the EU only commitments for Best Available Techniques (BAT) as per the latest BREF report of the European Commission (see EC Best Available Techniques (BAT) Reference Document for Iron and Steel Production). BREF compatibility is usually a legal requirement for commissioning a plant in Europe. Even in the case of under-delivery, BREF compatibility of the main plant should be made possible, provided that the under-delivery is covered by BREF and this can be verified by the specialist department. As the BREF report deals with concrete technologies, an application should also be possible outside the EU, if information on the technological specifications is available to the department.
- (b) The term associated facility in this sector guideline refers to facilities associated with crude steelmaking technology (e.g. casting and rolling mills).
- (c) Developing countries and emerging economies according to DAC List of ODA Recipients ([OECD - DAC List](#))
- (d) Coking plants are not classified in the iron and steel industry (but in NACE 19.10). However, they are part of an integrated metallurgical plant and are included here.
- (e) Optimization measures in this sector guideline include energy efficiency, GHG mitigation and environmental protection measures.
- (f) The stated emission intensity refers only to the Scope 1 system boundaries.
- (g) BOF: Basic oxygen furnace
- (h) DRI: Direct reduced iron
- (i) EAF: Electric arc furnace
- (j) BECCU/S: Bioenergy with carbon capture and storage or utilisation

2.3 Building sector

The sector guideline for the building sector is applicable for new construction, modernisation and the purchase of buildings located within the EU. It includes all building types that are heated or cooled according to their intended purpose (e.g. residential buildings, administrative buildings, schools and hospitals), as well as for building technology (systems and equipment for heating, cooling, indoor air and lighting technology and hot water supply). The minimum requirements for buildings in Germany are defined according to the established KfW Efficiency House and Efficiency Building standards.⁵ For buildings located in the other EU countries, the sector guideline purposely offers several possibilities to meet the 1.5°C-aligned minimum requirements and thus takes into consideration the heterogeneous climate conditions and national differences in building standards.

Scope of application

The following types of financing activities are steered by the sector guideline:

- New constructions, modernisations and purchase of residential and non-residential buildings located within the EU, including financing activities for individual building parts (e.g. apartments and the expansion of existing buildings⁶) or building technology (installation and setup of heating, cooling, ventilation and lighting technology as well as hot water supply).
- In the case of a new building or a full refurbishment, both the building efficiency and the heat generator requirements must be met.

The following types of financing activities are **not** steered by the sector guideline:

- Buildings not located within the EU.
- Acquisition of existing apartments, i.e. apartments that have already been occupied at least once since construction.
- Listed buildings⁷, industrial and production buildings, warehouse and shipping buildings, data centers as well as all building types that are not included in the scope of the German Building Energy Act (GEG §2 (2)) regardless of whether the location of the financed building is in Germany or other EU member states.
- Operation of buildings and technical installations for production processes in buildings.
- Individual measures, as long as they are not relevant for the primary energy demand of a building, e.g. barrier-free modification of the interior.
- General corporate financing and financing activities that cannot be technologically delimited over financial intermediaries e.g. for home ownership companies and construction companies.

⁵ In the Buildings Sector Guideline, the identical requirements for primary energy demand and transmission heat loss are set for the efficiency house or efficiency building standard in accordance with the GEG.

⁶ When extending existing buildings, building efficiency requirements must be met.

⁷ Listed buildings include (a) buildings which, according to an official list or by law, are historical monuments, (b) buildings that are part of a monument ensemble and (c) buildings that are classified as “other particularly building fabric worthy of preservation” by official decision.

