

Overview of legislation governing Germany's energy supply system

Key strategies, acts, directives, and regulations / ordinances

EUROPEAN LEVEL

EU CLIMATE AND ENERGY PACKAGE (20/20/20 TARGETS)

In December 2008, the European Union agreed on a host of directives and objectives. These set out specific targets which relate to the efforts to mitigate climate change and to reduce energy consumption and are to be reached by 2020: greenhouse gases emissions are to be cut by 20% compared to 2005, renewables are to account for 20% of gross final energy consumption, and energy efficiency is to increase by 20% compared to 1990.

2030 European Climate and Energy Framework

The new Climate and Energy Framework is centred on three main targets for 2030: to reduce greenhouse gas emissions from within the EU by a minimum of 40%, to increase the share of renewables in the EU's final energy consumption to at least 27%, and achieve energy savings of at least 27%.

INTERNAL ELECTRICITY MARKET DIRECTIVE (DIRECTIVE 2009/72/EC)

This directive lays down rules on the generation, transmission, and distribution of electricity, and on consumer supply and consumer protection. Furthermore, it specifies requirements for tendering and authorisation procedures as well as for the operation of the grids.

EMISSIONS TRADING DIRECTIVE (DIRECTIVE 2009/29/EC)

This directive introduced the European system of greenhouse gas emissions trading. It sets out the rules on how certificates are to be allocated and traded and stipulates requirements concerning the provision of information.

INDUSTRIAL EMISSIONS DIRECTIVE (DIRECTIVE 2010/75/EU)

The Industrial Emissions Directive sets out emissions limit values (ELVs) and other requirements for the approval of certain types of industrial installations, including power stations.

ENERGY EFFICIENCY DIRECTIVE (DIRECTIVE 2012/27/EU)

The aim of this directive is to cut primary energy consumption in the EU by 20% by 2020 compared to baseline projections. Measures here include the annual requirement for governments to improve the energy performance of 3% of its building stock and for energy distributors/sellers to cut their energy consumption by at least 1.5% every year.

ENERGY CONSUMPTION LABELLING DIRECTIVE (DIRECTIVE 2010/30/EU)

This directive sets out pan-EU rules for the uniform, pan-EU labelling of energy-related products. The directive provides for clarity regarding the respective responsibilities of suppliers and traders, and member states' obligation to provide information. Products for which the well-known label is used include washing machines, heating systems, and TV sets.

ECODESIGN DIRECTIVE (DIRECTIVE 2009/125/EC)

This directive provides the basis for pan-EU eco-design requirements for energy-related products, including TV sets, washing machines, and electrical engines. Only products which meet these requirements can be brought to market and used.

REGULATION (EC) No 714/2009 ON ACCESS TO THE NATURAL GAS TRANSMISSION NETWORKS

This regulation governs access to the natural gas transmission networks and LNG storage facilities. Its aim is to work towards establishing a wholesale market for natural gas and to create mechanisms that will lead to a harmonisation of the rules governing the cross-border exchange of natural gas.

REGULATION (EU) No 994/2010 ON SAFEGUARDING A SECURE SUPPLY OF NATURAL GAS

This regulation sets out the respective duties of companies and Member States as far as a secure supply of gas is concerned; these include minimum standards for gas infrastructure, customer supply, preventative action and contingency planning.

INTERNAL MARKET IN NATURAL GAS DIRECTIVE (DIRECTIVE 2009/73/EC)

This directive lays down rules concerning the transmission networks and the distribution, supply, and storage of natural gas. It sets out criteria and procedural requirements which govern the (non-)approval of requests for the transmission, distribution, supply, and storage of natural gas, and for the operation of natural gas networks.

ENVIRONMENTAL IMPACT ASSESSMENTS (EIA) DIRECTIVE (DIRECTIVE 2011/92/EU)

This directive stipulates the requirement for environmental impact assessments (EIAs) to be undertaken prior to the approval of certain types of public and private sector projects.

HABITATS DIRECTIVE (DIRECTIVE 2011/92/EU) AND BIRDS DIRECTIVE (DIRECTIVE 2009/147/EC)

These directives specify rules on biodiversity and environmental protection.

TAXATION OF ENERGY PRODUCTS AND ELECTRICITY DIRECTIVE

This directive harmonises energy and electricity tax schemes within the EU, defines minimum taxation levels, and lays down criteria for tax breaks and exemptions.

