§ 5 Trend-setting: emissions trading law [Emissionshandelsrecht]

I. Clarification of terminology

- not emissions but limited rights to make emissions are traded
- the correct and precise term would be: "greenhouse gas emission allowances trading law"

II. Backgrounds

1) The need to reduce greenhouse gas emissions to mitigate climate change

- a fact proved beyond doubts in decades of scientific research in global cooperation
  - most important scientific institution: the United Nations *Intergovernmental Panel on Climate Change (IPCC)*
  - most important scientific source: *IPCC Assessment Reports*
- however, a fact denied by the new U.S. Government and the lobbies behind it
  - contestested in large-scale global disinformation campaigns

2) The United Nations Framework Convention on Climate Change (UNFCCC) of 1992

- first international treaty on the global common fight against climate change
  - ratified by 197 states and European Union
- binding goal to stabilize greenhouse gas concentrations "at a level that would prevent dangerous anthropogenic interference with the climate system" (art. 2)
- modest climate protection obligations, mainly of the developed countries
  - reporting obligations, financial support for climate action of developing countries
- treaty bodies: annual Conference of the Parties (COP), UNFCCC Secretariat in Bonn

3) The implementation of the UNFCCC by the Kyoto Protocol of 1997/2012

- the Kyoto Protocol of 1997 set for the period of 2008 to 2012 *binding emission reduction targets* for 37 industrialised countries, the EU and economies in transition, which added to an average of 5 % reduction (compared to 1990)
  - implementation was successful but global impact was limited, since USA and China did not participate
- the Protocol allowed *joint fulfilment of quotas by several countries (bubbling)* and even *trading of limited emission allowances*, as long as the overall result was achieved
- the Doha Amendment to the Kyoto Protocol of 2012 set for the period of 2013 to 2020 further reduction targets, but was only ratified by EU, EU member states and few other states

4) The Paris Agreement on climate protection of 2015

- the present legally binding international treaty on the global fight against climate change
  - ratified by 193 states and European Union (USA have withdrawn again in 2025)
- binding *target to hold increase in global average temperature below 2° C*, preferably 1.5° C, above pre-industrial levels of 1750 (art. 2)
- states need to undertake and communicate "national determined contributions" (national climate action plans) and develop long-term low emission development strategies
- treaty bodies: annual Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), UNFCCC Secretariat
- although successful implementation is unlikely, an important vehicle for legal innovations
  - polarisation, populism and authoritarianism in the modern societies do not allow the necessary profound science-based economic, social and civilisational transformation to stop climate change
  - in 2025 it is already certain that the 2° target can no longer be achieved
  - nevertheless, the Agreement motivates to develop new concepts for innovative laws that serve its objective

5) The European Green Deal of 2019

- a program of the European Commission to *achieve complete climate neutrality by 2050*
  - with a one trillion Euro budget
  - complete reorganisation of energy supply, industry, agriculture and transport, to gain independence from fossil fuels
- legally implemented by the *European Climate Law* of 2021 (Regulation 2021/1119)
  - sets intermediate climate targets for 2030
  - requires EU climate strategy, assessment of climate protection measures, multilevel climate and energy dialogue

III. The concept of reducing greenhouse gas emissions through a limited market of tradable emission allowances [Emisssionszertifikate]

1) The idea: to require allowances for emissions, create a market for them and make them gradually more rare & expensive

- the innovative idea to utilise market mechanisms instead of direct state intervention to reduce greenhouse gas emissions
  - reconciles the need for climate protection with the needs of the market economy
  - allows a fairer distribution of the burden to those who emit the most or benefit most from their emissions
  - prevents unfair externalisation of production costs
  - inspires those who do not have to rely on emissions to look for alternatives
  - allows decentralised decisions on how emissions can be reduced most cost-effectively
- the dependence of this instrument on an appropriate limitation of the total quantity of emissions (cap) and an appropriate minimum price for emissions
  - even minor changes can render this instrument useless or turn it into a sharp weapon
  - high risk of manipulation through lobbying, nepotism and corruption

2) The development and first implementation of the concept in the USA

- first developed by American scholars in the 1960s
- first implemented in 1990 with the Acid Rain Program of the amended US Clean Air Act

3) The first and model wide-scale implementation of the concept in the European Union

- proposed by the European Commission in 2000, introduced by European legislation in 2003, launched 2005
- first comprehensive emissions trade system in the world, for broad and important sectors for the economy
- development in four phases: pilot phase (2005 - 2007), implementation of Kyoto Protocol (2008 - 2012), implementation of Doha Amendment (2013 - 2020 and later) and after the reform of 2023 (since 2023)

IV. The EU Emissions Trading System in the energy, industry, aviation and maritime transport sectors (EU ETS 1) and its implementation in German law

1) Regulation in a European Union directive plus national law

- Two-level regulatory system: The EU *directive* sets general rules that do not apply directly but need to be *implemented in the legal order of the member states*. It is binding, as to the result, but leaves choice of form and methods to the national authorities (cf. art. 288 sub-sect. 3 FEU Treaty).
- So the European emissions trading follows the same concept but can be different in detail in the various member states.
- A coherent regulation of the basic system in a directly applicable European regulation (art. 288 sub-sect. 2 FEU Treaty) might be more appropriate.