Table 4: Minimum requirements for buildings located in Germany

Purpose of financing activity	01/01/2023-31/12/2024	01/01/2025-31/12/2027	01/01/2028-31/12/2034	01/01/2035-31/12/2039	01/01/2040-31/12/2049	From 01.01.2050
Construction of new buildings and apartments	At least KfW Efficiency house or Efficiency building standard 55 or class A according to energy requirements certificate (in compliance with the requirements for heat generators; see "heat generator")	At least KfW Efficiency house or Efficiency building standard 55 or class A according to energy requirements certificate (in compliance with the requirements for heat generators; see "heat generator")	At least KfW Efficiency house or Efficiency building standard 40 or class A+ according to energy requirements certificate (in compliance with the requirements for heat generators; see "heat generator")	At least KfW Efficiency house or Efficiency building standard 40 or class A+ according to energy requirements certificate (in compliance with the requirements for heat generators; see "heat generator")	At least KfW Efficiency house or Efficiency building standard 40 or class A+ according to energy requirements certificate (in compliance with the requirements for heat generators; see "heat generator")	At least KfW Efficiency house or Efficiency building standard 40 or class A+ according to energy requirements certificate (in compliance with the requirements for heat generators; see "heat generator")
Purchase of buildings and apartments that since being built have not been occupied at least once (upcoming first-time occupation)						
Purchase of buildings that have been occupied at least once since their construction	At least KfW Efficiency house or Efficiency building standard 100 or class B according to energy requirements certificate If Efficiency House or Efficiency Building Standard does not meet 100, then renovation obligation within 4.5 years from the commitment (cf. "Refurbishment of buildings")	At least KfW Efficiency house or Efficiency building standard 100 or class B according to energy requirements certificate If Efficiency House or Efficiency Building Standard does not meet 100, then renovation obligation within 4.5 years from the commitment (cf. "Refurbishment of buildings")	At least KfW Efficiency house or Efficiency building standard 100 or class B according to energy requirements certificate If Efficiency House or Efficiency Building Standard does not meet 100, then renovation obligation within 4.5 years from the commitment (cf. "Refurbishment of buildings")	At least KfW Efficiency house or Efficiency building Standard 85 or Class B according to energy requirements certificate If Efficiency House or Efficiency Building Standard does not meet 85, then the refurbishment obligation must be completed within 4.5 years from the commitment (cf. "Refurbishment of buildings")	At least KfW Efficiency house or Efficiency building Standard 55 or Class A according to energy requirements certificate If Efficiency House or Efficiency Building Standard does not meet 55, then renovation obligation within 4.5 years from the commitment (cf. "Refurbishment of buildings")	At least KfW Efficiency house or Efficiency building Standard 40 or Class A+ according to energy requirements certificate If Efficiency House or Efficiency Building Standard 40 is not achieved, then renovation obligation within 4.5 years from the commitment (cf. "Refurbishment of buildings")
Modernisation of buildings and apartments	At least to KfW Efficiency house or Efficiency building Standard 100 or Class B according to energy requirements certificate (in compliance with the requirements for heat	At least to KfW Efficiency house or Efficiency building Standard 100 or Class B according to energy requirements certificate (in compliance with the requirements for heat	At least to KfW Efficiency house or Efficiency building Standard 100 or Class B according to energy requirements certificate (in compliance with the requirements for heat	At least to KfW Efficiency house or Efficiency building Standard 85 or Class B according to energy requirements certificate (in compliance with the requirements for heat	At least to KfW Efficiency house or Efficiency building Standard 55 or Class A according to energy requirements certificate (in compliance with the requirements for heat	At least to KfW Efficiency house or Efficiency building Standard 40 or Class A+ according to energy requirements certificate (in compliance with the requirements for heat

Purpose of financing activity	01/01/2023-31/12/2024	01/01/2025-31/12/2027	01/01/2028-31/12/2034	01/01/2035-31/12/2039	01/01/2040-31/12/2049	From 01.01.2050
	generators; see "heat generator")	generators; see "heat generator")	generators; see "heat generator")	generators; see "heat generator")	generators; see "heat generator")	generators; see "heat generator")
Individual measures⁸	Individual measures with ambition level of the KfW Efficiency house or Efficiency building Standard 70 or Class B according to energy requirements certificate	Individual measures with ambition level of the KfW Efficiency house or Efficiency building Standard 70 or Class B according to energy requirements certificate	Individual measures with ambition level of the KfW Efficiency house or Efficiency building Standard 70 or Class B according to energy requirements certificate	Individual measures with ambition level of the KfW Efficiency house or Efficiency building Standard 70 or Class B according to energy requirements certificate	Individual measures with ambition level of the KfW Efficiency house or Efficiency building Standard 55 or Class A according to energy requirements certificate	Individual measures with ambition level of the KfW Efficiency house or Efficiency building Standard 55 or Class A according to energy requirements certificate
heat generators	<ul style="list-style-type: none"> ▪ Electric heat pumps, solar thermal energy, local and district heating, biomass, etc. are permitted. ▪ Exclusion of fossil heat generators (exception: natural gas heat generators) 	<ul style="list-style-type: none"> ▪ Electric heat pumps, solar thermal energy, local and district heating, biomass, etc. are permitted. ▪ Exclusion of fossil heat generators (incl. combined heat and power plants (CHP)) 	<ul style="list-style-type: none"> ▪ Electric heat pumps, solar thermal energy, local and district heating, biomass, etc. are permitted. ▪ Exclusion of fossil heat generators (incl. combined heat and power plants (CHP)) 	<ul style="list-style-type: none"> ▪ Electric heat pumps, solar thermal energy, local and district heating, biomass, etc. are permitted. ▪ Exclusion of fossil heat generators (incl. combined heat and power plants (CHP)) 	<ul style="list-style-type: none"> ▪ Electric heat pumps, solar thermal energy, local and district heating, biomass, etc. are permitted. ▪ Exclusion of fossil heat generators (incl. combined heat and power plants (CHP)) 	<ul style="list-style-type: none"> ▪ Electric heat pumps, solar thermal energy, local and district heating, biomass, etc. are permitted. ▪ Exclusion of fossil heat generators (incl. combined heat and power plants (CHP))