TEN-YEAR NETWORK-DEVELOPMENT PLAN

Every two years, the European Networks of Transmission System Operators for Electricity and Gas produce non-binding pan-EU 10-year network development plans for the natural gas networks and the electricity grids. These plans include projections on what exactly will constitute an adequate expansion of the networks.

RENEWABLE ENERGY SOURCES (RES) DIRECTIVE (DIRECTIVE 2009/28/EC)

This directive provides the legal framework for the promotion of renewables. It sets out binding national targets for the total share of renewables in each Member State's gross final energy consumption, and for the transport sector. Moreover, it specifies rules with regard to joint projects, administrative procedures, the requirement to provide information, and access to the electricity grid.

EU ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE (DIRECTIVE 2010/31/EU)

This directive seeks to improve the energy performance of buildings in the EU.

CONNECTING EUROPE FACILITY REGULATION

This regulation sets out the overarching rules for the "Connecting Europe" facility, which helps to fund investment in priority EU infrastructure projects in the transport, energy, and telecommunications sectors.

CRITICAL INFRASTRUCTURE PROTECTION DIRECTIVE (DIRECTIVE 2008/114/EC)

The Member States are required to regularly identify European infrastructure that are critical, for instance for the supply of electricity. They are to ensure that operators' security plans are available and that security liaison officers are designated for each of these infrastructures.

REGULATION (EC) No 714/2009 ON CROSS-BORDER TRADING

This regulation introduces a compensation mechanism created for cross-border flows of electricity, rules on the allocation of interconnector capacity, and principles for transmission charges. The regulation is supplemented by various network codes.

REGULATION ON GUIDELINES FOR TRANS-EUROPEAN ENERGY INFRASTRUCTURE

This regulation sets out rules designed to streamline authorisation procedures and increase public support, and rules relating to the regulatory framework and cost allocation for energy infrastructure projects. A list of the main infrastructure projects of community interest (PCIs) in the field of electricity, gas, oil and smart grids is provided in the annex to the regulation.

INTER-TSO COMPENSATION MECHANISM (REGULATION (EU) No 838/2010)

This regulation sets out guidelines with regard to the fees charged for cross-border electricity exchange. It also lays down rules governing the fees charged for access to the transmission grids.

DIRECTIVE FOR A SECURE SUPPLY OF ELECTRICITY (DIRECTIVE 2005/89/EC)

This directive stipulates certain measures to be taken to ensure a secure supply of electricity. These measures concern generation capacity, balancing supply and demand, and ensuring that there is sufficient generation and transmission capacity for the systems to work reliably.

CCS DIRECTIVE (DIRECTIVE 2009/31/EC)

This directive sets out conditions for the selection, approval, and monitoring of storage sites.

EMISSION PERFORMANCE STANDARDS REGULATION

This regulation provides incentives for automotive companies to develop and bring to market energy-efficient vehicles and vehicles using alternative fuels.

ALTERNATIVE FUELS DIRECTIVE (DIRECTIVE 2014/94/EU)

This directive sets out a joint EU framework for the construction of alternative fuel infrastructure, including charging points for electric vehicles, which is to reduce dependency on oil within the transport sector and its environmental footprint.

PLANNED INVESTMENT IN ENERGY INFRASTRUCTURE

Every two years, the Member States furnish the European Commission with information on infrastructure projects that are at the planning stages or are currently being implemented. This data is provided for projects related to the generation, storage, and transport of natural oil and gas, electricity (including from renewable sources), biofuels, and CCS.

NATIONAL LEVEL

THE ENERGY CONCEPT OF THE FEDERAL GOVERNMENT

The energy policy of the Federal Government rests upon the Energy Concept of 28 September 2010, in which the Federal Government set out guidelines for ensuring an environmentally sound, reliable, and affordable energy supply, thus mapping the transition into the age of renewables, and upon the decisions of the German Bundestag in favour of phasing out the use of nuclear power.

ENERGY INDUSTRY ACT

The Energy Industry Act sets out the regulatory conditions that are necessary for ensuring a secure, affordable, consumer and environmentally friendly supply of electricity and natural gas. It regulates the supply systems for electricity and natural gas in order to ensure that competition is effective and is not distorted. It also implements European Union law with regard to the network-based supply of electricity and natural gas.

COMBINED-HEAT-AND-POWER ACT

The act regulates the funding for the combined and particularly efficient generation of electricity and heat in low-carbon CHP installations, especially on the basis of natural gas. It also provides for surcharges imposed to fund the construction and extension of networks and storage for heating and cooling.