2) The European Union's Emissions Trading Directive of 2003 (Directive 2003/87)

- frequently amended to further develop the ETS; last major reform: 2023
- ***"Cap and trade" system:*** Every year the EU member states issue *emission allowances* to the participating companies. Some are for free, most are auctioned off. Each allowance entitles to emit one ton of greenhouse gas. Each company must submit each year the appropriate number of allowances for the amount of greenhous gas it has emitted. If necessary,

it needs to buy more allowances on the market. They are traded at the stock exchange, at special energy exchanges, via brokers (e.g. banks) or directly.
The quantity of available allowances is limited by the ***"cap"***, a political decision on the maximum amount of greenhouse gases that may be emitted by all participating companies together. The cap is *lowered every year* (from 2005 to 2030 by 62 %) and the rules on the cap are constantly tightened.
The cap is determined by the national government in cooperation with the European Commission. Since the third period (2013 - 2020) there is a *cap for the whole European Union*, what reduces the discretion of the national governments. In the coming years, the cap will be more and more predetermined by European standards that are already anchored in the European law.

- In 2024, ca. 9.000 installations in the energy sector and emission-intensive industries that accounted for 40 % of the European greenhouse gas emissions, participated in the system.
- A *Market Stability Reserve (MSR)* shall counteract allowance oversupply or shortage that could render emissions trading dysfunctional. Every year, the supply of allowances to be auctioned is adjusted to *predefined thresholds of the total number of allowances in circulation (TNAC)*, without discretion of the member states or Commission. Surplus allowances are removed from the market but can be reintroduced later if necessary.
- Participating companies, emission allowances and transfers of allowances are registered in the *Union Registry*, a central European emissions trading register (see Regulation 2019/1122).

2) The German Greenhouse Gas Emissions Trading Act of 2025 [Treibhausgas-Emissionshandelsgesetz] (originally of 2004)

- To release greenhouse gases requires an *emissions authorisation plus* the annual surrender of the necessary *emission allowances* until September of the following year (sect. 4, 7). Plant and airplane operators receive some free allowances in accordance with EU law (sect. 23, 32).
- Operators, companies or responsible persons must determine their annual emissions under an *approved monitoring plan* and submit a *report verified by an accredited test body* to the authority (sect. 5, 6).
- The *emission allowances* are registered in the Union Registry. They are *transferred by agreement plus entry* in the purchaser's account *in the Union Registry* (sect. 8, 9).
- There are special regulations for plant operators, aviation, maritime transport and fuel emissions trading (sect. 19 et seq.).
- The Act is executed by the *German Emissions Trading Authority* [Deutsche Emissionshandelsstelle - DEHSt], a unit of the *German Environment Agency* [Umweltbundesamt - UBA].

V. The temporary additional German fuel emissions trading system in other transport sectors and the heating sector

- the *Fuel Emissions Trading Act* [Brennstofemissionshandelsgesetz] of 2019
- a genuine German "cap and trade" system, complementing EU ETS 1 for emissions resulting from the use of fossil fuels until EU ETS 2 is operational (see infra, VI.)
- a system not directly linked to the greenhouse gas emissions but to the *placing of fossil fuels on the market*
  - aiming to lower fossil fuel consumption in the society by causing higher fuel costs
  - however, emission-intensive enterprises can apply for financial support to cushion the hardship of fuel costs increases
- fuel suppliers must determine and report "their" annual fuel emissions under an approved monitoring plan on the basis of the quantity of fossil fuels placed by them on the market, and surrender the necessary emission allowances (sect. 7, 8)
- The Act is executed by the German Emissions Trading Authority at the German Environment Agency, which also maintains the *National Emissions Trading Registry* [Nationales Emissionshandelsregister - neHS].

VI. The coming EU Emissions Trading System for fuel emissions in the building, road transport and other sectors (EU ETS 2)

- regulated in the new Chapter IVa of the Emmisions Trading Directive
- a new emissions trading system, separate from EU ETS 1, that addresses emissions from fuel combustion in buildings, road transport and small industries
- fully operational in 2027; replaces the German fuel emissions trading system (see supra, V.)
- a system also not directly linked to the emissions but to *placing fossil fuels on the market*
- fuel suppliers must have an *emissions authorisation*, determine and *report "their" annual emissions* to the authority and *surrender the necessary emissions allowances*
- all emission allowances will be auctioned
  - a share of the revenues will be used to support vulnerable households and micro-enterprises through a *European Social Climate Fund* of up to 65 billion € (Regulation (EU) 2023/955)
  - member states must use the remaining revenues for climate action and social measures

VII. Problems and perspectives of emissions trading law

- a concept with a high potential for a constant, faire and finely adjusted reduction of green-house gas emission, but many "buts":
- *more bureaucracy* for enterprises, increasing production costs
  - companies must prepare the annual reports and set up an emission allowances management
- *vulnerability to strong market fluctuations*
  - in case of an economic crisis, the market price for emission allowances will fall so sharply that there is no incentive anymore to reduce emissions
  - in 2014, a dangerous surplus of allowances causing a far too low market price required a sensitive intervention
    - the auctioning of 900 million allowances needed to be postponed (so-called "backloading"); in 2015, they were transferred to the newly created Market Stability Reserve
- *vulnerability to sabotage* by corruption, lobbyists, populists and other rogue politicians
  - even smallest changes in the law, e.g. a significantly increased cap, can render the system ineffective, although it is still functioning
- *excessive complexity* can make the system difficult to understand for non-experts, hinder acceptance among the population and foster populist criticism