⁸ The technical requirements for individual measures are either taken directly from the GEG. If the GEG does not prescribe the appropriate level of ambition, corresponding technical parameters (generally U values) are derived.

Table 5: Minimum requirements for buildings located within the EU but outside of Germany

Purpose of financing activity	Minimum requirements
New constructions	The building must at least: <ul style="list-style-type: none"> ▪ meet EPC-classification „A“ (energy certificate), or ▪ meet the national requirements for “nearly zero-energy buildings” (NZEB)
Purchase of buildings that since being built have not been occupied (upcoming first-time occupancy)	
Purchase of buildings that since being built have been occupied at least once	The building (where necessary after completion of the financed modernisation ⁹) must at least: <ul style="list-style-type: none"> ▪ meet EPC-classification “A” (energy certificate) <u>or</u> <ul style="list-style-type: none"> ▪ be in accordance with the minimum standards for the implementation of the “Energy Performance of Buildings Directive” (EPBD)
Modernisation of buildings	
Individual measures	Individual measures with the ambition level of the Efficiency House and Efficiency Building standard 70
Heat Generators	<ul style="list-style-type: none"> ▪ For example, electric heat pumps, solar thermal energy, local and district heating, biomass. ▪ Exclusion of fossil heat generators (exception until 31.12.2024: natural gas heat generators¹⁰)

The KfW Group does not provide financing for the construction, acquisition or rehabilitation of production and administrative buildings for the exploration and production of oil and natural gas. Financing for the construction, acquisition or refurbishment of production and administration buildings for the processing and distribution of oil or natural gas is according to oil and natural gas sector guideline also excluded.¹¹

⁹ Analogue to the regulations in the BEG programmes, the customer has 4.5 years after application to implement the renovation measures.

¹⁰ From 01.01.2025 no fossil heat generators (also no combined heat and power units (CHP))

¹¹ Federal promotional programmes that cannot exclude individual branches of production for reasons of state aid law are exempt from this exclusion. The prerequisite for this is a corresponding review of the facts by the Legal Department. The result of the review must be communicated to the Corporate Development department and the sustainability officers of the business unit concerned.

2.4 Power generation sector

The sector guideline for power generation supports the expansion of renewable energies which can be financed as transformative technologies (e.g., wind, photovoltaic, solar thermal power plant, geothermal power plants, hydropower and tidal power plants, power generation with sustainable biomass¹²,...) without any limitations. At the same time, the sector guideline also considers the role of natural gas power plants in successfully shaping the transition phase towards greenhouse gas neutrality. In accordance with the sector guideline for the power generation sector, KfW Group does not make any commitments for coal-fired power plants, nuclear power plants or oil/diesel power plants (neither new construction nor modernisation).

Scope of application

The following types of financing activities are steered by the sector guideline:

- Global commitments to the power generation sector, insofar as the power plants financed in the process are designed to feed into the interconnected power grid for public power supply, as well as for electricity storage facilities.

The following types of financing activities are **not** steered by the sector guidelines:

- Interconnected or electricity grids
- Operational power plants for priority own use that do not feed into the interconnected or electricity grid for public electricity supply, or only feed into the grid on a subordinate basis.¹³
- Financing (including financing to financial intermediaries) without a technologically definable object of financing.
- General corporate financing for power generation companies.

¹² Sustainability certification is required for the production of electricity from biomass fuels in installations with a total rated thermal input ≥ 20 MW and in the case of gaseous biomass fuels with a total rated thermal input ≥ 2 MW.

¹³ Mini grids and generators (e.g. for refugee shelters) that are not connected to the interconnected or public electricity grid are treated as operational power plants.