ENERGY SECURITY OF SUPPLY ACT

This act defines how vital energy needs are to be met in the event of immediate threats or disruptions to the energy supply where these cannot be sufficiently addressed in time.

ELECTRICITY DUTY ACT

This law lays down the rules on electricity taxation and specifies cases in which reduced tax rates or tax exemptions apply.

ENERGY DUTY ACT

This law lays down the rules regarding tax rates on heating and motor fuels, and specifies cases in which reduced tax rates or tax exemptions apply.

METERING ACT

This law sets out the rules on the introduction and use of smart meters and on how the measurement values are to be passed on within the energy sector.

POWER GRID EXPANSION ACT

The Power Grid Expansion Act deals with the construction of extra-high-voltage grids. It sets out specific plans for grid projects that are designed to integrate electricity from renewable sources, establish better networks in the European Energy market, connect new power stations, and avoid structural bottlenecks in the transmission network.

GRID EXPANSION ACCELERATION ACT

This law sets out procedural requirements for the construction of cross-regional and cross-border extra-high-voltage lines. It also applies to high-voltage powerlines with a nominal voltage of at least 110 kV. The individual expansion projects are laid down in the Federal Requirements Plan Act. The aim of this act is to speed up planning and approval procedures.

FEDERAL REQUIREMENTS PLAN ACT

This act defines which measures are needed to expand and upgrade the extra-high-voltage grids in the next 10-15 years, supplementing the projects set out in the Power Grid Expansion Act.

ENVIRONMENTAL IMPACT ASSESSMENT ACT

This law specifies precautions to be taken in order to ensure effective environmental protection in the context of both public and private-sector projects.

ELECTRIC MOBILITY ACT

The act regulates the preferential participation of electric vehicles in road traffic in order to promote their use with a view to reducing the damaged caused to the climate and the environment by car traffic.

ENERGY AND CLIMATE FUND ACT

The Energy and Climate Fund was established in order to provide funding for the additional responsibilities associated with the Energy Concept of 28 September 2010. This Special Fund is used to fund measures in the areas of renewable energy and energy efficiency, as well as the national efforts to combat climate change. The Government Decisions of June and July 2011 stipulate that revenues from the auctioning of carbon emissions certificates are to be the only source of revenue.

ACT ON ENERGY CONSUMPTION LABELLING

The act regulates the enforcement powers and obligations of the Länder with regard to market supervision of product labelling. It also stipulates the general rules for the roll-out of the national efficiency labels for old heating systems.

ENERGY SERVICE ACT

The Energy Services Act was created to foster the development of a market for energy services and to ensure that final energy consumers are better informed about these services.

ATOMIC ENERGY ACT

This law is designed to protect life, health, and material goods from the hazards of the use of nuclear power and the harmful effects of ionising radiation. It defines basic rules for plant operation and for the structured phase-out of nuclear energy for commercial electricity production.

RENEWABLE ENERGY SOURCES ACT

This law is designed to promote the advancement of technologies that enable the production of energy from renewable sources at a lower cost. The share of renewables used in power generation is to be raised to 80% by 2050.

OFFSHORE WIND ENERGY ACT

This act is designed to encourage greater use of offshore wind energy, particularly in the interest of protecting the climate and the environment.

RENEWABLE ENERGIES HEAT ACT

This law is designed to help raise the share of renewables to 14 per cent of the energy used for heating purposes and to achieve this by 2020.

ENERGY SAVING ACT

This law sets out the basic legal requirements with regard to energy conservation in buildings.

GREENHOUSE GAS EMISSION TRADING ACT

This law provides the basis for the trading of greenhouse gas emission allowances within a pan-EU emissions trading system. The aim is to make a contribution towards the global effort to combat climate change through reducing the level of greenhouse gas emissions in a cost-efficient manner.

FEDERAL IMMISSION CONTROL ACT

This act is designed to protect people, animals and plants, the ground, water, the atmosphere, as well as cultural assets and material goods from harmful environmental effects (caused by air pollution, noise, vibrations, light, heat, and radiation).

FEDERAL MINING ACT

This law sets out the legal framework for the exploration, extraction, and processing of mineral resources in Germany. It also applies to the construction and operation of underground storage facilities.