According to the sector guideline for power generation, the following technologies classified as transformative can be financed indefinitely:

- Wind power Onshore and Offshore
- Photovoltaic (PV, including battery storage as hybrid power plants)
- Solar thermal power plant (Concentrated Solar Power, CSP)
- Hydropower and tidal power plants
- Geothermal power plants
- Power generation with sustainable biomass (Certification required with regard to sustainability, e.g. Global Bioenergy Partnership (GBEP), by the European Commission (provisionally) approved voluntary certification schemes¹⁴)
- Power plants which are verifiable 100% green or blue hydrogen powered from commissioning
- Electricity storage facilities (e.g., batteries storage)¹⁵

KfW Group sees it as its responsibility to support the heating and energy transition in Germany and worldwide as a reliable partner for the German government and customers. Modern, highly flexible and climate-friendly natural gas-fired power plants that are capable of using hydrogen in the future, play a role in the heating and energy transition. For these, it is important that they are geared towards achieving a 1.5° C pathway when funding is committed. Due to the uncertainties associated with the availability of hydrogen, the following minimum conditions apply to the financing of natural gas power plants. Natural gas power plants can be financed on the basis of a comprehensive criteria-based case-by-case assessment if they meet the following minimum conditions. However, based on the annual commitment volume for natural gas power plants and renewable energies (see transformative technologies above) within the scope of the sector guideline, the annual new commitments for natural gas power plants that meet the minimum conditions may not exceed a share of 1/3.

- Operation as balancing capacity or as a buffer for renewable energies **or**
- Contractual commitment to operate natural gas-fired power plants with H₂ in industrialized countries from 2035 at the latest and in developing and emerging countries from 2040 at the latest **or**
- Contractual commitment to operate natural gas power plants in industrialized countries with CCUS from 2035 at the latest and in developing and emerging countries from 2040 at the latest, provided this does not lead to any additional CO₂ emissions **or**
- Existence of a cover note for a natural gas power plant that meets the requirements of the German government's climate policy sector guidelines for export credit guarantees **or**
- H₂ readiness (of plant and periphery) in industrialized countries from 2030 or in developing and emerging countries from 2035 (possible if commissioning date 2030 or 2035 or earlier) and declaration of intent for operation with H₂ as well as contractual arrangements that do not prevent operation with H₂/CCUS **and** at country level, i.e. in the country of investment, the existence of ambitious Nationally Determined Contributions (NDC) or energy and climate protection concepts designed to achieve greenhouse gas neutrality in electricity and heat supply¹⁶

¹⁴ [Voluntary schemes \(europa.eu\)](https://europa.eu)

¹⁵ Batteries are accounted for as part of the capacity in the power sector in the International Energy Agency's "Net Zero by 2050" scenario, which forms the basis of the sector guideline. Therefore, electricity storage facilities are explicitly included in the guideline.

¹⁶ Germany is on a decarbonization path for electricity generation that can be considered compatible - for all other countries, an assessment per investment country is required.

In addition to the above-mentioned transformative and transitional technologies, the following measures can also be financed, but are not counted towards the above-mentioned quota.

- Optimisation measures on natural gas power plants provided they do not extend the technical lifetime¹⁷
- Natural gas power plants (with CCS¹⁸)
- Power plants that are operated 100% with hydrogen that is not exclusively green and/or blue, or where the color of the hydrogen is not clear, as of commissioning
- Waste incineration¹⁹ without energy recovery is Paris-aligned until the end of 2024 and may be financed. From 2025, only waste incineration with energy recovery may be financed.

¹⁷ Optimisation measures in this sector guideline include energy efficiency, GHG mitigation and environmental protection measures. A lifetime extension can be assumed if equipment in the core process is replaced; in the case of natural gas power plants, this is particularly the gas or steam turbine, the gas engine, the boiler and the generator.

¹⁸ Definition in accordance with the Carbon dioxide Storage Act - KSpG §3: 1. permanent storage: injection and contain-erless storage of carbon dioxide and secondary components of the carbon dioxide stream in deep underground rock layers with the aim of preventing leakage indefinitely.

¹⁹ Waste incineration is limited to municipal waste incineration in this sector guideline. Hazardous waste incineration is excluded from control in this sector guideline due to the technical circumstances.

2.5 Aviation sector

The guideline for aviation applies to the financing of aircrafts for the transport of humans and goods (NACE-Codes 51.1 and 51.21) as well as for financing to aircraft lessors (NACE-Code 77.35).²⁰ KfW Group continuously relies on the best technologies available. As for the aviation sector, there are currently no marketable transformative technologies available to promote a greenhouse gas neutral future, the sector guideline ensures Paris-compatibility by systematically limiting emissions of KfW Group's financed aircrafts. In accordance with the underlying decarbonization path published by the International Energy Agency (IEA) it defines a CO₂-Budget for new financing activities in the aviation sector, which gradually decreases compared to the previous year. The financing activities from 2019 form the calculated baseline (in representatively adjusted t CO₂/a).

KfW Group steers new financing activities within its CO₂-Budget.

Scope of application

The following types of financing activities are steered by the sector guideline:

- KfW Group's worldwide commitments for the financing of aircraft for the transport of humans (NACE Code 51.1) and for the transport of goods (NACE Code 51.21) in aviation including portfolio financing
- General financing to aircraft lessors (NACE Code 77.35)

The following types of financing activities are **not** steered by the sector guideline:

- Commitments outside of aircraft financing, such as airports and the development or production of new aircraft.
- General corporate finance apart from aircraft financing, e.g., commitments to suppliers (such as engine manufacturers).
- Financial activities to financial intermediaries insofar that the object of funding cannot be technologically delimited (except financing to aircraft lessors).

Table 7: Annually, dynamically decreasing CO₂ budget of KfW banking group for financing of aircraft for passenger and freight transport as well as for financing to aircraft lessors

Time period	Annual reduction in percent
2019 - 2022	2,06%
2023 - 2025	2,86%
2026 - 2030	6,17%
2031 - 2035	9,91%
2036 - 2040	11,27%
2041 - 2050	11,92%

²⁰ The sector guideline listed here currently only affects KfW IPEX-Bank, because the other business areas do not make any control-relevant commitments within the scope of application of the sector guideline.

2.6 Shipping sector

For new financing activities of KfW IPEX-Bank in the shipping sector (NACE 50.1 und 50.2), the sector guideline defines individual efficiency requirements based on the Energy Efficiency Design Index (EEDI) for ship types and sizes (see chapter 2.6.1). In addition, the shipping portfolio is steered towards a 1.5°C reduction path using real emissions data (see chapter 2.6.2) which are provided by the Poseidon Principles framework.

Scope of application

The following types of financing activities are steered by the sector guidelines:

- New financing to purchase or lease new ships in the below listed “Ship Type” categories (including structurally strengthened ship types, e.g. ice class with corresponding EEDI-deductions for the IMO-requirements).
- Retrofits (adjustments in the existing ship), provided that they prolong the ship’s technical lifetime, are treated like new ships (see scope of application for “new ship” and for “major conversion” according to resolution MEPC.203(62), ANNEX 19).

The following types of financing activities are **not** steered by the sector guidelines:

- New financing for ships that are not subjected to IMO-Regulations and therefore have not been issued with an International Energy Efficiency Certificate (IEEC with notice of the EEDI).
- New commitments in domestic promotional business for ships within the below mentioned “Ship Type” categories, provided they are compliant with the technical screening criteria of the EU taxonomy for sustainable activities (environmental objective climate protection)²¹
- New financing for the purchase and lease of new ships that are not listed in the below mentioned “Ship Type” categories.
- Retrofits, which do not prolong the technical lifetime of the corresponding ship (e.g. exhaust gas purification).
- Financing of individual ship components.
- Corporate Financing and other financing activities where the specific technologies are non-delimitable (e.g. intermediary-financing via financial institutions).

2.6.1 Efficiency requirements for new financing activities

The energy efficiency requirements are aligned with the efficiency requirements defined in the International Maritime Organisation’s (IMO’s) GHG-Strategy reduction targets (-40%/-70% relative by 2030/2050; -50% absolute CO₂-emissions by 2050). Financing can be provided if the reduction factor, specified by ship type in the table below in relation to the reference EEDI, is adhered to at the date of order placement. The EEDI is calculated in accordance with the IMO-Regulation (i.a. Resolution MEPC.203(62)).

²¹ See Annex 1 of the Delegated Act (“Climate Act”) of 04.06.2021 on the Taxonomy Regulation ([European Commission - Annex 1 Climate-Act](#)). Relevant are - depending on the object of financing - chapter 6.10, 6.11 or 6.12.