FEDERAL WATER ACT

This law specifies rules and requirements for the use and protection of water bodies. Most of the water used in the generation of energy (e.g. for cooling systems; hydropower) is surface water.

CARBON CAPTURE AND STORAGE (CCS) ACT

This act provides the legal framework for the piloting and application of technologies used in the sequestration, transport, and storage of carbon dioxide found in deep geological strata. It also contains rules on the examination, erection, operation, monitoring, and decommissioning of pilot storage facilities, and on the transfer of responsibility for these, as well as rules on connection and access to CO2 ducts and storage facilities.

FEDERAL NATURE CONSERVATION ACT

This act stipulates requirements for nature and landscape protection. It is comprised of rules that are designed to preserve biodiversity, a balanced ecosystem, regenerative capacity, the sustainable use of natural resources, and the diversity and beauty of nature and the countryside. The protection afforded under this act also covers the nurturing and, where necessary, restoring of these resources.

ENERGY-RELATED PRODUCTS ACT

In conjunction with the relevant EU legislation, this law defines the energy-related requirements that apply to products entering the market and being used. It also provides the legal basis upon which the Länder can exercise market surveillance.

ORDINANCE TO ENSURE THE SUPPLY OF GAS IN A SUPPLY CRISIS

This ordinance defines the powers of the Federal Network Agency and the Länder (as load distributors) that are necessary for ensuring that vital demand for natural gas is met. In a crisis situation, these load distributors can issue instructions both to gas companies and consumers.

ORDINANCE TO ENSURE THE SUPPLY OF ELECTRICITY IN A SUPPLY CRISIS

The aim of this ordinance is to ensure that vital needs for electricity are met. It also transfers the role of load distributor to the Federal Network Agency in the event of a supply crisis.

ELECTRICITY NETWORK ACCESS ORDINANCE

This ordinance defines the conditions for feeding electrical energy into the electricity grids and for the simultaneous take-off of electricity at remote distribution points. It also lays down the basic rules for grid balancing and balancing-group management.

ELECTRICITY NETWORK CHARGES ORDINANCE

This ordinance specifies the methods to be used for calculating charges for access to the transmission and distribution grids (grid fees), for the transmission of electricity to consumers, and for distributed feed-in.

GAS NETWORK ACCESS ORDINANCE

This ordinance defines the conditions under which grid operators shall provide access to their networks to those entitled to such access. It also covers the feed-in of biogas and the connection of biogas plants to the pipeline networks. Furthermore, this ordinance specifies requirements for efficient capacity utilisation, with the aim of ensuring that access to the networks is granted to those entitled to such access in a non-discriminatory way.

GAS NETWORK CHARGES ORDINANCE

This ordinance defines the methods to be used for calculating charges for access to gas pipelines and gas distribution networks for the transmission of natural gas to consumers via the networks of the gas network operators.

DISCONNECTABLE LOADS REGULATION

The purpose of the ordinance is to develop demand side management potential in the interest of the security of the electricity supply system at transmission system level.

GRID RESERVE ORDINANCE

This ordinance specifies the procedure to be used to create the grid reserve, to use installations that have been placed in the grid reserve, and the specifications to be met by installations placed in the grid reserve. Furthermore, it lays down detailed rules on how installations for the generation or storage of electricity are to be decommissioned.

ORDINANCE ASSIGNING PLANNING APPROVAL PROCEDURES

By way of this ordinance, the responsibility for conducting planning approval procedures for cross-regional and cross-border extra-high-voltage lines was transferred from the Länder to the Federal Network Agency.

INCENTIVE REGULATION ORDINANCE

This ordinance uses incentive-based regulation to stipulate the fees for access to the energy supply networks. Furthermore, it sets out requirements to be used to determine the total revenue that network operators may generate from grid fees (revenue cap), and also stipulates quality requirements.

CONCESSION-FEE ORDINANCE

This ordinance regulates the policy environment for concession fees for electricity and natural gas and the way in which these fees are to be calculated. Concession fees are paid by the energy utilities to the municipalities and districts. They are charged for the right to use public transport routes and to operate energy networks.

LOW-VOLTAGE-CONNECTION ORDINANCE

This ordinance specifies the basic conditions under which grid operators must connect end users to their low-voltage grid and provide the connection for the drawing of electricity. It comprises provisions governing the connection to the grid, the use of this connection, and the content of the grid connection contract.

CHARGING STATION ORDINANCE

The ordinance regulates technical minimum requirements for the safe and interoperable establishment and operation of publicly accessible charging stations for electric vehicles.