Table 8: Reduction factor (in percent) for the EEDI in relation to the reference-EEDI per ship type and size

Ship Type	Size	Until 31.12.2029	01.01.2030-31.12.2039	01.01.2040-31.12.2049
Bulk carrier	20,000 DWT and above	30	55	>55
	10,000 - 20,000 DWT	0 – 30*	0-55*	0->55*
Gas carrier	10,000 DWT and above	30	55	>55
	2,000 - 10,000 DWT	0 – 30*	0-55*	0->55*
Tanker	20,000 DWT and above	30	55	>55
	4,000 - 20,000 DWT	0 – 30*	0-55*	0->55*
Container ship	200,000 DWT and above	50	55	>55
	120,000 - 200,000 DWT	45	55	>55
	80,000 - 120,000 DWT	40	55	>55
	40,000 - 80,000 DWT	35	55	>55
	15,000 - 40,000 DWT	30	55	>55
	10,000 - 15,000 DWT	0 – 30*	0-55*	0->55*
General cargo ships	15,000 DWT and above	30	55	>55
	3,000 - 15,000 DWT	0 – 30*	0-55*	0->55*
Refrigerated cargo carrier	5,000 DWT and above	30	55	>55
	3,000 - 5,000 DWT	0 – 30*	0-55*	0->55*
Combination carrier	20,000 DWT and above	30	55	>55
	4,000 - 20,000 DWT	0 – 30*	0-55*	0->55*
LNG carrier	10,000 DWT and above	30	55	>55
Ro-ro cargo ship (vehicle carrier)	10,000 DWT and above	30	55	>55
Ro-ro cargo ship	2,000 DWT and above	30	55	>55
	1,000 - 2,000 DWT	0 – 30*	0-55*	0->55*
Ro-ro passenger ship	1000 DWT and above	30	55	>55
	250 - 1,000 DWT	0 – 30*	0-55*	0->55*
Cruise passenger ship (having non-conventional propulsion)**	85,000 GT and above	30	55	>55
	25,000 - 85,000 GT	0 – 30*	0-55*	0->55*
*) Linear interpolation of the value based on the size of the ship. The small value applies to the smaller ship. **) This is valid for cruise passenger ships with an unconventional propulsion, including diesel-electric propulsion, turbine propulsion and hybrid propulsion system.				

The KfW Group does not finance crude oil tankers > 120,000 DWT, specialized oil-related vessels and vessels related to the laying of oil and natural gas pipelines.

2.6.2 Steering towards a 1.5°C reduction path

In addition to the defined EEDI efficiency requirements above, the shipping portfolio is steered towards the 1.5°C climate target. For this purpose, the compatibility along a 1.5°C reduction path for the shipping portfolio is checked on basis of real emissions data, whereby data from the Poseidon Principles framework are used. In the event of exceeding (or the threat of exceeding) the reduction path appropriate countermeasures will be initiated. The sale of individual assets for emission reasons is excluded as a measure.

2.7 Oil and natural gas sector

The sector guideline for Oil²² and Natural Gas applies to financing along the oil and natural gas value chain with and without technologically definable financing assets. Paris-compatibility of financings in the oil and natural gas sector is ensured through Group-wide exclusions (see chapter 2.7.1) as well as financing limits (see chapter 2.7.2). In addition, there is financing in line with the 1.5°C target which is not subject to a limit (see chapter 2.7.3)

Scope of application

The following cases are regulated under the sector guideline:

- The sector guideline applies to KfW Group's worldwide commitments along the oil and natural gas value chain (upstream and midstream).

The following cases are not regulated under the sector guideline:

- Financing of national strategic oil and natural gas reserves
- Financial activities to financial intermediaries insofar that the object of funding cannot be technologically delimited.

²² In the oil and natural gas sector guideline, the term oil, unless specified more precisely in the respective context, includes both crude oil and products made from it.

2.7.1 Group-wide exclusions in the oil and natural gas sector

According to the sector guideline for oil and natural gas, the KfW group does not finance²³:

- Prospecting, exploration and production of oil and natural gas (upstream) as well as optimisation, greenhouse gas reduction and efficiency measures in prospecting, exploration and production projects
- Construction, acquisition or refurbishment of production and administrative buildings for the exploration and production of oil or natural gas²⁴
- Transport and storage infrastructure for crude oil, crude oil terminals and oil ports, as well as oil refineries:
 - Oil pipelines and pumping stations
 - Special vessels related to oil (e.g., vessels for the construction of oil drilling platforms)
 - Oil ports and terminals
 - Vehicles for land transport of crude oil
 - Railway lines explicitly for oil transport
 - Wagons for crude oil
 - Storage tanks for crude oil
 - Tank farms or tank farm portfolios with revenue-based crude oil content \geq 10%
 - Crude oil tankers > 120,000 DWT
 - Vessels for laying oil and natural gas pipelines
- Construction of new natural gas networks and pipelines
- LNG liquefaction terminals
- Construction of new refineries for classic fuels and combustibles²⁵
 - New construction (incl. net expansion)
 - New construction (without net expansion, production site concentration)
 - Lifetime extension without efficiency improvement
- Construction of new refineries for predominantly material use (new construction with net expansion, no production site concentration)
- Production plants for Grey hydrogen (steam reforming of fossil fuels, without the use of CCS)
- Associated infrastructure according to IFC Performance Standards for excluded financing items

The above mentioned excluded items are stated in the Exclusion List of KfW Group.

²³ In accordance with the German government's sector guidelines for export credit guarantees (Section Energy, Fossil energy sources: natural gas – German version only), further projects to develop new natural gas projects, as well as transport and storage facilities can be financed in special individual cases (after conducting an evidence-based review) until the end of 2025. Criteria to be met are the need for national security or geostrategic supply security interests, as well as compatibility with the 1.5 degree target and the ensurance of the avoidance of lock in effects.

²⁴ Federal promotional programmes that cannot exclude individual branches of production for reasons of state aid law are exempt from this exclusion.

²⁵ Refineries that exclusively serve the reprocessing (re-refining) and energetic use of waste oil - e.g. in the context of conversion into diesel - are still eligible for financing.

2.7.2 Financing objects / financing in the oil and natural gas sector that fall under the steering approach

According to the sector guideline for oil and natural gas the KfW group limits financing²⁶ for following objects:

- Maintenance and rehabilitation measures for definable financing assets in the oil and natural gas sector outside oil and natural gas prospecting, exploration and production
- Construction, acquisition or refurbishment of production and administration buildings for the processing and distribution of oil or natural gas
- Refineries predominantly for material use:
 - New construction (production site concentration, no net expansion).
 - Lifetime extensions (without energy efficiency improvements)
 - Conversion to material use
- Acquisition of existing natural gas pipelines or networks
- Natural gas pipelines or networks for cooking purposes
- LNG regasification terminals
- Acquisition, construction or leasing of LNG tankers
- Acquisition, construction or leasing of product tankers (IMO Class III) technically designed for the transport of mineral oil products in a proportion of at least 50% by mass.
- Acquisition or new construction of tank farms and tank farm portfolios for natural gas or petroleum products
- Acquisition or construction of vehicles for the land transport of petroleum products and natural gas
- Acquisition or construction of wagons and wagon portfolios for the carriage of petroleum products and wagons and wagon portfolios for the exclusive carriage of natural gas
- Acquisition or new construction of a railway line explicitly for the transport of natural gas
- Trade finance for oil and natural gas
- General corporate lending²⁷

2.7.2.1 Volume management approach (valid and applicable only for KfW IPEX-Bank):

IPEX ensures the 1,5°C -compatibility of financing in the oil and natural gas sector through a limiting financing budget for the annual new commitments.

The average value of the financings from the years 2018-2021 in absolute terms is the starting point. The annual financing budget, adjusted for inflation, decreases annually in line with a 1,5°C -aligned reduction path and is divided into three control areas.

²⁶ In accordance with the German government's sector guidelines for export credit guarantees (Section Energy, Fossil energy sources: natural gas – German version only), further projects to develop new natural gas projects, as well as transport and storage facilities can be financed in special individual cases (after conducting an evidence-based review) until the end of 2025. Criteria to be met are the need for national security or geostrategic supply security interests, as well as compatibility with the 1.5 degree target and the ensurance of the avoidance of lock in effects.

²⁷ General corporate finance is under control if the borrower is classified according to one of the following NACE codes: 6.1, 6.2, 19.2, 35.22, 35.23, 42.21, 46.71.2, 49.5. Thereby a distinction is made between three use cases. If the intended use is known and the credit line is used exclusively for oil and natural gas purposes, the entire financing falls under the control. If it is known that the credit line will be used exclusively for other purposes (outside oil and natural gas), the entire financing does not fall under the control. In the third case, the use of proceeds is unknown. In this case, it must be checked whether the majority of the company's activities are in the oil/natural gas sector. If the company is ≥ 50% active in the oil/ natural gas sector on a revenue basis, the entire financing falls under the control. If the company is ≥ 50% active in other segments (outside oil and natural gas), the entire financing does not fall under the control.

Table 9: Annual reduction factor per control area

Control area	Annual reduction factor compared to the respective previous year
<ul style="list-style-type: none"> ▪ Financing with identifiable financing objectives assets in the oil sector 	<ul style="list-style-type: none"> ▪ 2022 – 2040: 2,15% ▪ 2040 – 2050: 4,43%
<ul style="list-style-type: none"> ▪ Financing with identifiable financing objects assets in the natural gas sector 	<ul style="list-style-type: none"> ▪ 2022 – 2040: 2,34% ▪ 2040 – 2050: 3,15%
<ul style="list-style-type: none"> ▪ Trade finance and general corporate financing in the oil and natural gas sector 	<ul style="list-style-type: none"> ▪ 2022 – 2030: 1,93% ▪ 2030 – 2040: 3,48% ▪ 2040 – 2050: 1,90%

2.7.2.2 Staggered Exclusions (valid and applicable for PM, IK, DEG, FZ):

The sector control of IK, PM, DEG and FZ ensures 1,5°C compatibility of financing in the oil and natural gas sector through staggered exclusions and volume caps for the period 2023-2025. Financing for the listed financing items can no longer be made as of the applicable year.