HIGH-PRESSURE GAS PIPELINE ORDINANCE

This ordinance specifies procedures and requirements for ensuring technical safety during the erection and operation of high-pressure gas pipelines. It also lays down rules for the accreditation of technical-safety experts.

ORDINANCE ON ENERGY CONSUMPTION LABELLING

The ordinance regulates administrative offences relating to the obligations of manufacturers and sellers in the context of product labelling and establishes the legal basis for the Länder to impose fines.

ORDINANCE ON THE ENERGY LABELLING OF CARS

The Ordinance on the energy labelling of cars introduces an energy label for cars that informs consumers about the car's carbon footprint. In addition to providing absolute figures on consumption, the label also uses a colour-coded CO2 efficiency scale to show how efficient a car is compared to other models.

ORDINANCE ON THE CONNECTION OF POWER STATIONS TO THE NETWORKS

This ordinance lays down basic conditions under which facilities for the generation of electricity with a nominal capacity of at least 100 MW shall be connected to electricity supply grids with a voltage of at least 110 kV. It specifies requirements for the grid connection procedure and the bearing of the costs for connection, and also includes provisions as to what information TSOs must provide.

ORDINANCE ON GRID SYSTEM STABILITY

This ordinance is designed to prevent risks to system stability resulting from PV generation facilities. It sets out requirements for the retrofitting of inverters, as well as requirements regarding what information TSOs must provide.

ELECTRICITY DEFAULT SUPPLY ORDINANCE

This ordinance specifies the general conditions under which default energy utilities supplying household customers in the low-voltage range shall meet the need of the latter for electricity, charging standard prices. It sets out the rights and responsibilities of default utilities as well as the terms for supply and billing.

GAS DEFAULT SUPPLY ORDINANCE

As an equivalent of the default supply ordinance for electricity, this ordinance stipulates the general conditions for the default supply of natural gas to household customers in the low-pressure range.

LOW-PRESSURE-CONNECTION ORDINANCE

This ordinance lays down the conditions under which end consumers in the low-pressure range shall be connected to the general supply. It also sets out requirements for the grid connection contract.

PROTECTION OF TRANSMISSION NETWORKS ORDINANCE

This ordinance further fleshes out the Critical Infrastructure Protection Directive at national level. It stipulates the details of and deadlines within the procedure and specifies the requirements for operators' security plans and for the security liaison officers.

ORDINANCES IMPLEMENTING THE FEDERAL IMMISSION CONTROL ACT

The main purpose of these ordinances is to protect the environment from harmful environmental effects caused by air pollution and noise.

BIOMASS ELECTRICITY SUSTAINABILITY ORDINANCE

This ordinance applies to bioliquids used for electricity production under the Renewable Energy Sources Act. It sets out sustainability requirements with respect to the protection of areas for the production of liquid biomass and the certification of interfaces.

BIOMASS ORDINANCE

This ordinance regulates which matters are deemed to be biomass under the RES Act, which technical procedures for the production of electricity from biomass fall under the scope of application of the act, and which environmental requirements must be complied with in the production of electricity from biomass.

RENEWABLE ENERGIES ORDINANCE

This ordinance sets out rules on how electricity for which funding has been disbursed pursuant to the Renewable Energy Sources Act (EEG) is to be marketed, on how the level of funding under the EEG is to be determined and published, and on certificates of origin, certificates of regional production and the relevant registers associated with these.

AVERAGE ELECTRICITY PRICE ORDINANCE

The ordinance stipulates how the average electricity prices used to calculate the electricity cost intensity in the special equalisation scheme are calculated.

REGISTER-OF-FACILITIES ORDINANCE

This ordinance sets out requirements for the establishment and use of a register of facilities used to generate electricity from renewables and fireamp.

SYSTEM SERVICE ORDINANCE

This ordinance is designed to improve the safety and stability of the electricity grids, even when there are high shares of electricity from wind energy in the networks. Its goal is to raise the share of system services for the grids that is generated from wind energy.

CROSS-BORDER RENEWABLE ENERGY ORDINANCE

This ordinance defines the rules that apply for cross-border auctions for electricity from PV installations located within the Federal Republic of Germany or on the territory of another EU Member State.

STRATEGIES

REGULATIONS / DIRECTIVES

REPORTS / GUIDELINES

STRATEGIES

ACTS

ORDINANCES