Table 10: Staggered exclusions for developed countries

Exclusion from 2023	Exclusion from 2035	Exclusion from 2045
<ul style="list-style-type: none"> ▪ Refineries predominantly for material use: <ul style="list-style-type: none"> ○ New construction (production site concentration, no net expansion). ○ Lifetime extensions (without energy efficiency improvements) ○ Conversion to material use ▪ Construction, acquisition or refurbishment of production and administration buildings for the processing and distribution of oil or natural gas ▪ Acquisition, construction or leasing of product tankers (IMO Class III) technically designed for the transport of mineral oil products in a proportion of at least 50% by mass ▪ Acquisition or construction of vehicles for the land transport of petroleum products and natural gas ▪ LNG regasification terminals ▪ Acquisition, construction or leasing of LNG tankers ▪ Acquisition or construction of wagons and wagon portfolios for the carriage of petroleum products and wagons and wagon portfolios for the exclusive carriage of natural gas ▪ Acquisition or new construction of tank farms or tank farm portfolios for natural gas or petroleum products ▪ Gas pipelines or networks for cooking purposes ▪ Acquisition or new construction of a railway line explicitly for the transport of natural gas 	<ul style="list-style-type: none"> ▪ Maintenance and rehabilitation measures for definable financing assets in the oil and natural gas sector outside oil and natural gas prospecting, exploration and production ▪ Acquisition of existing natural gas pipelines or networks 	<ul style="list-style-type: none"> ▪ Trade finance for oil and natural gas ▪ General corporate lending

Table 11: Staggered Exclusions for developing countries (according to the [DAC list²⁸](#)):

Exclusion from 2025	Exclusion from 2030	Exclusion from 2040	Exclusion from 2045
<ul style="list-style-type: none"> ▪ Construction, acquisition and refurbishment of production and administration buildings for the processing and distribution of oil or natural gas ▪ Acquisition, construction or leasing of product tankers (IMO Class III) technically designed for the transport of mineral oil products in a proportion of at least 50% by mass ▪ Acquisition, construction or leasing of LNG tankers 	<ul style="list-style-type: none"> ▪ Refineries predominantly for material use: <ul style="list-style-type: none"> ○ New construction (production site concentration, no net expansion). ○ Lifetime extensions (without energy efficiency improvements) ○ Conversion to material use ▪ Acquisition or construction of vehicles for the land transport of petroleum products and natural gas ▪ LNG regasification terminals ▪ Acquisition or construction of wagons and wagon portfolios for the carriage of petroleum products and wagons and wagon portfolios for the exclusive carriage of natural gas ▪ Acquisition or new construction of tank farm and tank farm portfolios for natural gas or petroleum products ▪ Gas pipelines or networks for cooking purposes ▪ Acquisition or new construction of a railway line explicitly for the transport of natural gas 	<ul style="list-style-type: none"> ▪ Maintenance and rehabilitation measures for definable financing assets in the oil and natural gas sector outside oil and natural gas prospecting, exploration and production ▪ Acquisition of existing natural gas pipelines or networks 	<ul style="list-style-type: none"> ▪ Trade Finance for Oil and Natural Gas ▪ General corporate lending

2.7.3 Financing objects in the oil and natural gas sector that are eligible for unlimited financing in accordance with 1,5°C -compatibility

- Energy efficiency measures with a maximum capacity increase $\leq 10\%$ outside oil, or natural gas prospecting, exploration, and production.
- Carbon capture and storage (CCS).
- GHG reduction measures outside of exploration, prospecting, and production projects.
- Pipelines technically designed for 100% hydrogen use (including conversion measures)
- Production facilities for green or blue hydrogen
- Refineries for bio-based products (new construction, production site concentration, capacity expansion, retrofitting)
- Re-refining and energetic use of waste oil - e.g. in the context of conversion to diesel

²⁸ [OECD - DAC list](#), or current follow-up list)

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Palmengartenstraße 5–9
60325 Frankfurt am Main

nachhaltigkeit@kfw.de
www.kfw.de